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PAKISTAN MALARIA ERADICATION PROGRAM  
FOURTH LOAN

391-0139-①

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## I. SUMMARY AND RECOMMENDATIONS

### A. BORROWER

The Borrower will be the Government of Pakistan. The ultimate recipient of the loan and the implementing agency will be the Malaria Eradication Board (MEB) of the Government of Pakistan (GOP).

### B. AMOUNT OF LOAN

This Capital Assistance Paper (Loan Paper) has been written to cover the full \$6.8 million needed for the CY 1969 and CY 1970 Malaria Eradication Program (MEP). If there is a shortage of project funds, a loan may be authorized now for only the CY 1969 requirements of \$4.4 million. This Loan Paper will serve as the justification for loans for both years.

### C. PURPOSE OF THE LOAN

To finance the cost of importing commodities, including DDT and transportation, and laboratory and spraying equipment required for the execution of the MEP. The loan also includes sufficient funds to finance the foreign exchange costs of ten (10) technical advisors annually to be provided by the Public Health Service/ National Communicable Disease Center (PHS/NCDC). The question of whether these technical advisors should be funded from loan or grant funds is being discussed with the GOP, and if it is decided to use grant funds, these costs may be deobligated from the loan.

### D. PURPOSE OF THE ACTIVITY

The purpose of the Malaria Eradication Program is to eliminate malaria in Pakistan and to prevent its reintroduction. The MEP is based on the Plan of Operations of 1961, formally agreed to between the GOP and the World Health Organization (WHO). It will be carried out in successive stages and is scheduled to last 14 years, beginning in FY 1961 and ending in FY 1974.

### E. TOTAL COST OF THE ACTIVITY

The total cost of the fourteen (14) year MEP in the original 1961 Plan of Operations was Rs. 519.46 million (\$109.13 million). The estimated total cost was revised in 1965 to Rs. 661.44 million (\$138.75 million) to accommodate increased salaries and previously unforeseen costs such as customs duties and sales taxes. The

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total cost estimate was then reduced to Rs. 531.95 million (\$111.75 million) in FY 1967 when shortfalls in development resources made it necessary to cut budgets in all sectors of the economy. AID, PHS/NCDC and WHO were unable to accept the FY 1967 revision since it would have been inadequate to support a program capable of eradicating malaria in Pakistan. Suitable revisions now have been agreed upon for the remainder of the Third Plan period (through FY 1970), which would result in a total estimated project cost of Rs. 562.74 million (\$118.22 million). It is the view of AID, PHS/NCDC and WHO that this level of funding should be adequate for satisfactory project execution. (For more detailed discussion see pages 25-29 of Loan Paper).

#### F. BACKGROUND OF THE ACTIVITY

In 1958 the Government of Pakistan, with the assistance of WHO, began the preparation of the present program of malaria eradication. In August 1962, AID agreed to finance the foreign exchange requirements of the Malaria Eradication Program for FY 1963 from the General Commodities Loan No. 391-H-046 in the amount of \$1.5 million. In February 1963, the first specific Malaria Eradication Loan (391-H-053) was signed between the GOP and AID to provide \$3.8 million worth of foreign exchange assistance for FY 1964. A second loan (391-H-084) in the amount of \$10.4 million was signed in February 1965 to finance the foreign exchange requirements for two additional years. A third dollar loan was authorized in FY 1967 for \$4.0 million for CY 1968 needs.

In addition to both dollar and rupee loan support, AID, through a participating agency service agreement with the PHS, and WHO are providing technical assistance. Total AID assistance to date for the Malaria Eradication Program is \$42.4 million equivalent.

#### G. EXPORT-IMPORT BANK CLEARANCE

The Export-Import Bank decided on January 11, 1968 that it did not desire to consider a loan for this project.

#### H. MISSION VIEWS

This Loan Paper was prepared by the Mission and reflects its views.

I. STATUTORY CRITERIA

All applicable criteria have been met. (See Annex I of Loan Paper).

J. ISSUES

1. Malaria Eradication in Urban Areas

The urban areas of Pakistan were not included in the 1961 Plan of Operations because of the differing techniques required to eradicate malaria there as compared to rural areas where WHO techniques have general applicability. To date effective programs for eradication of malaria have not been implemented in all urban areas, particularly Karachi, where the incidence of malaria is quite high. This poses a major threat to areas protected by the MEP because of the real possibility that cases imported from unprotected areas will re-establish an infectuous reservoir in the protected areas. (See pages 14-16 of Loan Paper).

With the MEP moving into the maintenance phase in the early 1970s it is essential to ensure now that this threat is eliminated. A covenant will be written into the Loan Agreement which requires the borrower to submit to AID prior to December 31, 1968 a satisfactory plan for effective surveillance and eradication of malaria in urban areas, indicating how the plan will be financed and implemented and which organization(s) will be responsible for its execution.

2. Phase-in of Health Services

Once malaria has been eradicated and the maintenance phase begins, the local Health Services organization should assume responsibility to ensure that eradication will be maintained after termination of the MEP. The semi-autonomous MEP organization should be re-mobilized and the necessary build-up of the Health Services achieved by absorbing trained personnel from the MEP. The only alternative would be the continued costly maintenance of a separate MEP. Otherwise it is highly likely that an infectuous reservoir will be re-established and the incidence of malaria will again be a major health problem. It is essential that plans be formulated in the near future for this phasing in of Health Services, complete with details of how they will be staffed and financed, so that a logical transition can be made during the Maintenance Phase of the MEP which will occur for most zones in the early 1970s. (See pages 16 and 17 of Loan Paper).

A covenant will be included in the Loan Agreement requiring the Borrower to submit to AID prior to December 31, 1968 a satisfactory plan for the transfer to and effective implementation by local Health Services of responsibility for maintenance of malaria-free zones after malaria has been eliminated.

### 3. Need For Timely Rupee Financing

In the past, agreement on adequate levels of local currency support for the MEP, especially in West Pakistan, has been a major problem. As described above, satisfactory annual budgets now have been agreed upon for the remainder of the Third Plan, and evidence that necessary funds will be made available will be a Condition Precedent to Disbursement in the Loan Agreement.

Aside from the level of funding, the WMEP still is faced with the problem of timely release of rupee funds by Central and Provincial authorities to the WMEP organization. The majority of such rupee funds come from PL 480-generated rupees obligated through the Project Agreement (ProAg) mechanism. Despite the continuing need for rupees throughout the year to meet WMEP costs, the GOP has withheld release of funds until the ProAg was signed (this year on February 24, 1968), and even then further delays have resulted from slow processing through appropriate accounts. This produced a major morale problem which, in turn, reduces personnel efficiency and threatens the success of the program. USAID proposes to resolve this problem by negotiating with the GOP to set up a modus operandi whereby USAID will release funds directly to the WMEP upon presentation of satisfactory documentation.. (See pages 29-31 of Loan Paper).

### K. RECOMMENDATIONS

It is recommended that a loan to the Government of Pakistan be authorized in the amount of \$6,800,000 for use by the Malaria Eradication Board in implementing their CY 1969 and CY 1970 programs. It is recommended, that the loan be authorized subject to the following conditions:

1. The Government of Pakistan to repay the loan to AID in U.S. dollars within forty (40) years from the date of the first disbursement under the loan, including a grace period of not to exceed ten (10) years from the date of the first disbursement.

2. During grace period the Government of Pakistan to pay interest to AID in U.S. Dollars at the rate of two percent (2%)

per annum on all amounts of outstanding principal. From and after the expiration of the grace period, the Government of Pakistan to pay interest to AID in U.S. Dollars at the rate of two and one-half percent ( $2\frac{1}{2}\%$ ) per annum on all amounts of principal outstanding under the loan.

3. The relending terms of other financial arrangements between the GOP and the Provincial Governments for making the proceeds of the loan available to the Central Malaria Eradication Board and the Provincial Malaria Eradication Boards, as the implementing agencies, are to be satisfactory to and approved by AID.

4. The Government of Pakistan to produce evidence satisfactory to AID that sufficient local currency to insure completion of the project will be provided.

5. All goods and services financed under the loan to be procured from and have their source and origin in the U. S.

6. The loan to be subject to such other terms and conditions as AID may require (see pages 35, 35A & 38 of Loan Paper).

CAPITAL ASSISTANCE COMMITTEE

	<u>Mission</u>	<u>AID/W</u>
Loan Officer:	F.J. Moennighoff	E. Gardner
Public Health Advisor:	Dr. W. Boynton	Dr. M. Griffith
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Drafting Officer:	F.J. Moennighoff	

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## II. BACKGROUND ON THE MALARIA ERADICATION PROGRAM. (MEP)

### A. GENERAL

The Malaria Eradication Program (MEP) in Pakistan is part of a worldwide campaign to eradicate this dread disease. The campaign is being carried out in most of the malarious countries of the world under the coordination and technical guidance of the World Health Organization (WHO)

The technical basis of the program is the concept developed after the discovery of insecticides with residual effect, of which DDT is the most important example. It was found that if an insecticide with residual effect is applied to all the houses in an area and remains effective throughout the transmission season of malaria, the transmission of the disease is greatly reduced and within three or four years can be stopped altogether. After transmission has been stopped, all persons infected with malaria parasites can be located by house to house search and given radical treatment. By this process the parasite reservoir of malaria in the population is eliminated and the disease eradicated even though the mosquitoes may revert to their original density.

The concept of eradication by indoor spraying of residual insecticides is essentially applicable to rural areas. In towns larviciding is the procedure generally used because it is operationally less difficult and costly, given the conditions common to congested urban areas.

In Pakistan, malaria is predominantly a rural disease. The program here has been planned to extend to both Provinces in a phased manner over contiguous zones. Each zone brought under operation passes through the following technical phases:

1. Preparatory Phase - One year duration:
  - a) Malariaometric surveys
  - b) Determination of transmission seasons, vectors involved, and delimitation of malarious areas.
  - c) Preparation of Plan of Action.
  - d) Geographical Reconnaissance, which includes: mapping of each village, numbering of all houses, and census of each house.

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2. Attack Phase - Three to four years duration:-

- a) Interruption of malaria transmission by intradomiciliary application of residual insecticides or by any other necessary and appropriate means.
- b) Surveillance activities to measure success of attack operations.

3. Consolidation Phase - Three years duration:-

- a) Intensification of surveillance activities to determine existence of any malaria cases.
- b) Radical cure for any cases found.
- c) Elimination of any focus immediately by appropriate means.
- d) Attainment of eradication goal.

4. Maintenance Phase:

- a) Implementation of vigilance activities.
- b) Prevention of the re-establishment of malaria in the country or area.
- c) Integration of Malaria Eradication Organization into the Health Services of Pakistan.

The fundamental elements of a successful program are total coverage and timely execution according to a pre-planned format. Failure to achieve either of these may necessitate costly rephasing and might prevent eradication.

B. HISTORY OF THE PAKISTAN MEP

Encouraged by evidence that malaria could be eradicated, the GOP in 1958 sought the assistance of the WHO in developing a MEP for the country. After preliminary work, an agreement was signed in 1960 between the GOP and WHO in which WHO agreed to provide the technical assistance required to implement the program and the GOP committed itself to carry out the Program and provide from its own resources or those available from international agencies, such financing as would be required for successful execution of the Program.

The GCF-WHO agreement culminated in a Plan of Operations of 1961 for eradication of malaria in Pakistan, based on principles and practices used successfully in other eradication programs throughout the world. As a latecomer, Pakistan was able to draw on the experiences of other country programs, and, as a result, established a technically sound program which could be implemented on a very low cost per capita basis as indicated in the following figures:

<u>Country</u>	<u>Average Annual per Capita Cost</u>
Iran	Rs. 1.44
Iraq	1.20
Jordan	0.96
Lebanon	0.48
India	0.35
Pakistan	0.32

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The Program is now in its seventh operational year in Pakistan. Significant strides have been made during that time in reducing the incidence of malaria in Pakistan as indicated in the following table which shows the reduction in incidence in the Program's advanced zones:

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MALARIA INCIDENCE  
(per thousand of population)  
IN ADVANCED ZONES OF THE PAKISTAN MEF

ZONE	1960	1961	1962	1963	1964	1965	1966	1967
<u>EAST PAKISTAN</u>								
1		271.15	0.33	0.14	0.03	0.03	0.02	0.01
2			22.84	0.69	0.009	0.003	0.013	0.005
3			13.63	2.23	0.04	0.02	0.06	0.02
4				10.42	0.04	0.10	0.01	0.003
5				25.14	0.24	0.03	0.03	0.004
6				22.40	-	0.05	0.01	0.002
7					3.44	0.009	0.021	0.005
<u>WEST PAKISTAN</u>								
1	136.41	0.60	0.39	0.07	0.07	0.07	0.04	0.02
2	275.36	83.88	0.20	0.09	0.09	0.04	0.05	0.01
3		66.83	-	0.54	0.04	0.02	0.01	0.03
4			203.90	1.31	0.06	0.02	0.01	0.03
5	124.13	-	-	0.30	0.19	0.03	0.03	0.01
6	71.05	-	-	0.17	0.10	0.03	0.01	0.01
7	112.04	-	-	-	1.61	0.02	0.17	3.01
8	49.12	-	-	-	0.40	0.13	0.05	0.01
9	83.70	-	-	-	0.22	0.07	0.02	0.005
10	23.1	-	-	-	0.01	0.12	0.14	0.03
11				80.10	0.10	0.07	0.05	0.02
12				101.61	0.31	0.13	0.15	0.003

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The initial figure for each zone reflects the incidence immediately before launching of the scheme in each of these zones and traces the progress through June 1967. The present incidence is measured on a vastly larger base than the initial measurement. The figures conclusively demonstrate the technical success of the Program to date and indicate that eradication is a realistic objective in Pakistan.

Exhibits 1 and 2, Annex II, show the yearly progress in the two provinces in terms of the number of people protected by the Program. The status of the Program as of December 1967 is shown in the following table:

PAKISTAN MEP  
POPULATION PHASING DATA  
DECEMBER 1967

<u>Population (in Millions)</u>	<u>East Pakistan</u>	<u>West Pakistan</u>	<u>Total</u>
1. Country total	59.1	50.9	110.0
2. Original malarious areas	59.1	50.9	110.0
3. Maintenance Phase	-	-	-
4. Consolidation Phase	13.7	11.9	25.6
5. Attack Phase	25.1	26.5	51.6
6. Preparatory Phase	15.4	4.1	19.5
7. Program not yet started	4.9	8.4	13.3

NOTES:

1. Uses 1961 census figures as base with annual increment of 2.6% p.a.
2. Indicates present population of areas originally designated malarious. All of Pakistan was designated malarious in the 1961 Plan of Operation.
3. Includes zones not yet opened and city populations not scheduled for MEP protection. Following zones are not yet opened:

<u>WPMEP</u>	<u>EPMEP</u>
33,34,35	20,21,22

A number of problems have arisen to hinder the progress of the Program. Essentially these have been logistical and financial problems. In West Pakistan, the Plan of Operation was implemented, with only minor modifications, according to schedule through 1964-65. During 1965-66 the late arrival of commodities and equipment curtailed spraying operations in ten zones, necessitating a rephasing of the scheme. In addition to the direct effect on the ten zones, all contiguous zones were indirectly affected because of

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the threat of imported cases and steps were required to counteract this threat.

Late arrival of sprayers again affected the WPMEP in 1966-67, delaying the entry into Attack Phase of six zones. In addition, a budgetary crisis growing out of 1965 hostilities with India led to a drastic cut in the Malaria budget and threatened the demise of the Program in West Pakistan. This crisis was discussed in detail in the 391-H-128 CAP, along with the steps taken by A.I.D. to overcome the crisis. Section III (E) below reviews the implementation of those steps and the current status of the budget problem.

While the aforementioned problems have unquestionably delayed the Program and added to its cost, the time lost can be made up through modification of the phasing schedule so that the Program can be terminated on schedule. This, of course, will be done only under strict adherence to WHO criteria and subject to the scrutiny and evaluation of independent assessment teams.

The EPMEP has stayed on schedule to date even though it too was subjected to similar problems. This is attributable to the more dynamic leadership of the Program there and the fuller support of the GOEP. The financial problems there were of a lesser magnitude than those facing the WPMEP and the EPMEP was permitted greater flexibility in meeting them. As a result, personnel efficiency and morale have not suffered, as was the case in West Pakistan. In a labor intensive effort, this is a crucial element in the success of a program.

## C. ORGANIZATION

Under the terms of the WHO-GOP agreement, a semi-autonomous organization was established by the GOP in June 1961 to implement the nationwide program, and its powers were enumerated in an ordinance issued by the President. The Ordinance established a Central Malaria Eradication Board, presided over by the the Minister of Health (GOP), whose functions are policy making, coordination and overall supervision of the MEP. The Board has delegated executive responsibilities to the Director of the MEP.

Provincial Malaria Eradication Boards, presided over by the Provincial Health Secretaries, were established in East and West Pakistan. They are responsible for implementation of the Scheme in their respective Province and they have full control over the personnel and finances in their Provinces. All Plans of Action developed by the Provinces are approved and coordinated by the Central Malaria Board. In 1965, a new ordinance was issued which removed many powers of the Center and delegated these to the Province.

The administrative organization of the Pakistan MEP is shown in Exhibit 3, Annex II.

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At the lowest level of organization is the house visitor, called a Malaria Supervisor. He is responsible for undertaking all operational measures in the field. The area under his jurisdiction is called a sub-sector and includes approximately 10,000 - 12,500 population. Four sub-sectors are grouped in a unit and placed under an Assistant Malaria Inspector for supervision or up to ten sub-sectors are grouped together in a sector under the charge of a Malaria Inspector. All units or sectors comprising 1-2 million population are grouped together in a self-contained administrative and operational unit called a zone. A zone usually comprises an administrative district of the Province.

The senior officer of a zone is the District Malaria Eradication Officer, who is a senior doctor. The organization chart of a typical zone is shown in Exhibit 4, Annex II. Each zone reports through a Regional Headquarters to the Provincial Headquarters. The highest echelon of the Scheme is the National Headquarters.

The personnel requirements of the IEP are very large. Aside from the census, taken only every tenth year, no other program undertakes total coverage of the population. The exacting criteria of the program provides little leeway for personnel shortcuts. As a result, about 50 percent of the total budget goes for salaries and wages, the single largest budget item (DDT-- about 25% -- is the next largest item). The bulk of salary expenditures is on the house visitors at the lowest operational level. During the attack phase years, seasonal labor consisting of spray crews (generally 5 sprayers and 1 mixer per sub-sector) has a considerable incremental impact on the salary structure of the program.

Exhibit 5 and 6, Annex II show the annual requirements for seasonal labor and permanent staff. Seasonal labor requirements rose sharply after 1962 as many zones were put under attack. By 1965 the majority of the zones in both Provinces were under attack so that the requirement from 1965 - 1968 ranged from 27-32,000 malaria workers. Although the buildup was slower by approximately one year in East Pakistan, its requirements have ultimately become larger (16,665 at the peak in 1968 compared to 15,840 at the peak -- 1967-68--in West Pakistan) due to the larger population there. After 1968 there will be a sharp drop off in requirements in both Provinces with 23 zones in consolidation and others being projected for subsequent years, so that by 1970 the requirement will be only 12,000 and by 1972 only 1-2,000. Thereafter the only requirement for seasonal labor will be for isolated cases of residual spraying.

Permanent staff has likewise built up rapidly (although at a lower rate than seasonal personnel) since 1962, doubling virtually every year through 1967. The peak of 16,436 persons will be reached in 1969. Again, the larger population of East Pakistan necessitates a bigger staff (9,626 at the peak there compared to 6,816 in West Pakistan). The drop off of permanent staff will lag behind that of the seasonal staff by 1-2 years and proceed at a much slower rate of decline because of the continuing technical and house visiting

requirements of the program.

At the inception of the NEP it was envisioned that permanent staff would gradually be absorbed into the national Health Services which would take over the program as the zones move into the Maintenance Phase. This phased demobilization and absorption from one program into another makes sense economically and technically. However, to date, the principle has not been accepted by the GOP. Health services remain relatively low in priority within the health sector, which itself, unfortunately, appears neglected in the allocation of development resources (with the exception of family planning). Although the technical staff apparently has no difficulty in obtaining placement -- even at higher wages in such programs as family planning -- it is unfortunate that the skills of these people will not be re-mobilized under the aegis of the Health Services for all-out assault on other diseases such as smallpox. Many of the principles employed in malaria eradication would appear to have broad applicability to other programs attacking endemic diseases whose high incidence in Pakistan is widely recognized.

At the time of writing it appears there will be some shifts in senior administrative personnel in the Program as a result of the changes that have taken place in the Health Ministry in which new people have been appointed as Health Secretary and Director General of Health. A.I.D. cannot determine at this time what effect, if any, these changes will have on the NEP.

Program operations have improved substantially during the past year and depth has been developed in the middle echelon of administrators, so that changes confined to the few political posts are not expected to interfere with the progress of the Program. This development, nevertheless, is being closely followed and necessary steps will be taken by A.I.D. as they are called for.

#### D. TRAINING

Training of staff has not been a major problem for the NEP in spite of the varied staff requirements, including several categories drawing on unskilled people, many of whom are illiterate. The role of training is fundamental to the success of an eradication program. The personnel must be intimately familiar with the standardized WFP techniques. This principle was accepted from the first in the Pakistan NEP.

Technical assistance for training is provided by WFP. Training schools have been set up in each Province, at Lahore and Dacca. In addition, specialized courses are taught at regional and zonal headquarters.

A.I.D. training assistance provides twelve participants

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each fiscal year for short courses at the Malaria Eradication Training Center at Manila and two for one-year graduate courses in the U.S. This serves the purpose of providing advanced training to personnel already trained in Pakistan. These trainees will be able to assume greater responsibilities and eventually eliminate the requirement for external technical assistance. Up to the present time training at Manila has concentrated on Zone and Region Chiefs and on Spraying Superintendents. As the program goes into the advanced phases, foreign training will concentrate on epidemiology.

Although strenuous efforts need to be continued as the technical requirements of the program change and become increasingly sophisticated, training is not regarded by A.I.D. as a problem area in this project. The MEP staff and the WHO advisors are aware of the needs and keep course content current with requirements.

### E. FUNDING OF THE PAKISTAN MEP

The 1961 Malaria Eradication Board Ordinance established financial management autonomy but no guaranteed source of funds. It did establish a Malaria Eradication Fund into which would be pooled funds from all sources. The governing proviso was that the contributions of each Province were to be spent only in that Province.

Initially the Provincial Governments provided the rupee requirements, while the bulk of the foreign exchange costs were provided by A.I.D. through both grant and loan assistance. Additional financial assistance was provided, on a minor scale, by WHO and UNICEF. Since the 1965 hostilities with India, which produced a budgetary crisis that affected the allocation of development resources to the MEP, A.I.D. has provided both rupee and dollar financing for all so-called eligible costs, i.e. anything other than customs duties and sales taxes.

In addition, both A.I.D. and WHO have provided extensive technical assistance to the Program.

#### 1. FOREIGN ASSISTANCE - FINANCIAL

The following table summarizes A.I.D. assistance to date to the Pakistan MEP:

#### A.I.D. ASSISTANCE TO PAKISTAN MEP

##### Dollar Loans

391-H-046 (General Commodities)	\$ 1,500,000
391-H-053	2,555,000
391-H-084	10,400,000
391-H-128	4,000,000
	<hr/>
	\$18,455,000

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## PL 480 Loans

FY 1967: EPMEP	Rs. 23.0 million	=	\$ 4,830,000
WPMEP	Rs. 27.0 million	=	5,670,000
FY 1968: EPMEP	Rs. 23.5 million	=	4,937,000
WPMEP	Rs. 21.15 million	=	4,443,000
			\$19,880,000

## Grants

EPMEP	Rs. 4.4 million	=	\$ 924,000
WPMEP	Rs. 12.0 million	=	2,520,000
Technicians and Participant Training			575,981
			\$ 4,019,981
GRAND TOTAL:			\$42,354,981

NOTE: Exchange Rate of Rs. 4.76 = \$ 1.00 used.

A.I.D. assistance has been crucial to the implementation of the Pakistan Program. Rupee loans saved the Program from termination in West Pakistan in 1967 and permitted it to progress in reasonably satisfactory shape. Without the continued support of A.I.D. in both rupees and dollars, it is doubtful that the program could continue. There do not appear to be any alternative Free World sources of foreign exchange funding at the present time. WHO now provides only technical assistance and UNICRF has stated it does not intend to extend further assistance.

This OAP is being written to consider a loan to finance the FY 1969 foreign exchange requirements of the Pakistan LEF. Consideration will also be given to funding in advance the FY 1970 foreign exchange requirements, depending on the availability of development loan funds in A.I.D.'s current budget and the competing demand from other priority projects. The application governing this proposal was originally submitted for \$11.7 million for 1967-70. Consideration in FY 1967 was, however, confined to the immediate requirements for FY 1968 and a loan (391-H-128) was subsequently authorized for \$4,000,000 for those requirements.

As the summary indicates, A.I.D. also provided Rs. 23.5 million to the EPMEP and Rs. 21.15 million to the WPMEP in 1968.

Continued rupee assistance by A.I.D. is required.

## 2. FOREIGN ASSISTANCE - TECHNICAL

The Pakistan MEP receives technical assistance from A.I.D. and WHO. The objective of this assistance is to strengthen the planning, administrative and logistical capabilities of the Pakistan MEP staff.

WHO provides technical assistance in organizing and executing the MEP under terms of the agreement signed in 1960 with the GOP. WHO currently provides the following technical advisory staff:

### WHO TECHNICAL SUPPORT TO PAKISTAN MEP

<u>Campaign Advisory Team</u>	<u>National Hdqtrs.</u>	<u>WMREP</u>	<u>EPMEP</u>
Epidemiologist	1	-	-
Senior Advisor (Maleriologist)	-	1	1
Sanitarian	-	2	2
Entomologist	-	1	1*
<u>Training Advisory Team</u>			
Senior advisor (Maleriologist)	-	1	1
Sanitary Engineer	-	1	1*
Technician	-	1	1

\* Post vacant

WHO has assisted in establishing Training Centers at Lahore and Dacca which have already conducted a large number of courses for various categories of personnel required for the Program. These training activities will continue in FY 1969 and 1970. In addition, WHO and A.I.D. have provided fellowships for senior personnel for training abroad. Both WHO and A.I.D. plan to continue this fellowship program.

A.I.D. technical assistance has been provided to the Pakistan MEP since the inception of the Program. Staff is provided under a P.A.S.A. with the USPHS/National Communicable Disease Center (NCDC). Present staff includes the following:

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U.S. TECHNICAL SUPPORT TO THE PAKISTAN MEP

<u>PMS Advisory Team</u>	<u>National Hdqtrs.</u>	<u>WPMSP</u>	<u>EPWSP</u>
Malaria Advisor	1	-	-
Malaria Specialist	-	1	1
Epidemiologist	-	1*	1*
Health Educator	1*	-	-
Equip. O&M Specialist	-	1	1
Supply/Procurement Specialist	-	1	1

\*Post proposed, not filled.

According to NCDC, a staff of only five personnel is currently projected as of June 30, 1969 due to reduction of overseas personnel in compliance with Presidential directives. NCDC feels this number is inadequate and further, that certain changes should be made in the assignment of advisors, i.e. less emphasis on equipment and supply and more on entomology and epidemiology. Final resolution of this matter will depend on how the advisors are funded (i.e. loan or grant) and discussions between PMS/NCDC and AID.

#### F. PROBLEM AREAS

The operational procedures of the MEP are based on the 1961 Plan of Operations which has been approved by WHO. In the light of their world-wide experience with malaria eradication programs, both WHO and A.I.D. (NCDC) regard this as a sound Plan. The Program is implemented on an annual basis in accordance with approved annual Plans of Action which derive from the 1961 Plan of Operations.

In spite of sound, detailed planning, several operational problems have developed during the life of the MEP. In some respects, the sheer size and scope of the MEP makes these inevitable. However all concerned recognize these problems as deterrents to maximum efficiency in executing the Program, and steps are being taken or proposed to correct the problems.

##### 1. DDT Quality

There were no problems in this area in 1967-68. A new 12-month warranty has replaced the old 6-month warranty required of suppliers. Proposals based on the experience in Pakistan have resulted in new specifications administered by NCDC. These have proven effective in improving the products offered and the packaging.

Negotiations between GEA and Montrose Chemical Corporation are in the final stages for settlement on the sub-standard DDT shipped to Pakistan under Contract CS-005-53048. A new price adjustment clause has been adopted by GEA/NCDC, and included in current contracts, which establishes a uniform, graduated penalty clause and removes the old ambiguities concerning restitution for sub-standard materials. NCDC testing will be the basis for future settlements. Reimbursement will be based on a percentage of the landed cost, inversely proportional to the percentage of susceptibility.

## 2. Sprayer Deficiencies

Mechanical problems related to use of the disc-flow regulator is no longer a problem since this type of regulator is no longer used.

Adequate nozzle tips are on hand or under order.

A problem may develop in East Pakistan on shortages of sprayers and sprayer spares due to the long delay in initiating procurement. Procurement was delayed by the protracted negotiations over the loan Agreement for H-128 between I.L.D. and the GOF and the subsequent slow fulfillment of loan CPs.

## 3. Vehicle Maintenance

Vehicle maintenance has improved remarkably in 1967-68. Preventive maintenance procedures have been established reducing the number of inoperative and defective vehicles (40 currently compared to 115 last year). Preventive maintenance and inspection is done monthly in the zone by shop mechanics and every six months each vehicle is given detailed inspection under supervision of the Region Transportation Officer. Major unit repair is being done in the Lahore workshop and a capability is being developed to exchange operative units for defective units on a current basis, thus avoiding reduction of vehicle availability at the operational level.

Three workshops were completed in West Pakistan during the year in Region headquarters towns (Peshawar, Lahore and Sultan -- Sukkur already had a workshop). Spare parts are controlled out of the main warehouse in Lahore and distributed to secondary warehouses at the region level where minor repairs are effected.

Non-availability of spares remains a problem. The last spares arrived in WP in 1964. Dispositions for spare parts purchases were eliminated from the budget during the 1965-66 financial crisis, with the result that the only availabilities now are from high cost local procurement. Delivery of spares procured under H-128 has been delayed due to time lost in loan negotiation and CP fulfillment. The shortages will be tentatively alleviated by the arrival of the H-128 spares (\$30,000), but the inventory will not be soundly balanced until the requirements for which financing is being requested in this loan are met.

The EP vehicle maintenance program has made similar progress. The program there is regarded as a model among the Government agencies with vehicles of the EP&EP getting a considerably longer service life than vehicles of most other agencies. Nevertheless, continued improvement is required. The transport manual is being implemented to the extent possible.

Spares are not a critical problem in East Pakistan,

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although there is a continuing need for inventories. If timing of spare part deliveries could be improved, it would have a decidedly favorable impact on the maintenance program. To the extent possible, required spares are being procured locally from rupee resources. This, however, is not presently a reliable source of supply.

The mechanics staff in both provinces is up to about full complement. There is no organized training to upgrade skills, other than TBT experience, but supervision has improved. For the first time shop foremen are being used and the slots for workshop officers and Station Transport Officers are being filled.

A.I.D. continues to provide technical assistance with FES/MSDC transport specialists assigned to both programs.

## 4. Supply Problems

The Supply program has also improved in the current year. Improved inventory control procedures have facilitated planning and enabled the IEEF to better plan for its operational activities.

Warehousing continues to be on a makeshift basis, but as is the case in the Program to financially justify building the desired warehousing facilities. Secondary warehouses have been established at the Region and Zone levels for direct control of inventories. Within their areas they are doing a reasonably good job of distribution.

Without the recent improvement in inventory controls the IEEF would not have been able to re-allocate its DDT stocks to meet the emergency interim spraying requirements which arose because of the delayed arrival of H-123 imported DDT.

A.I.D. continues to provide fulltime technical assistance with FES/MSDC Supply Specialists assigned to both programs. To the extent practicable they are implementing the supply annual procedures.

The major continuing supply problem is the late arrival of commodities, which has nothing directly to do with the logistical competence of the IEEF. Every effort will be made this year to accelerate loan signing and CI fulfillment so that procurement, shipping and internal distribution can be implemented routinely.

## 5. Malaria Eradication in Urban Areas

In urban areas, particularly in large towns, wholesale indoor spraying with residual insecticides is a very expensive and

difficult procedure and, therefore, a different approach has to be adopted. When dealing with the malaria problem in the urban conditions, the most important consideration is whether the transmission of disease occurs within the city or not. The species of anopheline mosquitoes which transmit malaria generally prefer clean, clear stagnant water for breeding. Under urban conditions this type of breeding place is comparatively rare. Therefore, malaria is predominantly a rural disease. However, certain species of anophelids have adapted themselves to breeding in urban conditions. For instance, A. stephensi breeds in wells and cisterns and polluted water. If such vectors exist, and it is proved that transmission of malaria is occurring within the town, the situation has to be tackled by a thorough control of the vector mosquito's breeding places and elimination of infection from the population by case detection and treatment of each case.

However, if transmission of the disease is not occurring within the town, any malaria cases will necessarily be imported ones which were probably contracted elsewhere in rural areas or at the periphery of the town. Under such conditions, when the rural malaria has been brought under control, the number of cases in the urban areas will greatly decrease and residual cases in the town then can be located and given radical treatment. Thus the urban and the rural population can be made malaria-free without control of mosquito breeding in the towns.

In the towns of the Northern and Central Regions of West Pakistan and in the Central Districts of East Pakistan, the transmission of the disease within the towns has not been confirmed so far. In these towns investigations regarding transmission of the disease within the town will continue; and if no transmission is proved, the control of malaria in the rural areas around the town, as well as on the periphery of the town, by insecticidal spraying is likely to control the importation of the disease into the town. The residual cases within the town will then be eliminated by wholesale case detection and radical treatment.

However, in the towns in the Southern Regions of West Pakistan, the transmission of malaria within the towns has been confirmed. Malaria has assumed epidemic proportion in Karachi during the past two years. In those towns where transmission of the disease occurs, wholesale larviciding plans for control of mosquito breeding have to be launched. Plans have already been prepared for Karachi and Chittagong. But implementation of these plans has to be undertaken through the local authorities because control of mosquito breeding is linked with drainage, sewerage of the town and disposal of waste water. These functions are performed by the local authorities and the operations have to be conducted through them with the technical advice and assistance given by Malaria Eradication authorities. The plans for Karachi and Chittagong are being processed through various channels in order that their implementation may be undertaken by the local authorities.

In other towns local authorities are also being assisted in preparing mosquito control Plans even where malaria transmission has not been proved in order that the serious mosquito nuisance may be brought under control. Lyallpur municipal authorities have already launched a comprehensive plan for mosquito control with the assistance of the Malaria Eradication Organization.

Situation in Karachi:

In Karachi malaria has assumed epidemic proportion due to very unsatisfactory sanitary conditions. Jurisdiction of the Municipal Corporation extends only to a comparatively small part of the Greater Karachi area. A large number of local authorities and housing societies are involved in the rest of the area. The detailed Plan which has been prepared for mosquito control in the Greater Karachi area, therefore, envisages the creation of a Board, under the Commissioner of Karachi, to coordinate the efforts of all the local authorities. Launching of the Plan is awaiting creation of this coordinating body and other administrative pre-requisites for its implementation.

The MEP regards the threat posed for its program by the infectious reservoir of the cities as very serious and has urged the municipalities to accelerate their efforts. While funding is available in most cases, the staffing and technical competence are missing. It appears now that the MEP will be required to take over several of the local programs. Until such time as that decision is made, however, it will be impossible to evaluate the financial and manpower impact on the MEP.

A Special Covenant will be added to the Loan agreement committing the Borrower, through the Central and Provincial Health Ministries, to implement a plan for meeting the urban malaria problem. This covenant will require submission of the plan by 12/31/68, complete with details as to which organization will have responsibility for the program and how it will be financed and staffed.

6. Take-in of Health Services

The Plan of Operation used in most WHO-administered MEPS calls for the local Health Services to assume responsibility for the maintenance of eradication once malaria has been eliminated. At this point the semi-autonomous IEB and its organization would be demobilized. To the extent practicable the necessary build up of Health Services would be achieved by absorbing trained personnel from the MEP.

Since 23 zones in East and West Pakistan are already in consolidation and the majority of the remaining zones are projected for consolidation by 1970-71, it is time now to define what must be done in terms of manpower and money to prepare the

Health Services to assume responsibility for maintenance of eradication. In the judgement of A.I.D. Public Health officials, the Health Services will not be able to assume this burden without an expansion of staff and increased budget support. Failure to resolve this issue soon might jeopardize the results achieved by the IEE. The alternative is the costly continuation of residual mowing and continued mobilization of the IEE organization. Economically it makes sense to take the steps now to provide for the phasing-in of Health Services.

A.I.D. will have a Special Covenant in the new Loan agreement requiring submission by the Borrower, through the Central and Provincial Health Ministries, of a report detailing its plans, complete with a program for staffing and financing, for maintaining eradication of malaria. This report should be submitted by 12/31/68.

#### 7. Availability of Local Currency

The local currency problem remains as the major problem facing the WPAEP. The level of the budget has been resolved but the matter of the timely availability of these funds to the implementing agency continues to plague the Program. This problem, with a recommended solution, is discussed in Section III D and E below.

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III. PROJECT DESCRIPTION AND ANALYSIS

A. FINANCED LOAN

This CAY is being written on the basis of an application submitted by the IIF in FY 1966 requesting \$ 11.7 million to finance the foreign exchange requirements of the IIR for fiscal years 1967-1970. Since it was possible to meet FY 1967 requirements from carryover stocks financed in prior years, it became necessary to consider only the 1968-1970 requirements.

A decision was subsequently made to confine consideration to FY 1968 requirements only. This decision was dictated by shortage of project funds vis-a-vis the number of priority projects then ready for funding and partially by A.I.D.'s desire to link the foreign exchange funding of the project to its rupee funding, which is appropriated annually from Government budget sources and PL 420-generated rupee releases under A.I.D. ProApp.

Experience during the current year has shown that A.I.D.'s most effective leverage for bringing about a satisfactory execution of the IIR is in the combined use of CIs on the dollar loans and a clearcut position of A.I.D.'s desire to include financing of the IIR in the allocation of our total rupee resources. Experience has also shown that when dollar funds are authorized annually the Program is invariably affected by the late arrival of commodities. To the extent that we can ensure timely arrival by committing financing now for two years' requirements, we will alleviate one of the more serious operational problems of the Program.

In view of the foregoing, this loan is being processed on the basis of CY 1969 and CY 1970 requirements. The estimated requirements are based on the following assumptions regarding program pricing:

	<u>NUMBER OF TUNES IN EACH STAGE BY FISCAL YEAR</u>	
	<u>FY 1969</u>	<u>FY 1970</u>
Preparatory	5	0
Attack	37	25
Consolidation	23	30
Maintenance	<u>1</u>	<u>11</u>
Total	66	66

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The actual work schedule may, of course, be subsequently altered after evaluation of assessment reports. This is completed in May of each year.

The combined CY 1969 requirement for East and West Pakistan is \$4,400,000. The CY 1970 requirement for both Programs is \$2,400,000. Thus A.I.D. is seeking a total loan of \$6,800,000 for the Pakistan MEP for CY 1969 and CY 1970. Funds will be used for the following imported commodities: DDT and transport, laboratory and spraying equipment, as well as ocean freight, a contingency fund and loan funding of the PASA technicians. A breakdown of the estimated foreign exchange costs of these items is shown below.

Even though the first of these commodities will not be used until CY 1969, it is necessary to provide FY 1968 financing because of the procurement and distribution lead times involved. The schedule of procurement, distribution and spraying in East and West Pakistan is shown in Exhibit 7 and 8 Annex II.

#### B. BORROWER AND IMPLEMENTING AGENCY

The Borrower will be the Government of Pakistan (GOP). The implementing agency will be the Central Malaria Eradication Board of the GOP which coordinates the actual project implementation for the two Provincial Malaria Eradication Boards. The functions and responsibilities of the various echelons of the implementing agency are described in Section II C above.

#### C. FOREIGN EXCHANGE COSTS

The foreign exchange cost estimates for the MEP for CY 1969 and 1970 are shown in the table on the following page. This CAP is being written to secure financing for the foreign exchange requirements of both fiscal years if adequate funds are available for such a commitment. If they are not, the budget is broken down to identify each year's requirements separately and a loan should then be made to cover only CY 1969 requirements.

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ESTIMATE OF LOCAL & FOREIGN DISBURSEMENTS, CY 1969 & CY 1970

COMMODITY	EAST PAKISTAN		WEST PAKISTAN		TOTALS		GRAND TOTAL
	1969	1970	1969	1970	1969	1970	
1 DDT - 75% WDP	\$1,775,025	\$1,146,119	\$1,078,740	\$539,640	\$2,854,785	\$1,685,789	\$4,340,534
2. <u>TRANSPORT</u>							
a. Vehicles	44,800	NIL	80,000	NIL	124,800	NIL	124,800
b. Spare Parts	15,000	15,000	80,000	80,000	75,000	75,000	150,000
c. Tools	10,000	2,000	5,000	5,000	15,000	7,000	22,000
3. <u>LABORATORY EQUIPMENT</u>							
a. Microscopes	80,000	NIL	NIL	NIL	80,000	NIL	80,000
b. Microscope Spare Parts	5,000	5,000	5,000	5,000	10,000	10,000	20,000
c. Misc. (incl. slides, chemicals, drugs, etc.)	55,000	55,000	5,000	5,000	80,000	80,000	120,000
4. <u>SPRAY EQUIPMENT</u>							
a. Sprayers	84,000	NIL	NIL	NIL	84,000		84,000
b. Sprayer spares	141,000	140,000	31,500	31,500	772,500	171,500	344,000
Nozzle tips	40,000	16,000	NIL	NIL	40,000	16,000	56,000
Sub-Total	\$2,249,825	\$1,379,159	\$1,298,240	\$68,140	\$3,315,865	\$1,825,296	\$5,341,161
5. CONTINGENCIES (7%)	157,474	98,541	98,607	31,280	249,111	127,771	373,882
6. FREIGHT & INSURANCE (12%)	289,935	185,489	141,900	53,537	431,835	239,038	640,841
7. TECHNICIANS (10%)					230,000	230,000	430,000
<b>TOTALS</b>	<u>\$2,877,054</u>	<u>\$1,541,109</u>	<u>\$1,603,827</u>	<u>\$500,907</u>	<u>\$3,733,881</u>	<u>\$2,312,106</u>	<u>\$6,755,987</u>
				587	1,400,000	\$2,400,000	58,880,000

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EXPLANATORY NOTES

1. DDT - The DDT requirements for the MEF are calculated on the basis of established WFO formulas. The requirements for imported DDT are:

	<u>CY 1969</u>	<u>CY 1970</u>
	2130 M/T	670 M/T
WFMEP	(4,694,520 lbs.)	(1,476,630 lbs.)
	3500 M/T	2270 M/T
EFMEP	(7,717,500 lbs.)	(4,983,300 lbs.)

The DDT cost is calculated on the basis of 23¢/lb. FOB. In recent years the Pakistan Program has gotten a C&F cost, on the average of 23¢/lb. However, they have paid 26¢/lb. earlier. The budget must also protect against adverse seasonal price swings. Delays in procurement might mean significantly increased prices because of the diversion of U.S. production to U.S. agriculture beginning in early January.

In addition to imported DDT, the Program requires an additional 300 M/T in West Pakistan and about 300 M/T in East Pakistan. The Nowshera facility in WF has 300 M/T p.a. capacity. Any surplus availability will be used to build a buffer stock. In EF, the government-owned Chittagong facility will go into production in CY 1968 with estimated annual capacity of 500 M/T. However, the EFMEP is counting on receiving only 300 M/T per annum because of uncertainties about the ability of the plant to deliver at the times required by the Program.

- 2.(a) The WFMEP is procuring 40 replacement vehicles at an average cost of \$2,000/vehicle. This is the price for knockdown Willys vehicles which are then assembled in WF. Assembly, taxes, etc. are rupee costs. The present fleet in WF consists of 423 vehicles of which 42 will go out of use in 1968. Of the remaining vehicles 375 are Willys, on which the fleet is now being standardized.

A proprietary procurement waiver will be sought on these vehicles.

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In EF, 20 vehicles are being procured as additions to meet requirements for opening new zones. The CJ-6 Jeep, with canvas half top, is being procured at a unit cost of \$2,230. These jeeps for EF are imported already assembled.

(b) Vehicle Spares - \$60,000 in vehicle spares is required each year (1969 & 1970) in WF. The last spares for WF were procured in 1964 and the program is now being forced to procure in the local market at very high cost until spares procured under H-128 arrive in country. An inventory of about \$40,000 is used each year on an average fleet of 400 vehicles. The MEP will use the funding in addition to this requirement to build its stocks. Tendering in conformance with Willys specifications will be required.

EF has received vehicle spares with more consistency under prior loans than WF and therefore has a lower requirement for 1969 and 1970 than the WMEP.

(c) Tools - The WMEP will require about \$5,000 p.a. for tools, primarily towing/lifting equipment and some workshop items. The EFMEP requires about \$12,000 for two years for workshop tools and towing/lifting equipment. Efforts will be made to procure this through Excess Property.

3(a) The EFMEP does not plan to procure anymore microscopes. Attention will be focused on rehabilitation of existing stock.

The EFMEP will buy 200 microscopes in FY 1969 as additions. These will be used in opening new zones and improving the capability of existing zonal operations. There are presently 400 operable microscopes. 257 will be added under H-128. With those proposed for 1969, the availability will be about 660. This will meet the microscope requirements of the EFMEP for the balance of the program.

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(b) The WPMEP plans to rehabilitate about 50 microscopes a year at a cost of \$100 each. These will be returned to the factory for complete overhaul. Any requirement for a spares inventory will be met out of the contingency fund.

The EPMEP has a similar need of \$5,000 each year for microscope spares. This is viewed as low for EP. However, additional requirements can be met out of contingencies built into the budget. A substantial amount of rehabilitation work is being done by local repairmen in EP as a rupee expense.

(c) The WPMEP has minor requirements of \$5,000 p.a. for misc., lab equipment, mostly drugs. The bulk of requirements through FY 1970 were taken care of in H-128.

The EPMEP has a continuing heavy requirement in this category of \$55,000 p.a. The major requirement (\$33,000 ea. year) is for glass slides for blood samples and related chemical requirements. At this stage of the EPMEP it is essential that adequate provisions be on hand for blood sampling.

4.(a) The WPMEP does not require any additional sprayers to complete its Program through CY 1970.

EPMEP has 19290 sprayers, of which only 15,600 are operational or capable of rehabilitation. An additional 2,800 are needed to carry out remaining attack phase and residual spraying requirements.

(b) The WPMEP requires \$31,500 each year for sprayer spares. This is primarily for such short-lived components as rubber gaskets, fabric straps, springs, etc., which wear out regularly under the heavy workload. They are essential to the functioning of the sprayer. These requirements in WP average \$4.00/sprayer p.a. on a \$30 sprayer. There are about 8,000 sprayers now in use in WP.

The EPMEP requirement for sprayer spares amounts to about \$140-141,000 annually for CY 1969 and 1970. No sprayer spares were obtained in 1967. During 1967 the EPMEP picked up 5,600 sprayers from WP without any spares. With total servicing requirements now for 18,400 sprayers, the cost per sprayer per year works out to about \$8.00. This is about double the cost of sprayer repairs in WP but climatic conditions are more severe in EP and a portion of the incoming spares will be used to develop an inventory carry over for subsequent years.

(c) Nozzle Tips - The WPMEP has adequate nozzle tips on hand for its requirements.

The EPMEP uses about 3-4 nozzle tips per sprayer per spray season. On this basis they will require 50,000 nozzle tips in 1969 and 20,000 in 1970 over and above available stocks. The cost is 80¢ each.

5. Contingency is computed at 7 percent on the total cost of commodities and equipment. For PA/PR procured items (DDT, sprayers and sprayer spares) this covers the NCDC surcharge and represents the majority of the contingency fund. The balance, computed against L/Comm items gives flexibility to the program for unusual requirements.

6. Freight & Insurance are computed at 12 percent. This figure has been used in the past and has been more than adequate. Since most shipments come via West Coast USA, the Suez situation will not have a large impact on freight costs. There appears to be adequate cover for those shipments which will have to come around Africa. There is additional leeway from item 1-DDT - which averaged 23¢ C&F in 1967-1968. The cost in item 1 is computed at FOB value.

7. As part of the Mission's effort to reduce its staff consistent with Presidential directives and yet maintain program capabilities, it has been decided to negotiate with the GOP to loan fund the NCDC technicians assigned under a PASA with the USPHS to the Pakistan MEP. After preliminary discussions, the GOP reluctantly agreed to consider this proposal.

\$200,000 is being budgeted each year to cover the costs of technicians in the event final agreement is reached in this matter with the GOP. This includes seven slots presently filled and the addition of two epidemiologists (required as the MEP moves into the advanced phases) plus one health educator. If agreement is not reached on this matter with the GOP, this amount of money will be deobligated.

The following table gives a cost breakdown of the dollar salaries and overhead involved for each position:

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Position	FC Grade	Rate	Man Months	Salary	Differential	Total	Personnel Benefits	Initial Travel	Transportation of Things	Total
<u>Chief Malaria Advisor</u> Karachi	4(3)	15,861	12	15,720	2,360	18,080	1,280	-	250	19,560
<u>Malaria Health Educator</u>	4(2)	15,561	6	7,780	1,168	8,948	1,317	395	3,100	13,860
<u>Asst. Chief Malaria Advisor</u> Lahore	5(3)	14,665	12	14,663	2,200	16,863	3,010	-	275	20,260
<u>Dacca</u>	4(2)	15,261	10.5	13,613	3,454	17,067	2,235	100	1,725	21,190
<u>Supply Specialists(Malaria)</u> Lahore	5(3)	13,769	12	13,769	2,025	15,794	1,300	-	275	17,390
<u>Dacca</u>	4(2)	15,561	12	15,561	3,242	18,803	1,305	370	260	22,030
<u>Supply Specialists Adv.(Malaria)</u> Lahore	5(5)	14,665	12	14,665	1,650	16,315	3,243	500	1,205	21,365
<u>Dacca</u>	5(5)	14,665	12	14,665	3,663	18,328	1,113	-	250	19,740
<u>Malaria Specialists(Epi. entology)</u> Lahore	5(1)	12,373		6,433	605	7,401	1,714	305	3,125	11,500
<u>Dacca</u>	5(1)	12,373		6,436	1,609	7,045	1,200	305	3,125	11,600
Contingency										20,110
TOTAL										200,000

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## D. PROJECT FINANCES

The original 1961 Plan of Operations for the MEP called for the following expenditure over the 14-year life of the Program:

### ORIGINAL PLAN OF OPERATIONS (in millions of rupees)

	<u>Local Expenditure</u>	<u>Foreign Exchange</u>	<u>Total</u>
East Pakistan	167.01	97.49	264.50
West Pakistan	<u>160.25</u>	<u>94.71</u>	<u>254.96</u>
Total	327.26	192.20	519.46

In March 1965 an upward revision was made in cost estimates for the program, resulting in a total planned expenditure of Rs 311.70 million in West Pakistan, Rs 344.60 million in East Pakistan and Rs 5.44 million in the Center, or a total of Rs 661.44 million.

As is indicated in the following figures, actual expenditure to date has fallen significantly short of the planned figures:

### COMPARISON ACTUAL EXPENDITURES AGAINST ORIGINAL PLAN OF OPERATIONS (FY 1961-1967) (in million rupees)

	<u>Orig. Plan of Operation</u>	<u>Actual Expenditures</u>	<u>Shortfall</u>
<u>FY 1961-1965:</u>			
EPMEP	66.53	38.55	27.98
WPMEP	96.85	51.32	45.03
Center	<u>---</u>	<u>0.33</u>	<u>(0.33)</u>
Sub-total	163.38	91.20	72.18
<u>FY 1966:</u>			
EPMEP	32.91	39.13	(6.22)
WPMEP	37.20	29.91	7.29
Center	<u>---</u>	<u>0.31</u>	<u>(0.31)</u>
Sub-total	70.11	69.35	0.76

<u>FY 1967:</u>			
EPMEP	30.93	18.23	12.73
WPMEP	32.07	20.14	11.93
Center	<u>---</u>	<u>0.16</u>	<u>(0.16)</u>
Sub-total	69.03	38.53	30.50
	<hr/>	<hr/>	<hr/>
Grand Total	302.52	199.08	103.44
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>
Actual Expenditure as % of Original Plan		65.3%	

After major shortfalls in the first five years of the MEP, FY 1966 expenditures were approximately as originally planned. However, in 1967 the MEP again fell far short of planned expenditures. The EPMEP has succeeded in coping with its shortfall and has maintained its planned schedule. In West Pakistan the Program is one year behind schedule in at least eight zones.

In FY 1967, revised estimates were prepared for the MEP, based on the Report of a special GOP - appointed Appraisal Committee. Their recommendations were not predicated on the technical requirements of the Program, but rather were an attempt to accommodate the budget crisis which forced the GOP to cut back in all sectors. These revised estimates reduced the total cost of the 14-year MEP from Rs 301.44 million to Rs 531.95 million, with the amount allocated for the Third Five Year Plan reduced by Rs 142.42 million to Rs 271.53 million, a cut of 34 percent.

THIRD PLAN ALLOCATIONS  
(in millions of rupees)

	<u>W. Pak.</u>	<u>E. Pak.</u>	<u>Center</u>	<u>Total</u>
1. ORIG. PLAN (1961):				
(a) 2nd Plan Shortfall	53.77	27.17	(0.83)	80.11
(b) 3rd Plan	<u>133.29</u>	<u>157.31</u>	<u>---</u>	<u>291.16</u>
Sub-total	<u>187.06</u>	<u>184.98</u>	<u>(0.83)</u>	<u>371.21</u>
2. March 1965 Revision	190.0	221.0	3.00	414.0
3. FY 1967 Revision	119.2	150.0	2.38	271.58

WFC and A.I.D. objected strongly to this budget cut, citing the original commitment of the GCP to provide necessary support and pointing out that the investment to date, equivalent to about \$40.0 million, was being jeopardized. It appeared that funds budgeted for the EPMEP for the remainder of the Third Plan would be adequate, given certain realizable economy measures. The proposed EPMEP budget (in million rupees) was:

	<u>Internal</u>	<u>External</u>	<u>Total</u>
FY 1968	23.5	8.7	32.2
1969	24.0	9.1	33.1
1970	20.0	5.4	25.4

However, it was clear that the EPMEP could not be executed under the revised budget and still have as its objective the eradication of malaria. The revision proposed a Third Plan budget of Rs. 119.20 million for the five years for the EPMEP. At the time of revision Rs. 53.8 million had already been spent by the EPMEP. This would have left only Rs. 65.7 million for the remaining 3½ years of the Third Plan.

Subsequent negotiations produced a revised budget level for the West Pakistan MEF which was acceptable to the GCP, GOWP, AID and WFC. The first step had been the establishment of a satisfactory scope of work which would essentially permit the EPMEP to stay in phase. A minimum budget was then devised to support this scope of work. It was clearly recognized that the negotiated budget was the minimum amount at which the Program could be satisfactorily executed. The risks of not achieving eradication according to the Plan were increased by the reduced budget. However, this is not presently viewed as an issue since future Plan of Action modifications can be made to get the MEF back on schedule.

The details of the negotiated budget are as follows:

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WEST PAKISTAN MALARIA ERADICATION PROGRAM

BUDGET ESTIMATES FOR FY 1968, FY 1969 AND FY 1970

<u>DESCRIPTION</u>	<u>1967-68</u>	<u>1968-69</u>	<u>1969-70</u>
<u>MALARIA</u>	<u>13,863,000</u>	<u>14,000,000</u>	<u>14,300,000</u>
<u>FIXED ASSET PURCHASE</u>			
1. Structures	4,000	4,000	4,000
2. Tools & Stationery	180,000	130,000	300,000
3. Transport equipment	5,000	5,000	5,000
4. Laboratory equipment	140,000	150,000	150,000
5. Workshop equipment	50,000	40,000	40,000
6. Medicines	4,200,000	4,200,000	4,200,000
7. Anti-malaria drugs	250,000	265,000	295,000
<u>Total Fixed Purchase</u>	<u>4,830,700</u>	<u>4,800,000</u>	<u>5,000,000</u>
<u>RECURRENT EXPENDITURE</u>			
1. Repair of buildings	407,000	400,000	400,000
2. Transport maintenance	400,000	500,000	500,000
3. Transport S.S.I.	1,200,000	1,200,000	1,200,000
4. Salaries & Honor	3,812,000	2,525,000	2,125,000
5. Miscellaneous	435,000	500,000	400,000
6. Unloading charges	75,000	75,000	75,000
<u>Total Recurrent Expenditure</u>	<u>6,330,000</u>	<u>5,200,000</u>	<u>4,700,000</u>
<u>TOTAL S.M.A.E.</u>	<u>8,800,000</u>	<u>5,400,000</u>	<u>4,300,000</u>
<u>TIME REQUIREMENT (INTERNAL AND EXTERNAL) DURING THE NEXT THREE YEARS: ...</u>	<u>33,703,700</u>	<u>29,400,000</u>	<u>28,000,000</u>

Annual expenditure during 1968-69 - Rupees		3.08 crores	
1968-67	"	2.83	"
1967-68	"	3.37	"
1968-69	"	2.94	"
1969-70	"	2.80	"

Total: Third Plan Period: 13.00 "

A budget of Rs 33.7 million was included in the West Pakistan ADF for FY 1968, and the FY 1969 and 1970 budgets were provisionally accepted by the Borrower.

WHO and A.I.D. malaria experts believe that the programs in East and West Pakistan can be carried out under the latest revised budgets in FY 1969 and 1970. The agreed level of funding is the absolute minimum at which Plans of Action for the two years can be executed and remain consistent with the 1961 Plan of Operations' objectives in terms of phasing and terminal dates.

### B. THE LOCAL CURRENCY PROBLEM

Aside from the question of the level of funding necessary to support an effective program, the WPMEP is still faced with the problem of the timely release of rupee funds by the finance authorities to MEP officials. The majority of rupee funds come from PL-480 generated rupees allocated under Section 104(f) to the Program through the ProAg mechanism. For example, the rupee component of the FY 1967 WPMEP budget was Rs 24.96 million of which A.I.D. provided, on a loan basis, Rs 21.1 million. The balance, for financing of sales taxes and import duties, was provided by the GCWP from its own resources. Due to shortages in budget revenues, the GCWP has established the practice of making releases to the WPMEP only after PL-480 rupees have been released to it.

A.I.D. has argued that releases, up to the amount budgeted each year by the GCWP for the MEP, should be made available as required by the Program in advance of ProAg releases, with reimbursement of the GCWP budget accounts taking place upon release of A.I.D. rupees. To date releases to the Program have been tied to the source of funding. This is not desirable because it assumes that the financial cycle of the MEP, which is determined by the technical requirements of the Program, is consistent with the cycle of PL-480 Section 104(f) rupee releases. This is clearly not the case.

To overcome the problem of slow releases, A.I.D. wrote the following conditions in its FY 1968 ProAg for the WPMEP:

1. The USAID upon signature of the Project Agreement will release Rs 10,550,000 which is 50% of the programmed funds during FY 1968.
2. The GCP will immediately make available to the Malaria Eradication Program all of the remaining balance of undisbursed FY 1967 funds. Rs 12,500,000 were reported undisbursed as of June 30, 1967.
3. The GCP will make available to the MEP within thirty days of the USAID release Rs 10,550,000.

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4. The GCP will immediately release Rs 5,000,000, if not already released, which constitutes the GCP contribution to the FY 1968 rupee budget of Rs 26,100,000.

5. The GCP will release rupees needed to offset foreign exchange costs.

6. The second release of Rs 10,550,000 will be made when the Director of the WPMEP has notified USAID of the receipt of the first release of Rs 10,550,000 and furnishes USAID with expenditure reports that justify the second programmed release."

The first FY 1968 release to the GCP was made on March 1 and the funds did not reach the WPMEP within the specified time. At the time of writing the Provincial Director, MEP, had not received the funds and felt that continued delays would be experienced.

In view of this latest failure by the GCP/GCWP to honor its commitments to A.I.D. covering the WPMEP and the problems this poses for the Program, A.I.D. will take steps to alter the mechanism for release by negotiating with the GCP for A.I.D. control over the actual release to the implementing agency. A modus operandi will have to be established for placing the rupees into a bank account from which A.I.D. can authorize disbursement upon presentation of necessary documentation by the implementing agency.

It is well to reiterate why A.I.D. continues to support the MEP when the GCP/GCWP have shown a reluctance to support it themselves. The three impelling reasons for continued support, which hopefully will encourage a more enlightened attitude by the GCP, are:

1. The eradication of malaria is a regional effort involving programs in Iran, Afghanistan, India, Nepal and Burma as contiguous countries whose programs are intertwined with that of Pakistan. As pointed out elsewhere in this paper, the concept of eradication requires complete eradication of malaria-- thus the program in Pakistan must be successfully concluded to remove the danger of transmission within the region.
2. Expenditures through FY 1967 totaled about Rs 200.0 million, or 39 to 38 percent of the estimated total cost of the 14 year program (based on Rs 661.44 million and Rs 531.94 million respectively). The U.S. through FY 1967, provided \$27.76 million or Rs 132.14 equivalent to the MEP. Commitments made in FY 1968 increased this amount to \$42.35 million (Rs 201.6 million). If the program is truncated now, not only would this entire investment be lost, but the obstacles to ever

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mounting a successful malaria eradication program would be much greater. This is due to the insecticide resistance which develops in the mosquito unless the program is completed within a relatively short time period.

3. The economic as well as humanitarian benefits of the program are great.

For these reasons and others, A.I.D. will continue to press for and support the MEP in Pakistan.

The final rupee support required for FY 1969 and FY 1970 cannot be determined until the Plans of Action are submitted for the respective years. These Plans are generally finalized in May of each year for the following fiscal year after the results of the annual independent assessment are evaluated by Program officials and the necessary changes in phasing built into the subsequent Plan of Action. A.I.D.'s preliminary estimate of the requirement for rupee loan assistance is as follows:

	<u>FY 1969</u>	<u>FY 1970</u>
BFMEP	Rs 25.0 million	Rs 23.0 million
WFMEP	Rs <u>21.5</u> million	Rs <u>21.5</u> million
Total	Rs 46.5 million	Rs 44.5 million

Both rupee and dollar requirements will drop off sharply after FY 1970, particularly in the WFMEP. The major budget items -- DDT and personnel salaries and wages -- will decline because the attack phase in most zones will have been completed. DDT requirements will be confined to residual spraying activities, and seasonal requirements will be virtually eliminated as shown in Exhibit 5, Annex II.

Current calculations indicate that rupee generations under existing PL-480 agreements will be sufficient to meet the requirement in FY 1969. Subsequent generations are open to question, however, because present indications are that Pakistan's foodgrain requirements -- the major portion of recent PL-480 agreements -- will be met increasingly from local production. There undoubtedly will be generations on other agricultural commodity imports under the PL-480 program, however, and A.I.D. is prepared to provide rupees from those generations on a priority basis to the MEP. Thus, while funding of the Program's rupee budget could become a problem, it does not appear that it will. Hopefully the GCI's development budget situation will improve by that time to the point where it could increase its contributions and take up any slack from a shortfall in PL-480 monies.

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## E. ECONOMIC ANALYSIS

Although the investment in malaria eradication is primarily a "social investment" as opposed to a "productive investment," it can be justified in terms of its direct effect on sectors which are directly productive. In particular, since malaria is a rural disease, its effect on agricultural production is very important to a country such as Pakistan which is striving to achieve self-sufficiency in food.

In Pakistan, it is estimated that, at the onset of the Program, 20 million Pakistanis each year suffered from malaria. On the average they were totally incapacitated for an average of six working days and did not return to full productivity for a period of about two months. This meant that some 960 million man hours were lost annually, while an additional 1,300 million man hours were only partially utilized. Even in a country like Pakistan where unemployment is substantial and underemployment is widespread, this staggering loss of manpower represents a major hurdle to economic development. The significance of these foregoing statistics is further focused by other characteristics of malaria, such as:

- (1) Malaria is predominantly a disease of the rural population and is particularly prevalent in areas with artificial irrigation. With the opening of the Sukkur Barrage, the Sind became one of the most highly malarious areas in the country. Malaria experts point out that, in the absence of a successful eradication program, the expansion of water resource projects in Pakistan would greatly increase the incidence of malaria.
- (2) Malaria is a seasonal disease and the height of its prevalence occurs at precisely the time when the Rabi crops are being sown and the harvesting of Kharif crops is undertaken.
- (3) Malaria incidence is widespread. The height of the malaria season occurs precisely when the rural population should be most active in the cultivation of crops. Yet at this time, a large proportion of the population in rural areas may be suffering the effects of malaria.

A statistically verifiable system of economic analysis for evaluating the benefits of malaria eradication has not yet been developed, primarily because the proper controls cannot be imposed. In Pakistan, deficiencies in the system of health statistics add to the problem. Nevertheless, isolated attempts to measure the impact of malaria on the economy have been made and all point to the favorable

effect the elimination or reduction of the incidence of malaria can have on agricultural productivity.

The results of an experiment conducted in East Pakistan in 1949-51 by WHO indicated that the removal of malaria alone may result in an increase of 15-40 percent in agricultural production. Similar results have been obtained elsewhere in the world where malaria eradication programs have been undertaken. In Greece, where the eradication concepts were first employed and where the results are best documented, harvests increased 20-30 percent in protected areas.

Compared to these results, the cost of malaria eradication programs is relatively low. The WHO recommends an expenditure of about one dollar per person per year for the average seven year length of the program. The Pakistan program, however, has been phased over fourteen years for a total cost of \$120-\$140 million, which works out to about \$1.00 or Rs. 5 per person for the whole program. Compared to the cost of the Program, conservative estimates place the annual loss of income in Pakistan due to malarial effects at about 405.54 million, or Rs.312.0 million, which is about 47 to 55 percent of the total cost of the program. Stated in another way, the internal rate of return of the program, measuring only benefits during the 14 year eradication program itself, might be in the order of 60 percent.\* The return thereafter would be much greater. Included as Exhibit 11 to this CAP is a summary taken from the Annual Report for 1966-67 of the Pakistan MEF of recent economic studies done in Pakistan in an attempt to measure benefits of the Program, without accepting the soundness of the approaches taken and allowing for a considerable margin of error in calculating "annual loss of income" data, we may conclude that the economic benefits of this project are significant.

As has already been pointed out, health, and in this case malaria specifically, is both a means of achieving development and a principal goal of development itself. The aim of integrated social and economic development is to improve the general level of living of the people. The eradication of malaria in Pakistan will be a major step in this direction.

Health is one of the major determinants of the quantity and quality of the output of human capital. The WHO declares, "annual reports of the United Nations on the world economy indicate that developing countries whose economies show constant growth are among those that have achieved the greatest progress in the eradication or control of the main endemic diseases." Though illness strikes the individual, the resulting economic losses are a burden on the society as a whole. Conversely, increased productivity resulting from health improvements benefits the community even more than the individual. President Johnson has given clear cut recognition to this role of health in economic development by making it, along with education and agriculture, one of the main thrusts of the current year's foreign aid program.

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Finally, the eradication of malaria has become a worldwide effort, excluding for the time being only the very poorest of the developing countries, in terms of health resources, which has received strong support from the U.S. Government. The belief of the USG that eradication is a feasible and attainable goal is evidenced by the fact that A. I. D. can no longer support antimalaria schemes that employ only control measures. Pakistan's role in the regional effort to eradicate malaria is vital. Iran, Afghanistan, India, Nepal and Burma, as contiguous countries, all have programs whose prospect of success is in varying degrees intertwined with that of Pakistan. The programs in India, Burma and Pakistan are directly coordinated to ensure that progress in one country is not overcome by failure in its neighboring countries. The threat of imported incidence of malaria is very real and must be carefully prevented.

The MEP in Pakistan is clearly making an important contribution to the development of human resources necessary for social and economic development. It is the only program which extends to every household in the rural areas. As such, potentially valuable avenues of communication are being developed through which future programs in health and other areas may be implemented. Pilot projects are already being taken up to determine the ways and means of integrating the MEP with the rural health program.

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\* This calculation is based on phasing of expenditures of \$120 million according to Original Plan projections, no benefits the first two years, and benefits rising to Rs. 312.0 million a year on a straight line basis between year 3 and year 4.

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## IV. IMPLEMENTATION PLAN

### A. TIME SCHEDULE

For purpose of time phasing, it is assumed that A.I.D. will authorize at least the FY 1969 requirement of the WFP by May 31, 1968 and that the loan Agreement can be negotiated and executed within two months thereafter. At a maximum CP fulfillment will require an additional three months (October 31, 1968). Efforts will be made to negotiate a 30 day period for fulfillment. Based on current experience with M-120 procurement, this will barely provide the minimum time for procurement, shipping and delivery in East Pakistan for the first round of spraying which begins there on March 1, 1969. It will not accommodate slippage at any point. Therefore every effort must be made to match the schedules in Exhibits 7 and 8, Annex II, which are based on the ideal time phasing.

The terminal date for requesting L/Comms will be December 31, 1969 and the terminal date for disbursement will be December 31, 1970, assuming that adequate financing is available for both FY 1969 and 1970 requirements. If the loan is confined to FY 1969 requirements only, the terminal date for requesting L/Comms will be December 31, 1968 and the TDD of the loan will be December 31, 1969.

### B. COMPLETING PRECEDENT

The CPs will take essentially the same form as in Loan M-120, except that they will be structured so that East Pakistan and West Pakistan can satisfy them separately, to the extent possible. This will prevent the usual delays in WF from affecting the EFNEP, as in the past.

Since efforts will be made to fund PASA technicians under the Loan, a CP will be inserted requiring satisfactory arrangements for the provision of technical advisors from MCCDC. If negotiations for loan funding of PASA technicians are delayed or do not produce a workable agreement this CP will be deleted from the Loan Agreement.

The terminal date for meeting Section 3.01 CPs will be 90 days after the date of the Loan Agreement signing, unless otherwise negotiated.

Separate CPs will be established for disbursements against FY 1970 requirements. These CPs will repeat the initial CPs, with minor exceptions, and will require that the plans called for by Covenants in the Loan Agreement, covering eradication in urban areas and the phase in of Health

Services, have been submitted as required.

The terminal date for satisfaction of Section 3.02 CFCs will be July 31, 1969.

The CFCs covering the requirement for submission of Annual Plans of Action will specify that the budget necessary to support the Plans of Action, subject to subsequent revision by mutual agreement, are as follows:

		<u>FY 1969</u>		<u>FY 1970</u>
EPMEEP	Rs.	33.1 million	Rs	25.4 million
WFMEEF	Rs	29.4 million	Rs	28.0 million

The CF will specifically confirm that these amounts have been budgeted.

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### C. PROCUREMENT

The commodities financed by this loan will be procured by the Government of Pakistan through commercial channels, in accordance with A.I.D. regulations, except for DDT and spraying equipment which will be procured by the National Communicable Diseases Center (NCDC) through the General Services Administration (GSA). These procurement procedures have been employed on the previous loans A.I.D. has made to the MEF in Pakistan. Orders for commodities will be placed in sufficient time to ensure their availability for use in the program during the respective fiscal years.

It is desirable that orders for the first round of spraying requirements in E.F., which begins in March of the respective year, be placed in July and certainly no later than September. A.I.D. will bifurcate the CPs so that the EPMEP can individually satisfy its requirements. Thus A.I.D. believes a satisfactory timing can be developed on the procurement, shipping and internal delivery of commodities for the most imminent requirements in E.F.

### D. LOCAL PROCUREMENT OF DDT

The question of local procurement of DDT became an issue for consideration in the E-128 CAP. The problem has been further reviewed during the current year and the present status is as follows:

Present capacity in Pakistan for production of DDT includes the government-owned facility at Nowshera which supplies 700-800 M/T annually to the WPMEP. The Chittagong facility also came on line during the current year and has an estimated capacity of 300 M/T per annum. The output of these two facilities will be entirely taken up by the MEF according to the terms of existing inter-agency commitments.

The private sector facility in WP, about which the issue revolved last year, has not gone into production because there are no apparent buyers for its high cost output (prices are over three times CAP costs of imported DDT). The maximum output of this facility is 3.6 million pounds, which theoretically could provide an ideal buffer stock for the MEF. However, to triple (at a minimum) the cost on 3.6 million pounds of DDT would destroy the already weak budget of the MEF. The only alternatives, if this DDT were used, would be (a) to obtain a sanction for an increased budget -- this is highly unlikely in view of the prevailing government attitude regarding the Program, or (b) cut back spraying operations to accommodate the higher cost -- this is technically unsound and would prevent the achievement of eradication.

A detailed study of the advisability of subsidizing this high cost production, on the argument that it would save substantial foreign exchange for Pakistan, was made by A.I.D. during the current year. Based on information supplied by the manufacturer, the Secretary of Industries and A.I.D. data on the import price of DDT, the following comparison of the required subsidy per M/T with the foreign exchange saved per M/T was made using selected conversion rates:

	<u>Rupce Value of Foreign Exchange Saved at Various Scarcity Rates</u>	<u>Required Rupce Subsidy</u>	<u>Net Saving</u>
Rs 4.7615 = \$ 1.00	1,319	5,510	- 4,191
Rs 8.0 = \$ 1.00	2,213	5,510	- 3,297
Rs 12.0 = \$ 1.00	3,324	5,510	- 2,186
Rs 16.0 = \$ 1.00	4,432	5,510	- 1,078
Rs 19.0 = \$ 1.00	4,900	5,510	- 610
Rs 20.0 = \$ 1.00	5,540	5,510	+ 30

A value of Rs. 20/\$ 1.00 would have to be assigned to the foreign exchange saved through local procurement to justify the required subsidy. Even assuming a significant margin of error in this analysis, it was concluded "that the foreign exchange saving to be had at the present time from local procurement of this DDT does not justify the amount of subsidy required to match the competitive DDT import price."

Furthermore, tests conducted by NCDC on test samples of this DDT indicated it was clearly below required standards. This problem, however, might be overcome without extreme difficulty if the price problem/<sup>WSPC</sup>resolved.

A.I.D. will require that, prior to procurement of locally produced DDT whose sales price is substantially in excess of imported DDT prices, the borrower must obtain the concurrence of A.I.D. or sanction an increased rupee budget to cover the additional cost over imported DDT prices. The present budget is structured to provide for DDT procurement from the Newsham and Shikrapur facilities. A.I.D. has no objections to continuing this procurement because of long-standing commitments and because it provides a reserve factor to the stock requirement of the Program which has proven invaluable during seasons when the arrival of imported DDT has been delayed.

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E. PROGRAM PHASING

The phasing of the MEP in East and West Pakistan for the remaining years of the Program is shown in Exhibits 9 and 10, Annex II. Spraying operations are planned for termination in West and East Pakistan in 1970 and 1971 respectively. If rephasing is necessitated, the entire country may not be protected against malaria by the end of the Fourth Plan as now contemplated. However, excluded zones will be zones of low endemicity that can be feasibly isolated and brought into the Program as financing and commodities become available.

F. CONDITIONS AND COVENANTS

A. I. D. proposes to include the following covenants in the Loan Agreement:

(1) The Borrower shall submit to A. I. D. prior to December 31, 1968, a satisfactory plan, including details on time phasing, for the effective surveillance and eradication of malaria in urban areas, indicating how the plan will be financed and implemented and which organization will be responsible for its execution.

(2) The Borrower shall submit to A. I. D. prior to December 31, 1968, a satisfactory plan, including details on time phasing, for the effective transfer to and effective implementation by, the local Health Services of the responsibility for maintenance of malaria-free zones after malaria has been eliminated. Financial and implementation plans should be detailed to indicate the level of financial support and staffing that will be required by the Health Services to effectively carry out these responsibilities.

(3) The Borrower shall cause the procedures set forth in the Supply and Transport Manuals approved by the Government of Pakistan, WFC and A. I. D. to be implemented by the Malaria Eradication Board in a manner mutually agreeable to Borrower and A. I. D.

See Section IV. B above for the structuring of Conditions-Precedent designed to facilitate the loan implementation.

In addition, the conditions under which this loan is being made will be strengthened by A. I. D.'s position that rupee releases under our PL-480 funding for the WPMEP will be directly controlled by A. I. D. and said releases will be made directly to the WPMEP. This position will be discussed officially with the GOP prior to execution of the Loan Agreement.

V. MISCELLANEOUS

A. IMPACT ON U.S. ECONOMY

The proceeds of this loan all will be spent in the U. S. and will increase exports of DDT and transport, laboratory and spraying equipment and spare parts over levels which would otherwise obtain.

B. REPAYMENT PROSPECTS

The Borrower will be the Government of Pakistan (GOP) and the implementing agency the Central Malaria Eradication Board (CMEB) of the Government of Pakistan. It will be the obligation of the GOP to make interest and principal payments on this loan to A. I. D.

An assessment of Pakistan's external debt position and prospects leads us to share the view of other observers, including the IFED, that Pakistan can support additional debt as long as the blend of terms continues to be soft. Pakistan's external public debt amounted to less than \$200 million at the end of the First Plan. By June 1966, Pakistan had received long and medium term loan aid commitments or contracted for loan aid totalling \$2.4 billion requiring service in foreign exchange of which \$1.3 billion had actually been disbursed and was subject to such debt service as specified by the loan terms. The service on this debt called for about \$110.5 million in 1967, of which \$16 million was for privately placed debt and the balance of \$95 million for publicly placed debt. This service is equivalent to about 12-14 percent of prospective foreign exchange earnings. During FY 1967 Pakistan was offered about \$400 million of additional credits and expected disbursements of about \$500 million. If Pakistan's additional requirements for foreign capital are met on the existing average terms (after adjusting for recent changes in the rates of interest and terms of payment from some sources) its debt service on long and medium term debt will probably average over \$200 million a year for the Fourth Plan. However, if earnings of foreign exchange continue to rise by 10 percent a year for the balance of the Third Plan and in a range of at least 7-10 percent thereafter, the foreseeable debt service should remain within the range of 15-20 percent of earnings for the next decade. Even if every effort is made to sustain the good export performance there remain uncertainties outside Pakistan's control, such as the future of jute, on which its foreign exchange earnings are heavily dependent. It would, therefore, not be prudent to propose any significant hardening of terms at present.

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Although Pakistan can continue to accept some debt on conventional terms, its ability to do so depends on a degree of continuity in such relations and on the availability of the bulk of its requirements on soft terms.

We consider that Pakistan's favorable development prospects support its long term capability to repay debt on the scale and terms projected. It is the judgement of A. I. D. that there is a reasonable prospect of repayment of this loan under the terms and conditions being recommended.

C. EXPORT-IMPORT BANK CLEARANCE

The Export-Import Bank informed A. I. D. on that it did not desire to consider a loan for this project. All previous malaria loans in Pakistan were made after similar determination by the Eximbank.

D. OTHER FREEWORLD SOURCES OF FINANCING

The consortium method of coordinating sources of financing for Pakistan's development requirements reasonably assures that no other Free World financing is available for this project. WHO's assistance will continue to be confined to technical assistance, with minor exceptions, and UNICEF has unequivocally stated it will provide no further direct financial support to the Program.

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## VI . CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis in this paper, A.I.D. has concluded that:

1. The Malaria Eradication Program is one of the most vital health programs in Pakistan, based on social and economic criteria.
2. The Malaria Eradication Program is technically well designed to achieve the objective of eradication and is operationally sound if the GOP-WHO Plan of Operation and derivative annual Plans of Action are followed.
3. The financial plan for the Malaria Eradication Program as agreed to between the GOP and WHO is sound. Recent weaknesses in the Program are attributable to deviations from this plan which have necessitated operational modifications. A.I.D. is continuing to take steps to correct these weaknesses.
4. Progress to date indicates the Program is successful in reducing the incidence of malaria in Pakistan as a first step to eradicating the disease.
5. There have been significant improvements during 1967-68 in the supply and transport aspects of the program. The systems involved are no longer major problems. The problems now relate primarily to the timely availability of commodities and equipment which is not directly controllable by the MEP. Every effort will be made to expedite the procurement-shipping - internal distribution cycle.
6. Immediate attention should be focused on (a) eradicating malaria in the urban areas in order to prevent renewed transmission in protected zones, and (b) phasing in of the Health Services to ensure maintenance of eradication after termination of the MEP. Covenants in the Loan Agreement will be directed to covering these problems.
7. The cost estimates of commodities to be financed under this loan are reasonable and based on latest available prices.
8. The local currency problem has not been satisfactorily resolved to date. Now that an adequate level of support has been assured, efforts must be directed at providing for the timely availability of those funds. A.I.D. will take steps to facilitate budget releases to the MEP.

9. The implementation plan is sound in light of experience with previous loans. The key to meeting the timing requirements will be the expeditious negotiation and execution of a Loan Agreement and rapid satisfaction of CPs.
10. The Malaria Eradication Program has made reasonably satisfactory use of previous A.I.D. financing.
11. There is reasonable expectation that the loan can be repaid under the terms and conditions recommended.

As shown in Annex I, all A.I.D. statutory criteria have been met.

In view of the foregoing, A.I.D. recommends authorization of a loan of \$6.8 million for the FY 1969 and FY 1970 foreign exchange requirements of the MEP. If sufficient funds are not available, the loan should be made to cover only the FY 1969 foreign exchange requirements of the MEP, which amount to \$4.4 million. The loan should be subject to the standard A.I.D. terms and conditions and the Special Conditions and Covenants given in Section IV. F.

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ANNEX I

Checklist of Statutory Criteria

1. FAA § 102. Extent to which US commodities and services are furnished consistent with improving the US balance of payments . -- All goods and services financed by this loan will have their source and origin in the United States.
2. FAA § 201(b). Manner in which loan will promote country's economic development, emphasizing help for long-range plans and programs designed to develop economic resources and increase productive capacities. -- Considered throughout the loan paper, especially Sections II A and III F.
3. FAA § 201(b)(1). Information and conclusion on availability of financing from other free-world sources, including private sources within the United States. , -- This loan is a part of the United States share of Consortium assistance to the Government of Pakistan for fiscal year 1968. Other financing for this loan is not available.
4. FAA § 201(b)(2). Information and conclusion on activity's economic and technical soundness, including the capacity of the recipient country to repay the loan at a reasonable rate of interest. -- The malaria eradication program is considered economically and technically sound. See Section III of this paper. Pakistan is considered to have the capacity to repay this loan under recommended terms and conditions.
5. FAA § 201(b)(3).- Information and conclusion on existence of reasonable promise activity will contribute to development of economic resources or increase of productive capacities. -- By reducing the incidence of malaria, and thus freeing agricultural workers from the debilitating effects of the disease, productive capacities and economic development should be enhanced.

---

The following abbreviations are used:

FAA - Foreign Assistance Act of 1961, as amended by the Foreign Assistance Act of 1967.

App. Foreign Assistance and Related Agencies Appropriation Act, 1968.

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6. FAA § 201(b)(4). Information and conclusion on activity's relationship to other development activities, and its contribution to realizable long-range objectives. -- The project will contribute to Pakistan's goals of eradicating malarial and improving public health.
7. FAA § 201(b)(5). Country's self-help measures, including institution of Foreign Assistance Act investment guaranty programs. -- Pakistan has been and is undertaking a wide range of significant self-help measures, particularly in the field of agriculture. Pakistan has agreed to the institution of the expropriation and inconvertibility guaranty programs, and is expected to agree shortly to the war risk and Extended Risk Guarantee programs.
8. FAA § 201(b)(6). Information and conclusion on possible effects on U. S. economy, with special reference to areas of substantial labor surplus. -- Commodities will be purchased from the US Suppliers. No particular benefit to areas of labor surplus is anticipated.
9. FAA § 201(b)(7). Information and conclusion on the degree to which the country is making progress toward respect for the rule of law, freedom of expression and of the press, and recognition of the importance of individual freedom, initiative, and private enterprise. -- Pakistan's adherence to the maintenance of the Rule of Law, individual freedom and relative freedom of expression and of the press is recognized. Private enterprise and initiative are regarded as having an important place in Pakistan's economic development drive. Measures have recently been taken which it is expected will permit even greater opportunity for the exercise of initiative and private enterprise.
10. FAA § 201(b)(8). Information and conclusion on the degree to which the country is taking steps to improve its climate for private investment. -- Pakistan's leaders have recognized that domestic and foreign private investment is essential to Pakistani economic development, and efforts supporting private investment continue.

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11. FAA § 201(b)(9). Information and conclusion on whether or not the activity to be financed will contribute to the achievement of self-sustaining growth. -- The promise of the loan reflected throughout the loan paper is that it will contribute to the achievement of self-sustaining growth.
12. FAA § 201(b). Information on applicability of the twenty-country ceiling. -- Pakistan has been included in the list of countries eligible for Development Loan assistance during the current fiscal year.
13. FAA § 201(b). Information and conclusion on reasonable prospects of repayment. -- It is concluded that repayment is reasonably assured.
14. FAA § 201(d). Information and conclusion on legality (under laws of the country and the US) and reasonableness of lending and relending terms. -- The funds will be lent in compliance with the laws of the United States and of Pakistan and the lending terms are considered reasonable. The Government of Pakistan will not retain the loan funds.
15. FAA § 201(e). Information and conclusion on availability of an application together with sufficient information and assurances to indicate reasonably that funds will be used in an economically and technically sound manner. -- Considered in Section <sup>411</sup>---. Sufficient information and assurances have been received - and adequate controls will be incorporated in the loan agreement - to indicate that the funds will be used in an economically and technically sound manner.
16. FAA § 201(f). If a project, information and conclusion whether it will promote the economic development of the requesting country, taking into account the country's human and material resource requirements, and the relationship between the ultimate objectives of the project and the country's overall economic development. -- The project will promote economic development. Considered throughout the loan paper, specifically Section 1.3.2.

17. FAA § 201(f). If a project, information and conclusion whether it specifically provides for appropriate participation by private enterprise. -- Private US suppliers will provide the goods to be provided under the loan.
18. FAA § 201(g). Total amount of money under loan which is going directly to private enterprise, is going to intermediate credit institutions or other borrowers for use by private enterprise, is being used to finance imports from private sources, or is otherwise being used to finance procurements from private sources. -- All goods financed from the loan will be procured from private sources in the US.
19. FA § 207. Information on the emphasis placed on
- (a) encouraging development of economic, political and social institutions;
  - (b) improving availability in the country of educated trained manpower;
  - (c) self-help in meeting the country's food needs;
  - (d) programs aimed at malnutrition, disease eradication, slum clearance, water purification, sewage disposal, health education, maternal and child care (including family planning), and other public health assistance;
  - (e) other development activities including industrial development, free labor unions, cooperatives and voluntary agencies; transportation and communication systems; capabilities for economic planning and public administration; urban development; and modernization of laws to facilitate economic development. --
- (a) Improvement of health standards in order to be viable.
  - (b) By reducing malaria and increasing productive capacities, development, the loan will permit better utilization of existing manpower;
  - (c) The reduction of malaria should improve productive capacities of agriculturalists;
  - (d) The program this loan supports is designed to end malaria;
  - (e) No direct effect.

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20. FAA § 202. Information on the extent to which the country is
- (a) attempting to increase food production and food storage and distribution facilities;
  - (b) creating a favorable climate for foreign and domestic private enterprise and investment;
  - (c) increasing the role of the people in the developmental process;
  - (d) allocating expenditures to development rather than to unnecessary military purposes or intervention in other free countries' affairs;
  - (e) willing to contribute funds to the project or program;
  - (f) making economic, social and political reforms such as tax collection improvements and changes in land tenure;
  - (g) responding to the economic, political and social concerns of its people and allowing a determination to take self-help measures.
- (a) Pakistan has undertaken an extensive program to bring about agricultural self-sufficiency and improve means for storage and distribution of food.
- (b) Considered above with respect to Section FAA 201(b)(3).
- (c) Pakistan has applied great emphasis in its Basic Democracies and agricultural improvement program in bringing the people into its development process.
- (d) Pakistan's development programs embodied in its Third Five Year Plan stress key development areas, and governmental expenditures are used for development and not diverted to unnecessary military purposes or foreign intervention.
- (e) Pakistan is providing the local currency resources required for this Project.
- (f) Pakistan is engaged in programs for economic, social and political reforms of both a short and long-term nature, in order to achieve development objectives more efficiently and justly.
- (g) The emphasis Pakistan has placed on development is noteworthy and the country has demonstrated an unusual determination to carry through self-help measures.

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21. FAA § 203. Information about multilateral assistance being furnished to the country and whether the loan will encourage regional development programs. -- Pakistan is receiving assistance from the members of the Pakistan consortium from other free world donors, and from Communist bloc sources. It is not anticipated that the loan will affect regional development.
22. FAA § 204. Actions to which loan will contribute to the objective of assuring maximum participation in the task of economic development on the part of the people of the developing countries through the encouragement of cooperative private and local governmental institutions. -- The project will lead to the improvement of living standards, a basic requirement for economic development.
23. FAA § 601 (a). Information and conclusions whether loan will encourage efforts of the country to : (a) increase the flow of international trade; (b) foster private initiative and competition; (c) encourage development and use of cooperatives, credit unions, and saving and loan associations; (d) discourage monopolistic practices; (e) improve technical efficiency of industry, agriculture, and commerce; (f) strengthen free labor unions. -- (a) All equipment and materials financed under the loan will be procured in the United States, with a consequent effect on US-Pakistan trade patterns; (b) No direct effect; (c) No direct effect; (d) No direct effect; (e) No direct effect; (f) No direct effect.
24. FAA § 601(b). Information and conclusion on how the loan will encourage US private trade and investment abroad, and how it will encourage private US participation in foreign assistance programs (including use of private trade channels and the services of US private enterprises. -- The loan will not have a direct effect on encouraging US investment abroad, but does encourage private US participation in foreign assistance programs by the use of US firms.
25. FAA § 601(d). Consideration of the project and conclusion on compliance with the Congressional policy that engineering and professional services of US firms and their affiliates are to be used in connection with capital projects to the maximum extent consistent with the national interest. -- Not applicable.

26. FAA § 602. Information and conclusions whether loan will permit American small business to participate equitably in the furnishing of goods and services financed by it. -- Goods procured under this loan will be supplied by US private enterprise; procurement procedures under this loan will permit equitable participation of US small business.
27. FAA § 601 (c); App § 103. Compliance with restriction of commodity procurement to US except as otherwise determined by the President and subject to statutory reporting requirements. -- All procurement of goods financed by this loan will have their source and origin in the US.
28. FAA § 601 (b). Compliance with bulk commodity procurement restriction to prices no higher than the market price prevailing in the US at time of purchase. -- The loan agreement will contain a provision covering this requirement.
29. FAA § 601 (d). Compliance with requirement that marine insurance be purchased on commodities if the participating country discriminates, and that insurance be placed in the US. -- The loan will be provide.
30. FAA § 606(a). Information as to the utilization of excess personal property in lieu of procurement of new items. -- The loan agreement will contain a provision covering this requirement.
31. FAA § 611(a)(1). Information and conclusion on availability of engineering, financial, and other plans necessary to carry out the assistance and of a reasonably firm estimate of the cost of the assistance to the United States. -- Considered in Sections II, 308, III. Plans have been formulated in conjunction with WPC, and reasonably firm cost estimates have been developed.
32. FAA § 611 (c). If a loan for a project of \$1 million or more, certification by the principal AIE officer in the country as to the capability of the country (both financial and human resources) to effectively maintain and utilize the project taking into account other US-financed projects. (Such certification is to be approved by the Administrator at the time the loan is authorized). -- The required certification is attached.

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33. FAA § 311 (a)(2). Necessary legislative action required within recipient country and basis for reasonable anticipation such action will be completed in time to permit orderly accomplishment of purposes of loan. -- No legislative action is required.
34. FAA § 311(b); App. § 111. If water or water-related land resource construction project or program, information and conclusion on a benefit-cost computation. -- Not applicable.
35. FAA § 311(c). Compliance with requirement that contracts for construction be let on competitive basis to maximum extent practicable. -- Not applicable.
36. FAA § 312(b) and 326(b). Appropriate steps that have been taken to assure that, to the maximum extent possible, the country is contributing local currencies to meet the cost of contractual and other services and foreign currencies owned by the US are utilized to meet the cost of contractual and other services. -- The local currency portion of the project is supported by IDA (E) funds.
37. FAA § 318. Compliance with requirement that assistance to newly independent countries be furnished through multi-lateral organizations or plans to maximum extent appropriate. -- The US is collaborating with IBRD-IDA and other free world countries to provide foreign exchange assistance to aid Pakistan in its economic development. This loan is being provided as part of the US contribution through the Consortium.
38. FAA § 329(a); App. § 117(a) and (b). Compliance with prohibitions against assistance to Cuba and any country (a) which furnishes assistance to Cuba or failed to take appropriate steps by February 14, 1964, to prevent ships or aircraft under its registry from carrying equipment, materials, or supplies from or to Cuba; or (b) which sells, furnishes, or permits any ships under its registry from carrying items of primary strategic significance, or items of economic assistance. -- Pakistan is not in violation of these sections.
39. FAA § 320 (1). If assistance to the government of a country, existence of determination it is not controlled by the international Communist movement. -- Pakistan is not controlled by the International Communist Movement.

40. FAA § 620 (c). If assistance to the government of a country, existence of indebtedness to a US citizen for goods or services furnished or ordered where such citizen has exhausted available legal remedies or where the debt is not denied or contested by such government or the indebted-ness is not an unaffiliated guaranty of payment given by such government. -- Pakistan is not ineligible under this section.
41. FAA § 620(d). If assistance for any productive enterprise which will compete with US enterprise, existence of agreement by the recipient country to prevent export to the US of more than 20% of the enterprise's annual production during the life of the loan. -- The project will not compete with US enterprise.
42. FAA § 620(e)(1). If assistance to the government of a country, extent to which it (including government agencies or subdivisions) has after January 1, 1962, taken steps to repudiate or nullify contracts or taken any action which has the effect of nationalizing, expropriating, or otherwise seizing ownership or control of property of US citizens or entities beneficially owned by them without taking appropriate steps to discharge its obligations. -- Pakistan has not nationalized, expropriated or otherwise seized property of US citizens.
43. FAA § 620(f); App § 100. Compliance with prohibitions against assistance to any Communist country. -- Pakistan is not a communist country.
44. FAA § 620 (g). Compliance with prohibition against use of assistance to compensate owners for expropriated or nationalized property. -- Loan funds would not be used to compensate owners for expropriated or nationalized property.
45. FAA § 620 (h). Compliance with regulations and procedures adopted to insure against use of assistance in a manner which, contrary to the best interests of the U.S., promotes or assists the foreign aid projects or activities of the Communist-bloc countries. -- The loan agreement will contain a provision covering this requirement.

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46. FAA § 620(i). Existence of determination that the country is engaging in or preparing for aggressive military efforts. -- Pakistan is not ineligible under this section.
47. FAA § 620(i). Information on representation of the country at any international conference when that representation includes the planning of activities involving insurrection or subversion against the US or countries receiving US assistance. -- Pakistan has not participated in such conference and is not ineligible under this section.
48. FAA § 620(j). Existence of a determination that the country has permitted or failed to prevent destruction of US property by mob action or has failed to take steps to prevent a recurrence and to pay compensation -- Pakistan is not ineligible under this section.
49. FAA § 620(k). If construction of productive enterprise where aggregate value of assistance to be furnished by US will exceed \$100 million, identification of statutory authority. -- The loan will not exceed this amount.
50. FAA § 620(l). Consideration which has been given to denying assistance to the government of a country which after December 31, 1966, has failed to institute the investment guaranty program for the specific risks of inconvertibility and expropriation or confiscation. -- Pakistan has instituted the investment guaranty program.
51. FAA § 620(n); App. §. 107(b); App. § 118. Compliance with prohibitions against assistance to countries which traffic or permit trafficking with North Viet-Nam. -- Pakistan does not traffic or permit trafficking with North-Viet-Nam.
52. FAA § 620(o). If country has seized, or imposed any penalty or sanction against, any US fishing vessel on account of its fishing activities in international waters, information on the consideration which has been given to excluding the country from assistance. -- Pakistan is not ineligible under this section.
53. FAA § 620(p); App. § 117. U. A. R. restriction. -- Not applicable.
54. FAA § 620(q). Existence of a default under any Foreign Assistance Act loan to the country. -- Pakistan is not in default under any FAA loan.

55. FAA § 620(s). Consideration of whether Pakistan is devoting unnecessary percentage of budget for military purposes or use of foreign exchange for military equipment. -- Pakistan is not ineligible under this section.
56. FAA § 620(t). Prohibition on aid if country has severed diplomatic relations with UN unless agreements have been negotiated after resumption. -- Pakistan has not severed diplomatic relations with the United States.
57. FAA § 620(u). Status of the country with respect to obligations to the UN. -- Pakistan is not delinquent in any obligation to the United Nations.
58. FAA 636(l). Prohibition on financing non-US manufactured rotor vehicles. -- All goods will have their source and origin in the United States.
59. Compliance with requirement that payments in excess of \$100,000 for architectural and engineering services on any one project be reported to Congress. -- Not applicable.
60. App. § 104. Compliance with bar against funds to pay pensions, etc., for military personnel. -- Funds from the loan would not be used for pensions.
61. Compliance with requirement that country attempts to create distinctions because of race or religion among foreigners in granting personal or commercial access or other rights otherwise available to US citizens generally, application which will be made in negotiations of contrary principles as expressed by Congress. -- Pakistan does not attempt to create such distinctions.
62. App § 111. Compliance with existing requirements for security clearance of personnel. -- If necessary, security clearances will be obtained.
63. App. § 112. Compliance with requirement for approval of contractors and contract terms for capital projects. -- The Loan agreement will contain a provision covering this requirement.
64. App. § 114. Compliance with bar against use of funds to pay assessments, etc., of UN member. -- The loan funds will not be used to pay UN assessments.

65. App. § 115. Compliance with regulations on employment of US and local personnel for funds obligated after April 30, 1964 (Regulation 7). -- This provision will be complied with, if applicable, under this loan.
66. App. § 115. Viet-Nam iron and steel restrictions. -- Not applicable.
67. App. § 119. If a country other than Greece, Turkey, Iran, Israel, Republic of China, Philippines or Korea, reduction in assistance by amounts spent for the purchase of sophisticated military equipment. -- No reduction in assistance to Pakistan is required under this section.
68. App. § 401. Compliance with bar against use of funds for publicity or propaganda purposes within US not heretofore authorized by Congress. -- The loan proceeds will not be used for such purposes.

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MALAWIA TRADITIONAL PROGRAMME  
EAST PAKISTAN

(Population in 000's)

PHASE	YEAR	1961		1962		1963		1964		1965		1966		1967	
		P	A	P	A	P	A	P	A	P	A	P	A	P	A
CONSOLIDATION	3rd.													1,895	1,895
	2nd.									1944	1944	4,426	4,428		
	1st.							1,895	1895	4316	4316	5,115	7,400		
	TOTAL							1,895	1895	6230	6230	11,538	13,823		
ATTACK :	3rd.							1847	1847	4,208	4208	4987	4087	9,038	6,753
	2nd.					1800	1800	4100	4100	4,850	4850	8800	8809	6,772	7,437
	1st.			1754	1754	3993	3996	4738	4736	8,557	8587	6600	7249	11,453	12,780
	TOTAL			1754	1754	5793	5796	10883	10883	17,635	17652	20396	21045	27,263	26,970
PREPARATION		1710	1710	3694	3694	4616	4616	8323	8368	6,483	7064	11162	12456	12,448	13,548
TOTAL PHASES :	-	1710	1710	8648	8648	10412	10412	19051	19051	25,880	26611	37818	39761	51,249	54,340

P : Population stipulated to be covered as in the Original Plan.

A . Actual population covered.

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ANNEX II  
Exhibit 2

FEDERAL POPULATION PROGRAMME  
WEST PAKISTAN

(Population in 000's)

PROGRAM	YEAR	1961		1962		1963		1964		1965		1966		1967		
		P	A	P	A	P	A	P	A	P	A	P	A	P	A	
MIRAJI DA- PLAN	3rd.													1,261	-	
	2nd.											1,229		1,852	3,123	
	1st.									1,198	-	1,815	3,044	7,331	8,786	
	TOTAL									1,198	-	3,044	3,044	10,654	11,889	
MIRAJI :	4th							1,135	1,153	1,769	2,867	7,340	7,340	9,491	8,234	
	3rd.					1,138	1,138	1,724	1,724	7,153	7,153	9,229	9,229	13,025	11,259	
	2nd.			1,149	1,149	1,690	1,380	6,073	6,973	8,994	8,994	12,994	10,973	3,331	2,872	
	1st.	1,031	1,081	1,537	1,537	6,700	6,700	1,787	8,767	12,373	10,895	8,120	2,604	9,055	7,425	
	TOTAL	1,031	1,081	2,543	2,543	9,614	9,614	15,622	18,532	30,269	29,809	37,393	30,146	36,880	29,590	
MIRAJI C- II	2nd.	-	-	-	-	-	-	-	-	-	1,672	-	7,237	-	-	
	1st.	1,598	1,598	9,924	9,924	8,516	8,516	12,059	12,059	7,917	7,917	5,902	-	-	2,565	
	TOTAL	1,598	1,598	9,924	9,924	8,516	8,516	12,059	12,059	7,917	9,595	5,902	7,237	-	2,565	
TOTAL MIRAJI C- I & II	-	-	2,677	2,677	9,976	9,976	12,136	12,136	20,381	20,381	30,401	30,401	48,329	40,427	47,534	44,044

P : Population stipulated to be covered as in the Original Plan.

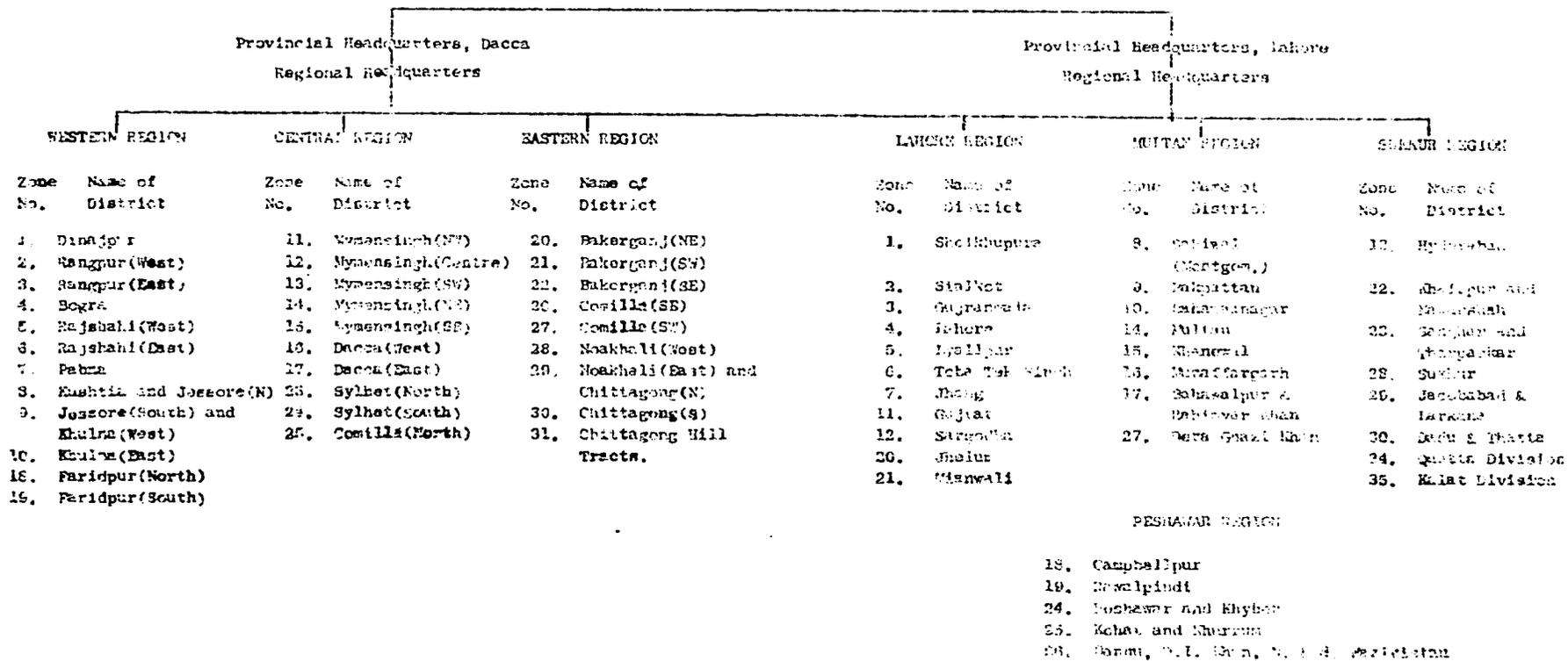
A : Population actually covered.

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CENTRAL MALARIA ERADICATION BOARD  
National Headquarters Karachi

Provincial Malaria Eradication Board, East Pakistan

Provincial Malaria Eradication Board, West Pakistan

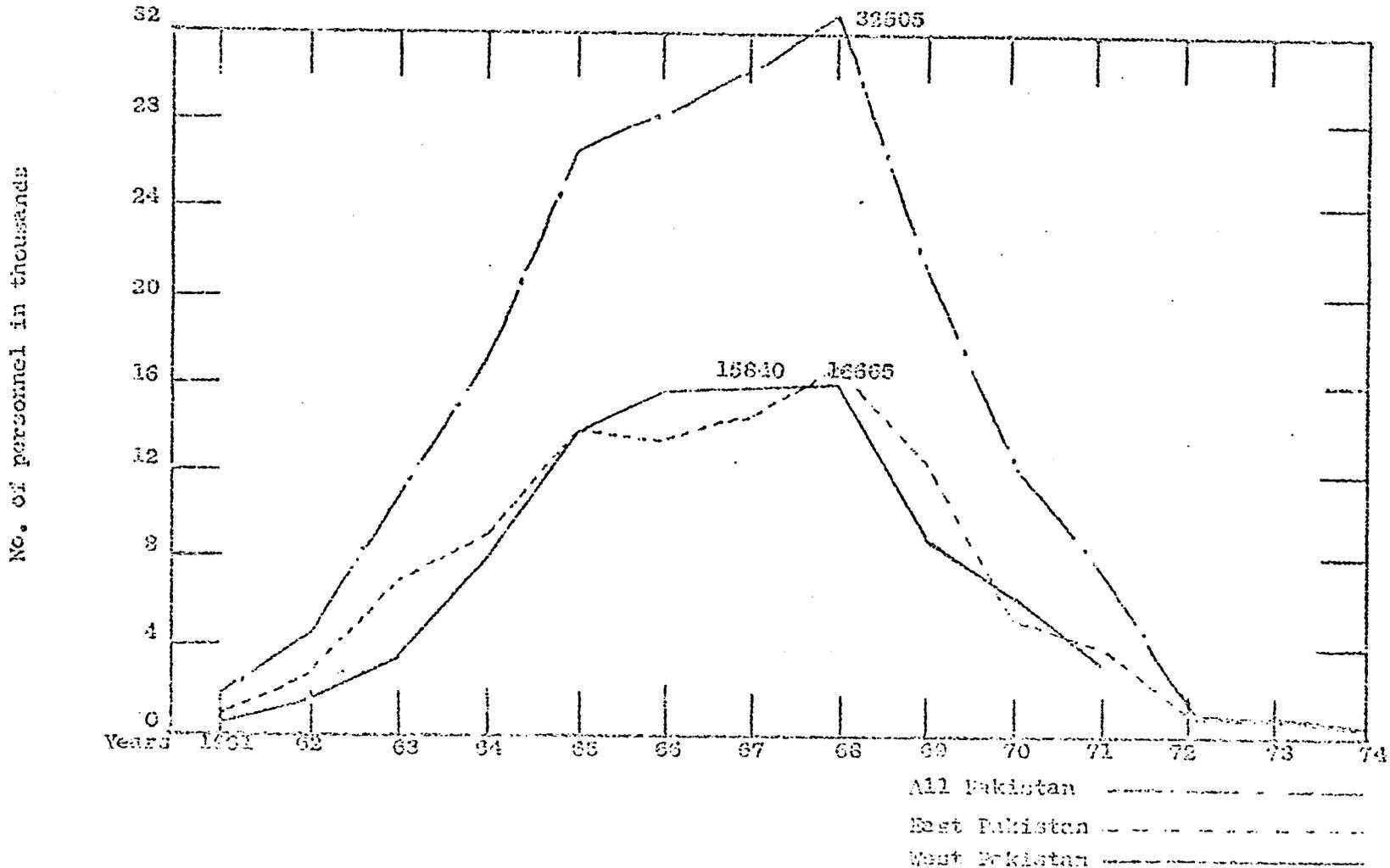


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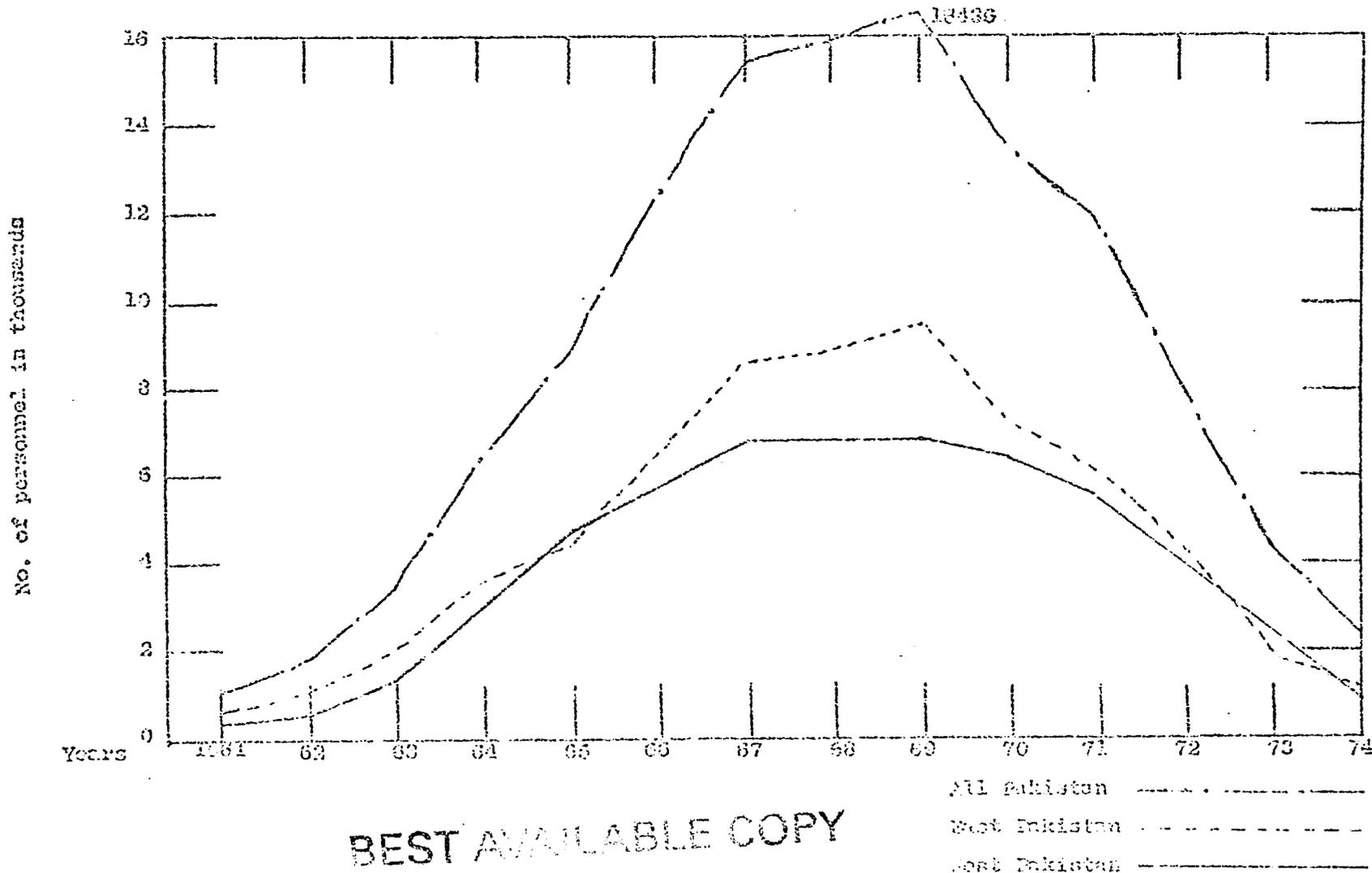


Year-wise position of Seasonal Labour (Mixers and sprayers)



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Year-wise position of Personnel employed all the year.



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All Pakistan ———  
West Pakistan - - - -  
East Pakistan - . . .

SCHEDULE 1. APPROX. DATES FOR BEGINNING AND ARRIVAL DATE  
FOR REQUIRED AMOUNT OF DDT - EAST AND WEST  
PAKISTAN MALARIA ERADICATION PROGRAM - CY 1969\*

	<u>Date Round I</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>Date Round II</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>'Arrival'</u> <u>Date</u> <u>in part of</u> <u>entry, no</u> <u>later than</u>	<u>To be ordered</u> <u>no later</u> <u>than</u>	<u>Cost/Order</u>
<u>EAST PAKISTAN</u>					
Total CY 1969 requirement = 7,717,500 lbs.	March 1, 1969 5,753,125 lbs.		Jan. 1, 1969	July 1, 1968	\$1,331,268.73
		Sept. 1, 1969 1,929,375 lbs.	July 1, 1969	June 1, 1969	443,756.26
<u>WEST PAKISTAN</u>					
Total CY 1969 requirements = 4,604,800 lbs.	June 1, 1969 2,347,280 lbs.		April 1, 1969	Oct. 1, 1968	\$529,289.30
		Aug. 1, 1969 2,347,280 lbs.	June 1, 1969	Dec. 1, 1968	\$359,869.30
Total DDT requirement CY 1969 = 12,412,000 lbs.					
				Total costs:	\$2,354,765.00

\*A six month lead time is allowed between ordering and arrival in part of entry. This is absolutely minimum for safety. Two months are allowed after arrival for distribution in the field prior to commencing spraying. This is also an absolute minimum time.

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ADMINISTRATIVE REPORT ON THE DDT AND DDT EQUIVALENTS  
FOR THE YEAR 1970 OF THE DDT IN EAST AND WEST  
PAKISTAN UNDER PRODUCTION SYSTEM IN CY 1970\*

	<u>Date Round I Spraying begins and DDT requirement</u>	<u>Date Round II Spraying begins and DDT requirement</u>	<u>Arrival Date in part of entry, no later than</u>	<u>To be ordered no later than</u>	<u>Cost/Order</u>
<u>EAST PAKISTAN</u>					
Total CY 1970 requirement = 4,983,300 lbs.	March 1, 1970 3,737,475 lbs.		Jan. 1, 1970	July 1969	\$859,619.25
		1,245,325 lbs.	July 1, 1970	Jan. 1969	286,539.75
<u>WEST PAKISTAN</u>					
Total CY 1970 requirement = 1,476,600 lbs.	June 1, 1970 738,340 lbs.		April 1, 1970	Oct. 1969	\$39,636.40
		August 12, 1970 738,340	June 1, 1970	Dec. 1969	\$39,636.40
Total DDT requirement CY 1970 = 6,459,900 lbs.					<u>\$1,436,795.40</u>
			Total costs:		

\*A six month lead time is allowed between ordering and arrival in part of entry. This is absolutely minimum for safety. Two months are allowed after arrival for distribution in the field prior to commencing spraying. This is also an absolute minimum time.

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ANNEX II  
Exhibit 9

POPULATION BASELINE CHART

EAST PAKISTAN MALARIA ERADICATION PROGRAM\*  
1968 - 1975 (IN MILLIONS)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
A. TOTAL POPULATION	59.11	60.14	61.41	62.70	64.01	65.37	66.75	68.5
B. MALARIOUS AREAS	59.11	60.14	61.41	62.70	64.01	65.37	66.75	68.5
C. MAINTENANCE	-	5.52	11.96	21.70	29.81	42.11	57.96	88.3
D. CONSOLIDATION	20.44	21.51	27.01	32.59	34.31	23.26	8.79	-
E. ATTACK	30.81	33.11	21.84	8.35	-	-	-	-
F. PREPARATORY	7.86	-	-	-	-	-	-	-

\*Population data based on 1961 census projected on the basis of 2.6% increase per annum.

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ANNEX II  
Exhibit 10

POPULATION PHASING CHART

WEST PAKISTAN MALARIA ERADICATION PROGRAM\*  
1968 - 1974 (IN MILLIONS)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
A. TOTAL POPULATION	50.9	52.2	53.5	54.8	56.2	57.6	59.1
B. MALARIOUS AREAS	50.9	52.2	53.5	54.8	56.2	57.0	59.1
C. MAINTENANCE	-	3.4	9.0	21.0	37.0	51.1	59.1
D. CONSOLIDATION	11.0	30.7	37.2	32.0	19.2	6.5	-
E. ATTACK	26.5	13.8	6.2	-	-	-	-
F. PREPARATORY	4.1	1.2	-	-	-	-	-
G. TOWN & CITY POPULATION (NOT UNDER PROTECTION)	8.4	3.1	1.1	-	-	-	-

\*Population data based on 1961 census projected on the basis of 2.6% increase per annum.

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BENEFITS OF THE SCHEME\*

Malaria is predominantly a rural disease and its prevalence has far reaching effects on the health and economic conditions of the developing countries. Its prevalence during the sowing and harvesting season in autumn substantially affects agricultural production. Therefore, it has been observed all over the world that control of malaria results in increases in agricultural yields. In Pakistan an experiment conducted by the WHO in Ishwargonj Thana of Mymensingh District during the years 1949-51 indicated that agricultural yields in the area where malaria control measures had been applied experienced increases up to 40% in the yield of various crops compared to a similar control area in which anti-malaria measures had not been adopted. In 1961 similar effects were observed in the rice producing tract of Sheikhupura and Gujranwala Districts when the Malaria Eradication Scheme was launched in Sheikhupura District while Gujranwala District had not been included in the Scheme. The former District showed consistent increased rice production whereas in Gujranwala District the rice production showed a decline during the same period. It should be noted that these two Districts comprise the same producing tract.

During the deliberations of the Appraisal Committee on the Malaria Eradication Programme, studies were conducted by the members of the Committee viz. Dr. Akhlaqur Rahman, Chief Economist, Planning Department, Government of East Pakistan and Mr. Sarshar Ahmad Khan, CSP, Chief, Health, Social Welfare and Manpower, Planning and Development Department, Government of West Pakistan on the economic effects of eradication of malaria in advanced Zones of the Scheme in East and West Pakistan respectively. The conclusions of the East Pakistan study were as follows:-

The East Pakistan study showed that the possible contribution made by the Malaria Eradication Programme in increasing the yield of rice, sugar and jute is likely to be Rs 21.63 lakhs in Dinajpur District in 1962 and Rs 10.27 lakhs in Rangpur. Whereas the total expenditure on the Malaria Eradication Programme amounted to approximately Rs 20 lakhs and Rs 38 lakhs respectively (in these districts).

This study also estimated the following other savings due to Malaria Eradication Programme in advanced Zones of East Pakistan:-

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\*This section taken from the Annual Report, 1966-67 of the Pakistan Malaria Eradication Board, FIS 26-31

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### Benefits Accruing from Malaria Eradication in 6 Zones of East Pakistan 1962-66.

Estimated value in Rupees

1. Labour time saved	1,40,20,950
2. Lost efficiency regained	5,32,79,610
3. Cost of medicines saved	<u>42,48,802</u>
Total	7,15,49,362

Total economic gains on account of the above quantifiable factors amounted to Rs 89.49 million against a total expenditure of Rs 29.4 million on the Scheme in the six Zones of East Pakistan, thus giving a very favourable cost-benefit ratio.

Conclusions of this study were, therefore, as follows:-

1. Judged by the change in annual parasite incidence in the 6 Zones under evaluation, the Malaria Eradication Programme in East Pakistan seems to have been successful in achieving its ends.
2. The estimates of only a few quantifiable benefits indicate that the overall gains from the implementation of the Programme are likely to be greater than its cost.

Similar conclusions were drawn by the West Pakistan study although it placed the cost-benefit ratios at a lower value.

The above studies only dealt with a few quantifiable benefits accruing from the Malaria Eradication Programme and came to the above mentioned conclusions. A large proportion of the benefits of Malaria Eradication Programme cannot be properly assessed in terms of cost-benefits. These include the following:-

Malaria has a profound debilitating effect on the population. Younger age groups of the population are particularly susceptible to this disease and when infected the growth of the child as well as his mental capabilities are permanently impaired. Thus a very far-reaching effect on the physical and mental capabilities of the population as a whole is exerted by this disease. Its control results in improvement of physical standards as well as mental capabilities of the population and the educability of the children. Such profound but insidious effects cannot be quantified in terms of money. Malaria has almost disappeared from a number of advanced districts of the Scheme in both the Provinces and is fully under control wherever the Attack Phase of the Scheme has been launched. Some of the resulting benefits are already apparent but long term benefits will become apparent only in due course of time.

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Statistical Methods used in above mentioned studies conducted by Mr. Adhlaqur Rahman, Chief Economist, Government of East Pakistan and Mr. Sarshar Ahmad Khan, CSP, Chief, Health and Manpower Section, Planning and Development Department Government of West Pakistan.

#### East Pakistan Study

The following districts were included in the investigation of the beneficial effects of the Malaria Eradication Programme:-

1. Dinajpur	(Zone No. 1)	1961-66
2. Rangpur	(Zone Nos. 2 & 3)	1962-66
3. Bogra	(Zone No. 4)	1963-66
4. Rajshahi	(Zone Nos. 5 & 6)	1963-66

Two types of effects were examined viz, (a) the effects on the incidence of malaria and (b) the effects on the economic well being of the population in the above districts.

(a) Effects on the incidence of malaria: Before launching of the Programme a baseline malariometric survey had been conducted in each district to assess the pre-eradication parasite rate which would serve as the indicator for estimating changes in the incidence of malaria after the launching of the Programme. The sectors in different Zones were divided into three major groups on the basis of the intensity of parasite rates. The Annual Parasite Incidence (API) per thousand on the basis of data collected through surveillance operation (active and passive case detection) was calculated for different years for each of the three groups in each Zone and compared with the data provided by the baseline survey. It was observed that the parasite incidence in each group of Sectors in each Zone declined drastically after the first year of spraying under the Malaria Eradication Programme and by 1966 the parasite incidence fell nearly to zero.

(b) Economic effects: The Malaria Eradication Programme has been observed to produce substantial favourable effects on the economic conditions of the people. The following three benefits only, out of the many others, were estimated in terms of rupee-value because these were considered to be easily quantifiable i.e., being estimated in terms of money:

1. Labour time saved
2. Lost efficiency regained and
3. The cost of medicines saved

To evaluate the above benefits it was considered necessary to estimate the number of people cured of malaria parasite infestation. This number was estimated to be the difference between the number of people found infected with malaria parasites in two consecutive years. The sum of the people cured in consecutive years, thus, gave the total number of people cured in the period involved (i.e., from the year of launching of the Scheme in the Zones up to 1955).

The next statistical problem was the estimation of the man-days saved. These were calculated with the help of studies previously conducted in India on the subject. It was assumed that 55% of the total number of people cured constitutes the adult population and 40% of the adult population would give the working man-power cured.

It was then assumed on the basis of studies conducted in pre-independence India and a recent study conducted by the economists of West Pakistan Planning and Development Department that man-days lost are 15 days per malaria patient per annum. So the total number of man-days saved was estimated by multiplying the effective working manpower cured by 15. Rupee value was arrived at by assuming the cost of Rs 2 per man-day saved.

To evaluate the "lost efficiency regained" it was first necessary to equate the efficiency in terms of man-days. It was assumed that a healthy person in rural areas works 225 days a year. If he develops malaria and is cured of the disease it was assumed that he becomes 20% inefficient for some days before he actually regains his normal efficiency. So the man-days saved on this account were arrived at by multiplying the effective labour cured by 20% of 225. The value was then arrived at as in the case of effective labour cured.

For calculating the cost of medicines saved it was assumed that Rs 2 are spent on the average per sick person in a year, to cure him of malaria. So the effective labour saved was multiplied by 2 to give cost of medicines saved.

Cumulative value over the period for all the six Zones was then worked out on the basis of the <sup>above</sup> mentioned three factors. This was then compared with the total cost actually incurred on each of the Zones. This comparison gave the Zone-wise 'Benefit-Cost Ratio' for the period involved.

The conclusions of the study in East Pakistan were that the benefits which accrued from implementation of the Malaria Eradication Programme in respect of three quantifiable factors viz. loss of man days, decrease in efficiency and cost of medicines worked out to approximately Rs 39.48 million against a total expenditure of Rs 29.40 million on the Malaria Eradication Programme in the six Zones under study. If a 20% margin of error is assumed in the baseline data, then these benefits worked out to about Rs 71.55 million. The 'Benefit-Cost Ratios' in the two cases are 3.04 and 2.43 respectively.

Agricultural Production:

Greater efficiency and labor time saved due to eradication of malaria are also reflected in the increased yields/<sup>and</sup> income in the agriculture sector. Contribution of Malaria Eradication to increasing agricultural yields is difficult to assess because a number of other variables like fertilizer, irrigation, better seeds, better methods of cultivation and favourable weather conditions are involved. However, from the available data for Dinajpur and Rangpur (Zones 1, 2 and 3) an estimate was made for two critical years i.e., for 1962 in the case of Dinajpur and for 1963 in the case of Rangpur. These two years were selected because there were intensified activities of the Malaria Eradication Programme during these years; secondly, the impact of other development activities on agriculture in the two districts during this period was minimal. It was estimated that the possible contribution made by the Malaria Eradication Programme due to increased efficiency and additional work by the labourer to the increased yield of rice, sugarcane, and jute was approximately Rs. 21.63 lakhs in Dinajpur in 1962 and approximately Rs. 19.27 lakhs in Rangpur in 1963.

West Pakistan Study

A similar study was carried out for West Pakistan Malaria Eradication Programme. The following Zones were included for evaluation of benefits:-

1. Sheikhupura District	(Zone No. 1)	..	..	1963-66
2. Sialkot District	(Zone No. 2)	..	..	1962-66
3. Gujranwala District	(Zone No. 3)	..	..	1963-66
4. Lahore District	(Zone No. 4)	..	..	1964-66
5. Lyallpur District	(Zones No. 5 and 6)	..	..	1964-66

For evaluation of the benefits the same assumptions were adopted as in the East Pakistan study. But in addition, statistical exercises were attempted with different assumptions and their combinations. These assumptions were:-

- (i) Labour time gain at 7½ days a year.
- (ii) Gain in efficiency @ 10% of 235 working days a year.

'Benefits' and 'Cost-benefit Ratio' were also worked out, in both the studies, assuming 20% margin of error in the baseline data.

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The results of the economic benefits study in West Pakistan with various assumptions are summarised below:-

	<u>Alternate I</u>			<u>Alternate II</u>		
	Benefit	Expendi- ture on the Scheme	Benefit cost ratio	Benefit	Expendi- ture on the Scheme	Benefit cost ratio
	(Rupees in million)			(Rupees in million)		
<b>Assumptions:</b>						
1. 15 days/year saving in labor time and 20% gain in efficiency.	37.05	19.91	4.37	69.65	19.91	3.50
2. 15 days/year saving in labor time and 10% gain in efficiency.	34.04	19.91	2.74	43.71	19.91	2.20
3. 7½ days/year saving in labor time and 20% gain in efficiency.	78.52	19.91	3.94	62.82	19.91	3.16
4. 7½ days/year saving in labor time and 10% gain in efficiency.	43.11	19.91	2.32	36.89	19.91	1.85

Comparative data on 'Benefit-Cost Ratio' in the two Wings of the Country may be seen in the following Table with uniform assumptions of 15 days per year saving in labor time and 20% gain in efficiency:

	Alternate I		Alternate II	
East Pakistan .. ..	..	3.04	..	2.43
West Pakistan .. ..	..	4.31	..	3.50

As mentioned above a number of benefits which accrue from the Malaria Eradication Programme are of an imponderable nature and cannot be quantified. For example, successful implementation of the Malaria Eradication Programme would certainly reduce the number of deaths due to malaria and thus prevent depletion of working manpower. There are other benefits such as improvement of general health standards, longevity of life of people etc. All these have not been taken into consideration in the above studies.

In addition to the above economic benefits it was observed that the spraying of DDT not only eradicated malaria but also eliminated a number of other insect borne diseases such as dengue fever, kala-azar, sandfly fever and oriental sore in the sprayed areas.

To sum up, it may be concluded from the findings of the above two studies that in addition to ameliorating greatly the suffering of the population due to sickness, the Malaria Eradication Programme has also proved to be fully worthwhile in terms of its quantifiable economic benefits.

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ANNEX III

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT  
MISSION TO PAKISTAN

Cable: USAIDPAK

Alfalah Building  
The Mall, Lahore

April 15, 1968

The Honorable William S. Gaud  
Administrator  
Agency for International Development  
Washington D. C.

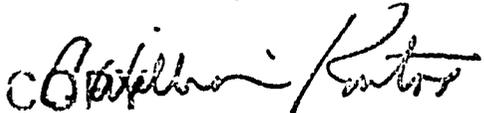
Dear Mr. Gaud:

As principal officer of the Agency for International Development in Pakistan, it is my responsibility to recommend to the Agency the authorization of loans in this country. My recommendations are based on a careful consideration of the financial and human resource capability of Pakistan to fulfil the purpose of the loans.

This is to certify that Pakistan has the financial and human resources capability to effectively maintain and utilize the capital assistance project, Malaria Eradication Fourth. In so certifying, I have taken into account the way in which projects in Pakistan previously financed or assisted by the United States were maintained and utilized. In particular, I have considered the way in which the Government of Pakistan has developed and implemented the malaria eradication program, which previous United States project loans have supported. This performance is evaluated in the accompanying capital assistance loan paper.

Sincerely,

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C. William Kontos  
Director

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AID Loan No. 391-H

CAPITAL ASSISTANCE LOAN AUTHORIZATION

Provided from: Development Loan Funds

Pakistan: Malaria Eradication Fourth

Pursuant to the authority vested in the Administrator, Agency for International Development (hereafter called "AID") by the Foreign Assistance Act of 1961, as amended, and the Delegations of Authority issued thereunder, I hereby authorize the establishment of a loan pursuant to Part I, Chapter 2, Title I, the Development Loan Fund to the President of Pakistan of not to exceed Six Million Eight Hundred Thousand Dollars (\$6,800,000) to assist in financing the foreign exchange costs of goods, materials and services required for the execution of the Malaria Eradication Program in Pakistan during calendar years 1969 and 1970. The loan is subject to the following terms and conditions:

1. Interest and Terms of Repayment. The interest on the loan shall be two percent (2%) per annum on the disbursed balance of the loan during the grace period and thereafter two and one-half percent (2-1/2%) per annum. The loan shall be repaid within forty (40) years from the date of the first disbursement under the loan, including a grace period of not to exceed ten (10) years.
2. Currency of Repayment. Provision shall be made for repayment of the loan and payment of the interest in United States Dollars.
3. Other Terms and Conditions:
  - (a) Goods, materials and services financed under the loan shall be procured from the United States of America.

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(b) Relending terms or other similar financial arrangements by the Borrower shall be subject to A.I.D. approval;

(c) This loan will be subject to such other terms and conditions as the A.I.D. may deem advisable.

---

Assistant Administrator  
Bureau for Near East and South Asia

---

Date

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A. I. D. Loan No.

LOAN AGREEMENT  
BETWEEN THE  
PRESIDENT OF PAKISTAN  
AND THE  
UNITED STATES OF AMERICA  
for  
MALARIA ERADICATION FOURTH

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Dated:

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LOAN AGREEMENT dated \_\_\_\_\_ between  
the PRESIDENT OF PAKISTAN ("Borrower") and the UNITED  
STATES OF AMERICA, acting through the AGENCY FOR  
INTERNATIONAL DEVELOPMENT ("A.I.D. ").

## ARTICLE I

### The Loan

SECTION 1.01. The Loan. A.I.D. agrees to lend to the Borrower pursuant to the Foreign Assistance Act of 1961, as amended, an amount not to exceed Six Million Eight Hundred Thousand United States Dollars (\$6,800,000) ("Loan") to assist the Borrower in carrying out the Project referred to in Section 1.02 ("Project"). The Loan shall be used exclusively to finance United States Dollar costs of goods and services required for the Project ("Dollar Costs"). The aggregate amount of disbursements under the Loan is hereinafter referred to as "Principal".

SECTION 1.02. The Project. The "Project" shall mean that portion of the malaria program of the Malaria Eradication Board of the Government of Pakistan designed in accordance with the Plan of Operations adopted by the Government of Pakistan and the World Health Organization ("WHO") in 1961 to eliminate

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malaria in Pakistan and prevent its reintroduction ("Program") to be executed during calendar years 1969 and 1970 in accordance with the Plans of Action for 1969 and 1970 adopted by the Government of Pakistan and WHO. The Project is more fully described in Annex I, attached hereto, which Annex may be modified in writing. The goods and services to be financed under the Loan shall be listed in the implementation letters referred to in Section 9.03 ("Implementation Letters").

## ARTICLE II

### Loan Terms

SECTION 2.01. Interest. The Borrower shall pay to A.I.D. interest which shall accrue at the rate of two percent (2) per annum for ten years following the date of the first disbursement hereunder: and at the rate of two and one-half percent (2-1/2%) per annum thereafter on the outstanding balance of Principal and on any due and unpaid interest. Interest on the outstanding balance shall accrue from the date of each respective disbursement as such date is defined in Section 7.03, and shall be computed on the basis of a 365-day year. Interest shall be payable semi-annually. The first payment of interest shall be due and payable no later than six (6) months after the first disbursement hereunder, on a date to be specified by A.I.D.

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SECTION 2.02. Repayment. The Borrower shall repay to A.I.D. the Principal within forty (40) years from the date of the first disbursement hereunder in sixty-one (61) approximately equal semi-annual installments of Principal and interest. The first installment of Principal shall be payable nine and one-half (9-1/2) years after the date on which the first interest payment is due in accordance with Section 2.01. A.I.D. shall provide the Borrower with an amortization schedule in accordance with this Section after the final disbursement under the Loan.

SECTION 2.03. Application, Currency and Place of Payment. All payments of interest and Principal hereunder shall be made in United States Dollars and shall be applied first to the payment of interest due and then to the repayment of Principal. Except as A.I.D. may otherwise specify in writing, all such payments shall be made to the Controller, Agency for International Development, Washington, D.C., U.S.A., and shall be deemed made when received by the Office of the Controller.

SECTION 2.04. Prepayment. Upon payment of all interest and refunds then due, the Borrower may prepay, without penalty, all or any part of the Principal. Any such prepayment shall be applied to the installments of Principal in the inverse order of their maturity.

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## SECTION 2.05. Renegotiation of the Terms of the Loan. The

Borrower agrees to negotiate with A.I.D. at such time or times as A.I.D. may request, an acceleration of the repayment of the Loan in the event that there is any significant improvement in the internal and external economic and financial position and prospects of the country of the Borrower.

## ARTICLE III

### Conditions Precedent to Disbursement

#### SECTION 3.01. Conditions Precedent to Any Disbursement.

Prior to the first disbursement or to the issuance of the first Letter of Commitment under the Loan, the Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) An opinion of the Minister of Law of Pakistan or of other counsel acceptable to A.I.D. that this Agreement has been duly authorized or ratified by, and executed on behalf of the Borrower, and that it constitutes a valid and legally binding obligation of the Borrower in accordance with all of its terms;

(b) A statement of the names of the persons holding or acting in the office of the Borrower specified in Section 9.02, and a specimen signature of each person specified in such statement;

(c) Evidence of arrangements satisfactory to A.I.D. for the provision of technical advisors from the United States National Communicable Disease Center;

(d) Evidence of the relending or other financial arrangements with regard to the use of the funds provided hereunder;

(e) Written assurance that the Borrower will execute the Malaria Eradication Program in its entirety according to the Plan of Operations adopted by the Government of Pakistan and W.H.O. in 1961 and the derivative annual Plans of Action, and that any material modifications to the Program must be mutually agreeable to the Borrower, W.H.O. and A.I.D.;

(f) Evidence that a Plan of Action for 1969 has been adopted by the Government of Pakistan that is mutually agreeable to Borrower, W.H.O. and A.I.D.;

(g) Evidence that funds other than those provided hereunder which are necessary for the timely completion of the Project will be made available to the Director and Provincial Chiefs of the Program in a timely and effective manner and in an amount or amounts that are mutually agreeable to Borrower, W.H.O. and A.I.D.;

(h) Evidence of arrangements for the procurement of goods, including list and prices of such goods, and the distribution and utilization thereof as required for the Project together with schedules for purchase, delivery, distribution and utilization thereof.

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In order to prevent delays in fulfillment of Conditions Precedent with respect to one Province from affecting malaria eradication operations in the other Province, Conditions Precedent 3.01 (d)-(h) above shall be satisfied independently for each Province. Upon satisfaction of conditions precedent with respect to one Province, A.I.D. will authorize disbursements or the issuance of Letters of Commitment for Eligible Items for that portion of the Malaria Eradication Program to be executed in that Province.

SECTION 3.02. Conditions Precedent to Disbursement for the 1970 Malaria Eradication Program. Prior to the first disbursement or the issuance of Letters of Commitment for any Eligible Items for that portion of the Malaria Eradication Program to be executed during calendar year 1970, the Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

- (a) Evidence that Borrower has submitted to A.I.D. the plans required by Sections 5.01 and 5.02.
- (b) Evidence that a Plan of Action for 1970 has been adopted by the Government of Pakistan that is mutually agreeable to Borrower, W.H.O. and A.I.D.;

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(c) Evidence that funds other than those provided hereunder which are necessary for the timely completion of the Project will be made available to the Director and Provincial Chiefs of the Program in a timely and effective manner and in an amount or amounts that are mutually agreeable to Borrower, W.H.O and A.I.D. ;

(d) Evidence of arrangements for the procurement of goods, including list and prices of such goods, and the distribution and utilization thereof as required for the Project together with schedules for purchase, delivery, distribution and utilization thereof.

As in the case of the conditions precedent in 3.01 above, the conditions precedent in this Section shall be satisfied independently for each Province. Upon satisfaction of conditions precedent with respect to one province, A.I.D. will authorize disbursements or the issuance of Letters of Commitment for Eligible Items for that portion of the 1970 Malaria Eradication Program to be executed in that Province.

SECTION 3.03. Terminal Dates for Meeting Conditions Precedent to Disbursement.

(a) If all the conditions specified in Section 3.01 shall

not have been met for both Provinces within ninety (90) days from the date of this Agreement, or such later date as A.I.D. may agree in writing, A.I.D. at its option may cancel that portion of the amount of the Loan not subject to outstanding commitment documents, or may terminate this Agreement by giving written notice to Borrower. In the event of a termination upon the giving of notice, the Borrower shall immediately repay the Principal then outstanding and shall pay any accrued interest and upon receipt of such payments in full, this Agreement and all obligations of the parties hereunder shall terminate.

(b) If all the conditions specified in Section 3.02 shall not have been met for both Provinces by July 31, 1969, or such later date as A.I.D. may agree in writing, A.I.D. at its option may cancel that portion of the amount of the Loan not subject to outstanding commitment documents, or may terminate this Agreement by giving written notice to Borrower. In the event of a termination upon the giving of notice, the Borrower shall immediately repay the Principal then outstanding and shall pay any accrued interest and, upon receipt of such payments in full this Agreement and all obligations of the parties hereunder shall terminate.

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SECTION 3.04. Notification of Meeting of Conditions Precedent to Disbursement. A.I.D. shall notify the Borrower upon determination by A.I.D. that conditions precedent to disbursement have been met.

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ARTICLE IV

General Covenants and Warranties

SECTION 4.01. Execution of the Project.

(a) The Borrower shall carry out the Project with due diligence and efficiency, and in conformity with sound public health, financial and administrative practices;

(b) The Borrower shall cause the Project to be carried out in conformity with all of the contracts, schedules and other arrangements and with all modifications therein, approved by A.I.D. pursuant to this agreement. Borrower shall obtain A.I.D. concurrence prior to any material modification or cancellation of any such contracts, schedules or other arrangements.

SECTION 4.02. Funds and Resources to be Provided By Borrower.

(a) The Borrower shall provide promptly as needed all funds, in addition to the Loan, and all other resources required for the punctual and effective carrying out of the Project.

(b) In the event DDT produced in the country of the Borrower is procured for the Program in place of imported DDT, Borrower shall provide sufficient additional funds to provide for the increased local currency costs of the Project so that the Project is fully carried out.

SECTION 4.03. Continuing Consultation. The Borrower and A.I.D. shall cooperate fully to assure that the purpose of the Loan

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will be accomplished. To this end, the Borrower and A.I.D. shall from time to time, at the request of either party, exchange views through their representatives with regard to the progress of the Project, the performance of the consultants, and other matters relating to the Project.

SECTION 4.04. Management. The Borrower shall provide qualified and experienced management for the Project and it shall train such staff as may be appropriate for the maintenance and operation of the Project.

SECTION 4.05. Taxation. This Agreement, the loan and any evidences of indebtedness issued in connection herewith shall be free from, and the Principal and interest shall be paid without deduction for and be free from, any taxation or fees imposed under the laws in effect within the country of the Borrower. As, and to the extent that (a) any contractor including any consulting firm; financed hereunder, any personnel of such contractor and any property or transactions relating to such contracts and (b) any commodity procurement transaction financed hereunder, are not exempt from identifiable taxes, tariffs, duties and other levies imposed under laws in effect in the country of the Borrower, the Borrower, except as Borrower, contractors and A.I.D. may otherwise agree, shall pay or reimburse the same under Section 4.02 of this Agreement with funds other than those provided under the Loan.

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SECTION 4.06. Utilization of Goods and Services.

(a) Goods and services financed under the Loan shall be used exclusively for the Project, except as A.I.D. may otherwise agree in writing.

(b) Except as A.I.D. may otherwise agree in writing, no goods or services financed under the Loan shall be used to promote or assist any foreign aid project or activity associated with or financed by any country not included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of such use.

SECTION 4.07. Disclosure of Material Facts and Circumstances.

The Borrower represents and warrants that all facts and circumstances that it has disclosed or caused to be disclosed to A.I.D. in the course of obtaining the Loan are accurate and complete, and that it has disclosed to A.I.D. accurately and completely, all facts and circumstances that might materially affect the Project and the discharge of its obligations under this Agreement. The Borrower shall promptly inform A.I.D. of any facts and circumstances that may hereafter arise that might materially affect, or that it is reasonable to believe might materially affect, the Project or the discharge of the Borrower's obligations under this Agreement.

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SECTION 4.08. Commissions, Fees and Other Payments.

(a) Borrower warrants and covenants that in connection with obtaining the Loan, or taking any action under or with respect to this Agreement, it has not paid, and will not pay or agree to pay, nor to the best of its knowledge has there been paid nor will there be paid or agreed to be paid by any other person or entity, commissions, fees or other payments of any kind, except as regular compensation for bona fide professional, technical or comparable services. The Borrower shall promptly report to A.I.D. any payment or agreement to pay for such bona fide professional, technical or comparable services to which it is a party or of which it has knowledge (indicating whether such payment has been made or is to be made on a contingent basis), and if the amount of any such payment is deemed unreasonable by A.I.D., the same shall be adjusted in a manner satisfactory to A.I.D.

(b) The Borrower warrants and covenants that no payments have been or will be received by the Borrower, or any official of the Borrower, in connection with the procurement of goods and services financed hereunder, except fees, taxes or similar payments legally established in the country of the Borrower.

(c) A.I.D. from time to time may issue binding instructions concerning the eligibility for financing hereunder of commissions, including brokerage commissions and commissions paid to sales

agents of suppliers, and allowances to purchasing agents or importers. Borrower agrees to comply with such instructions, to promptly report to A.I.D. any payment or allowance, or agreement to pay or permit any commissions or allowances, covered by such instructions of which it has knowledge and to reimburse A.I.D. on request, in the amount of any payment or allowance made or permitted contrary to such instructions; provided, however, that this paragraph shall apply only to commissions or allowances arising from contracts or orders made or placed after the receipt by Borrower of notice of such instructions.

SECTION 4.09. Maintenance and Audit of Records. The Borrower shall maintain, or cause to be maintained, in accordance with sound accounting principles and practices consistently applied, books and records relating both to the Project and to this Agreement. Such books and records shall, without limitation, be adequate to show:

- (a) the receipt and use made of goods and services acquired with funds disbursed pursuant to this Agreement;
- (b) the nature and extent of solicitations of prospective suppliers of goods and services acquired;
- (c) the basis of the award of contracts and orders to successful bidders; and
- (d) the progress of the Project.

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Such books and records shall be regularly audited, in accordance with sound auditing standards, for such period and at such intervals as A.I.D. may require and shall be maintained for five years after the date of the last disbursement by A.I.D. or until all sums due A.I.D. under this Agreement have been paid, whichever date shall first occur.

SECTION 4.10. Reports. The Borrower shall furnish to A.I.D. such information and reports relating to the Loan and to the Project as AID may request.

SECTION 4.11. Inspections. The authorized representatives of A.I.D. shall have the right at all reasonable times to inspect the Project, the utilization of all goods and services financed under the Loan, and the Borrower's books, records and other documents relating to the Project and the Loan. The Borrower shall cooperate with A.I.D. to facilitate such inspections and shall permit representatives of A.I.D. to visit any part of the country of the Borrower for any purpose relating to the Loan.

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ARTICLE V

Special Covenants and Warranties

SECTION 5.01. Planning for Malaria Eradication in Urban Areas.

The Borrower shall submit to A.I.D. prior to December 31, 1968, a satisfactory plan developed in collaboration with PHS/NCDC and WHO following thorough investigation of the problem, including details on time-phasing, for the effective surveillance and eradication of malaria in urban areas, indicating how the plan will be financed and implemented and which organization(s) will be responsible for its execution.

SECTION 5.02. Health Services. The Borrower shall submit to A.I.D. prior to December 31, 1968, a satisfactory plan, including details on time-phasing, for the transfer to, and effective implementation by, local Health Services of responsibility for maintenance of malaria-free zones after malaria has been eliminated. Financial and implementation plans should be detailed.

SECTION 5.03. Supply and Transport. Borrower shall cause the procedures set forth in the supply and transport manuals approved by the Government of Pakistan, W.H.O. and A.I.D. to be implemented by the Malaria Eradication Board in a manner mutually agreeable to A.I.D. and the Borrower.

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ARTICLE VI

Procurement

SECTION 6.01. Procurement from the United States. Except as A.I.D. may otherwise agree in writing, disbursements made pursuant to Section 7.01 shall be used exclusively to finance the procurement for the Project of goods and services having both their source and origin in the United States of America. Except as A.I.D. may otherwise agree, in the event that goods planned to be financed by the loan and purchased in the United States are purchased by the Borrower in a third country or in the country of the Borrower, the amount of the Loan will be reduced by an amount equal to the United States cost of the goods estimated at the time of the Loan Agreement. All ocean shipping and marine insurance financed under the Loan shall have both their source and origin in the United States of America.

SECTION 6.02. Eligibility Date. Except as A.I.D. may otherwise agree in writing, no goods or services may be financed under the Loan which are procured pursuant to orders or contracts firmly placed or entered into prior to the date of this Agreement.

SECTION 6.03. Goods and Services Not Financed Under Loan. Goods and services procured for the Project but not financed under the Loan, shall have their source and origin in countries included

in Code 935 of the A.I.D. Geographic Code Book as in effect at the time orders are placed for such goods and services.

SECTION 6.04. Implementation of Procurement Requirements.

The definitions applicable to the eligibility requirements of Sections 6.01 and 6.03 will be set forth in detail in Implementation Letters.

SECTION 6.05. Plans, Specifications, and Contracts.

(a) Except as A.I.D. may otherwise agree in writing, the Borrower shall furnish to A.I.D. promptly upon preparation, all plans, specifications, construction schedules, bid documents, and contracts relating to the Project, and any modifications therein, whether or not the goods and services to which they relate are financed under the Loan.

(b) Except as A.I.D. may otherwise agree in writing, all of the plans, specifications, and construction schedules furnished pursuant to subsection (a) above shall be approved by A.I.D. in writing.

(c) All bid documents and documents related to the solicitation of proposals relating to goods and services financed under the Loan shall be approved by A.I.D. in writing prior to their issuance. All plans, specifications, and other documents relating to goods and services financed under the Loan shall be in terms of United States standards and measurements, except as A.I.D. may otherwise agree in writing.

(d) The following contracts financed under the Loan shall be approved by A.I.D. in writing prior to their execution:

- (i) contracts for engineering and other professional services
- (ii) contracts for construction services,
- (iii) contracts for such other services as A.I.D. may specify, and
- (iv) contracts for such equipment and materials as A.I.D. may specify.

In the case of any of the above contracts for services, A.I.D. shall also approve in writing the contractor and such contractor personnel as A.I.D. may specify. Material modifications in any of such contracts and changes in any of such personnel shall also be approved by A.I.D. in writing prior to their becoming effective.

(e) Consulting firms used by the Borrower for the Project but not financed under the Loan, the scope of their service and such of their personnel assigned to the Project as A.I.D. may specify, and construction contractors used by the Borrower for the Project but not financed under the Loan shall be acceptable to A.I.D.

SECTION 6.06. Reasonable Price. No more than reasonable prices shall be paid for any goods or services financed, in whole or in part, under the Loan, as more fully described in Implementation Letters.

Such items shall be procured on a fair and, except for professional service on a competitive basis in accordance with procedures therefor prescribed in Implementation Letters.

SECTION 6.07. Shipping and Insurance.

(a) Goods procured from the United States and financed under the Plan shall be transported to the country of the Borrower on flag carriers of any country included in Code 935 of the A.I.D. Geographic Code Book as in effect at the time of shipment.

(b) At least fifty percent (50%) of the gross tonnage of all goods financed by A.I.D. (computed separately for dry bulk carriers, dry cargo liners and tankers) which shall be transported to the country of the Borrower during each United States fiscal year on ocean vessels shall be transported on privately-owned United States-flag commercial vessels unless A.I.D. shall determine that such vessels are not available at fair and reasonable rates for United States flag commercial vessels. No such goods may be transported on any ocean vessel (or aircraft)(i) which A.I.D. in a notice to the Borrower has designated as ineligible to carry A.I.D. financed goods or (ii) which has been chartered for the carriage of A.I.D. financed goods unless such charter has been approved by A.I.D.

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(c) If in connection with the placement of marine insurance on shipments financed under United States legislation authorizing assistance to other nations, the country of the Borrower, by statute, rule or regulation, favors any marine insurance company of any country over any marine insurance company authorized to do business in any state of the United States of America, goods procured from the United States and financed under the Loan shall during the continuance of such discrimination be insured against marine risk in the United States of America with a company or companies authorized to do a marine insurance business in any state of the United States of America.

(d) The Borrower shall insure, or cause to be insured, all goods procured in the United States and financed under the Loan against risks incident to their transit to the point of their use in the Project. Such insurance shall be issued upon terms and conditions consistent with sound commercial practice, shall insure the full value of the goods, and shall be payable in the currency in which such goods were financed. Any indemnification received by the Borrower under such insurance shall be used to replace or repair any material damage or any loss of the goods insured or shall be used to reimburse the Borrower for the replacement or repair of such goods. Any such

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replacements shall be of United States source and origin and otherwise subject to the provisions of this Agreement.

SECTION 6.08. Notification to Potential Suppliers. In order that all United States firms shall have the opportunity to participate in furnishing goods and services to be financed under the Loan, the Borrower shall furnish to A.I.D. such information with regard thereto, and at such times, as A.I.D. may request in Implementation Letters.

SECTION 6.09. United States Government-Owned Excess Property. The Borrower shall utilize, with respect to goods financed under the Loan to which the Borrower takes title at the time of procurement, such reconditioned United States Government-Owned Excess Property as may be consistent with the requirements of the Project and as may be available within a reasonable period of time. The Borrower shall seek assistance from AID and A.I.D. will assist the Borrower in ascertaining the availability of and in obtaining such Excess Property. A.I.D. will make arrangements for any necessary inspection of such property by the Borrower or its representative. The costs of inspection and of acquisition, and all charges incident to the transfer to the Borrower of such Excess Property, may be financed under the Loan. Prior to the procurement of any goods, other than Excess Property, financed under the Loan and after having sought such A.I.D. assistance, the Borrower shall indicate to A.I.D. in writing, on the basis of information then available to it, either that such goods cannot be made available from reconditioned United States

Government-Owned Excess Property on a timely basis or that the goods that can be made available are not technically suitable for use in the Project.

SECTION 6.10. Information and Marking. Borrower shall give publicity to the Loan and the Project as a program of United States aid, identify the Project site, and mark goods financed under the Loan, as prescribed in Implementation Letters.

## ARTICLE VII

### Disbursements

SECTION 7.01. Disbursements for United States Dollar Costs - Letters of Commitment to United States Banks. Upon satisfaction of conditions precedent, the Borrower may, from time to time, request AID to issue Letters of Commitment for specified amounts to one or more United States banks, satisfactory to A.I.D., committing AID to reimburse such bank or banks for payments made by them to contractors or suppliers, through the use of Letters of Credit or otherwise, for Dollar Costs of goods and services procured for the Project in accordance with the terms and conditions of this Agreement. Payment by a bank to a contractor or supplier will be made by the bank upon presentation of such supporting documentation as A.I.D.

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may prescribe in Letters of Commitment and Implementation Letters. Banking charges incurred in connection with Letters of Commitment and Letters of Credit shall be for the account of the Borrower and may be financed under the Loan.

SECTION 7.02. Other Forms of Disbursement. Disbursements of the Loan may also be made through such other means as the Borrower and A.I.D. may agree to in writing.

SECTION 7.03. Date of Disbursement. Disbursements by A.I.D. shall be deemed to occur , in the case of disbursements pursuant to Section 7.01, on the date on which A.I.D. makes a disbursement to the Borrower, to its designee, or to a banking institution pursuant to a Letter of Commitment.

SECTION 7.04. Terminal Date for Disbursement. Except as A.I.D. may otherwise agree in writing, no Letter of Commitment or amendment thereto shall be issued in response to requests received by A.I.D. after December 31, 1968, and no disbursements shall be made against documentation received by A.I.D. or any bank described in Section 7.01 after December 31, 1969, A.I.D. at its option, may at any time or times after December 31, 1970, reduce the Loan by all or any part hereof for which documentation was not received by such date.

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ARTICLE VIII

Cancellation and Suspension

SECTION 8.01. Cancellation by the Borrower. The Borrower may, with the prior written consent of A.I.D. by written notice to A.I.D. cancel any part of the Loan (i) which, prior to the giving of such notice, A.I.D. has not disbursed or committed itself to disburse or (ii) which has not then been utilized through the issuance of irrevocable Letters of Credit or through bank payments made other than under irrevocable Letters of Credit.

SECTION 8.02. Events of Default; Acceleration. If any one or more of the following events ("Events of Default") shall occur:

(a) The Borrower shall have failed to pay when due any interest or installment of Principal required under this Agreement;

(b) The Borrower shall have failed to comply with any other provision of this Agreement, including, but without limitation, the obligation to carry out the Project with due diligence and efficiency;

(c) The Borrower shall have failed to pay when due any interest or any installment of Principal or any other payment required under any other loan agreement, any guaranty agreement, or any other agreement between the Borrower or any of its agencies and A.I.D. or any of its predecessor agencies,

then A.I.D. may, at its option, give to the Borrower notice that all or any part of the unrepaid Principal shall be due and payable sixty (60)

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days thereafter, and, unless the Event of Default is cured within such sixty (60) days:

(i) such unrepaid Principal and any accrued interest hereunder shall be due and payable immediately, and'

(ii) the amount of any further disbursements made under then outstanding irrevocable Letters of Credit or otherwise shall become due and payable as soon as made.

SECTION 8.03. Suspension of Disbursements. In the event that at any time:

(a) An Event of Default has occurred;

(b) An event occurs that A.I.D. determines to be an extraordinary situation that makes it improbable either that the purpose of the Loan will be attained or that the Borrower will be able to perform its obligations under this Agreement; or

(c) Any disbursement would be in violation of the legislation governing A.I.D. ;

(d) The Borrower shall have failed to pay when due any interest or any installment or principal or any other payment required under any other loan agreement, any guaranty agreement or any other agreement between the Borrower or any of its agencies and the Government of the United States of America or any of its agencies;

Then A.I.D. may at its option:

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(i) Suspend or cancel outstanding commitment documents to the extent that they have not been utilized through the issuance of irrevocable Letters of Credit or through bank payments made other than under irrevocable Letters of Credit, in which event A.I.D. shall give notice to the Borrower promptly thereafter;

(ii) Decline to make disbursements other than under outstanding commitment documents;

(iii) Decline to issue additional commitment documents, and

(iv) At A.I.D.'s expense, direct that title to goods financed under the Loan shall be transferred to A.I.D. if the goods are from a source outside the country of the Borrower, are in a deliverable state and have not been offloaded in ports of entry of the country of the Borrower. Any disbursement made or to be made under the Loan with respect to such transferred goods shall be deducted from Principal.

SECTION 8.04. Cancellation by A.I.D. Following any suspension of disbursement pursuant to Section 8.03, if the cause or causes for such suspension of disbursements shall not have been eliminated or corrected within sixty (60) days from the date of such suspension, A.I.D. may, at its option, at any time or times thereafter, cancel all or any part of the Loan that is not then either disbursed or subject to irrevocable Letters of Credit.

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SECTION 8.05. Continued Effectiveness of Agreement.

Notwithstanding any cancellation, suspension of disbursement or acceleration of repayment, the provisions of this Agreement shall continue in full force and effect until the payment in full of all Principal and any accrued interest hereunder.

SECTION 8.06. Refunds.

(a) In the case of any disbursement not supported by valid documentation in accordance with the terms of this Agreement, or of any disbursement not made or used in accordance with the terms of this Agreement, A.I.D., notwithstanding the availability or exercise of any of the other remedies provided for under this Agreement, may require the Borrower to refund such amount in United States dollars to A.I.D. within ninety days after receipt of a request therefor. Such amount shall be made available first for the cost of goods and services procured for the Project hereunder, to the extent justified; the remainder, if any, shall be applied to the installments of Principal in the inverse order of their maturity and the amount of the Loan shall be reduced by the amount of such remainder. Notwithstanding any other provision in this Agreement, A.I.D.'s right to require a refund with respect to any disbursement under the Loan shall continue for five years following the date of such disbursement.

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(b) In the event that A.I.D. receives a refund from any contractor, supplier, or banking institution, or from any other third party connected with the Loan, with respect to goods or services financed under the Loan, and such refund relates to an unreasonable price for goods or services, or to goods that did not conform with specifications, or to services that were inadequate, A.I.D. shall first make such refund available for the cost of goods and services procured for the Project hereunder, to the extent justified, the remainder to be applied to the installments of Principal in the inverse order of their maturity and the amount of the Loan shall be reduced by the amount of such remainder.

SECTION 8.07. Expenses of Collection. All reasonable costs incurred by A.I.D., other than salaries of its staff, in connection with the collection of any refund or in connection with amounts due A.I.D. by reason of the occurrence of any of the events specified in Section 8.02 may be charged to the Borrower and reimbursed to A.I.D. in such manner as A.I.D. may specify.

SECTION 8.08. Non-Waiver of Remedies. No delay in exercising or omission to exercise any right, power, or remedy accruing to A.I.D. under this Agreement shall be construed as a waiver of any of such rights, powers, or remedies.

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ARTICLE IX

Miscellaneous

SECTION 9.01. Communications. Any notice, request, document or other communication given, made or sent by the Borrower or A.I.D. pursuant to this Agreement shall be in writing or by telegram, cable or radiogram and shall be deemed to have been duly given, made or sent to the party to which it is addressed when it shall be delivered to such party by hand or by mail, telegram, cable or radiogram at the following addresses:

TO BORROWER:

Mail Address: Secretary to the Government of Pakistan  
President's Secretariat  
Economic Affairs Division  
Islamabad, Pakistan

Cable Address: ECONOMIC  
Islamabad .

To A.I.D.:

Mail Address: United States Agency for International  
Development  
Alfalah Building, The Mall  
Lahore, Pakistan

Cable Address: USAIDPAK  
Lahore

Other addresses may be substituted for the above upon the giving of notice. All notices, requests, communications and documents submitted to A.I.D. hereunder shall be in English, except as A.I.D. may otherwise agree in writing.

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SECTION 9.02. Representatives. For all purposes relative to this Agreement, the Borrower will be represented by the individual holding or acting in the office of the Secretary, Economic Affairs Division and A.I.D. will be represented by the individual holding or acting in the office of Director, U.S.A.I.D. Mission to Pakistan. Such individuals shall have the authority to designate by written notice additional representatives. In the event of any replacement or other designation of a representative hereunder, Borrower shall submit a statement of the representative's name and specimen signature in form and substance satisfactory to A.I.D. Until receipt by A.I.D. of written notice of revocation of the authority of any of the duly authorized representative of the Borrower designated pursuant to this Section, it may accept the signature of any such representative or representatives on any instrument as conclusive evidence that any action effected by such instrument is duly authorized.

SECTION 9.03. Implementation Letters. A.I.D. shall from time to time issue Implementation Letters that will prescribe the procedures applicable hereunder in connection with the implementation of this Agreement.

SECTION 9.04. Promissory Notes. At such time or times as A.I.D. may request, the Borrower shall issue promissory notes or such other evidences of indebtedness with respect to the Loan, in such form, containing such terms and supported by such legal opinions as A.I.D. may reasonably request.

SECTION 9.05. Termination Upon Full Payment. Upon payment in full of the Principal and of any accrued interest, this Agreement and all obligations of the Borrower and A.I.D. under this Loan Agreement shall terminate.

IN WITNESS WHEREOF, the Borrower and the United States of America, each acting through its respective duly authorized representative have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

GOVERNMENT OF PAKISTAN

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

UNITED STATES OF AMERICA

BY: \_\_\_\_\_

Name: \_\_\_\_\_

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## ANNEX I

### Project Description

The Malaria eradication program in Pakistan is designed to eliminate malaria and prevent its reintroduction in the entire country of Pakistan in accordance with the Plan of Operations prepared and adopted by the Government of Pakistan ("GOP") and the World Health Organization ("WHO") in 1961 covering the years 1961 to 1974 and yearly (fiscal year) Plans of Action prepared and adopted by the GOP and WHO ("Program").

The activities of the fourteen year, phased Program include the geographic and topographical reconnaissance of all malarious areas, the numbering and mapping of all houses in these areas and then a campaign of spraying all inside surfaces of these houses with DDT twice a year, until malaria transmission is low enough that spraying can be discontinued and surveillance activities become the sole protection against malaria. The purpose of the surveillance operation is to discover and cure every case of residual malaria in the country by monthly visits to find active or recent fever cases and follow-up procedures including blood samples taken of each

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fever case microscopically examined for malaria parasites, radical cures of confirmed cases and focal spraying, mass blood examinations and epidemiological investigations to ensure transmission will not occur in the vicinity of a confirmed case.

The Project includes that portion of the Program to be executed during calendar years 1969 and 1970.

The Plan of Operation provides for an annual technical review of the Program by the G.O.P. and W.H.O. as the basis for the preparation of an annual Plan of Action for each Province. The Plans of Action for FY 1969 are expected to include the following operations:

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District - Wise Status of Malaria Eradication Program of Pakistan  
By Technical Phases in FY - 69

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<u>Phases</u>	<u>EAST PAKISTAN</u>	
	<u>Total Pop: 60.9 million</u>	
	<u>Districts</u>	<u>Population</u> (Million)
<u>Maintenance Phase</u>	Dinajpur	2.1
<u>Consolidation Phase</u>		
3rd Year	Rangpur	4.5
2nd Year	Bogra, Rajshahi & Patna	7.6
1st Year	Kushtia & Jessore, Jamalpur, Tangail, Kishoregonj of Mymensingh	7.1
	Total of Consolidation Phase:	<u>19.2</u>
<u>Attack Phase:</u>		
5th Year	-	-
4th Year	Netrokona and Sadar sub-division of Mymensingh district, Jessore and Sathkhira sub-division of Khulna	3.4
3rd Year	Jessore & Sathkhira sub-division of Khulna	5.0
2nd Year	Khulna (-Sathkhira), Sylhet, Comilla (excluding Chandpur sub-division), Noakhali (East)	12.1
1st Year	Dacca, Faridpur, Chandpur subdivison, Noakhali (West), Chittagong Hill Tract	14.00
	Total of Attack Phase	<u>34.5</u>
<u>Preparatory Phase</u>	Bakergonj	5.1
	GRAND TOTAL	<u>60.9</u>

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Phases

WEST PAKISTAN  
Total Pop: 51.2 Million

	<u>Districts</u>	<u>Population</u> (Million)
<u>Maintenance Phase</u>		
<u>Consolidation Phase</u>		
3rd Year	Sheikhpura & Sialkot	3.2
2nd Year	Gujranwala, Lahore, Lyallpur T. T. Singh & Pakpattan	9.0
1st Year	Jhang, Sahiwal, Bahawalpur, Gujrat, Sargodha, Multan, Khanewal, Campbellpur, Rawalpindi	12.4
	Total of Consolidation Phase	<u>24.6</u>
<u>Attack Phase:</u>		
5th Year	Hyderabad	1.5
4th Year	Muzaffargarh, B. pur & R. Y. Khan, Jhelum, Khairpur, Nawab- shah, Sanghar-Tharparkar	7.0
3rd Year	Mianwali, D.G. Khan	1.8
2nd Year	Peshawar-Khyber, Kohat, Kurrum, N. Wazirstan Bannu, D. I. Khan, S. Wazirstan, Sukkur, Jacob- abad-Larkana, Dadu Thatta	10.1
1st Year	Hazara, Mardan, Malakand	<u>4.8</u>
	Total of Attack Phase	<u>25.2</u>
<u>Preparatory Phase:</u>	Quetta Division, Kalat Division	<u>1.4</u>
	GRAND TOTAL	<u>51.2</u>

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Alfalah Building  
The Mall, Lahore

Secretary to Government  
Economic Affairs Division  
President's Secretariat  
Government of Pakistan  
Islamabad

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Dear Sir:

Subject : Loan No. A.I.D. 391-X-  
Malaria Eradication 4th  
Implementation Letter No. 1

This letter sets forth the procedures for utilizing the proceeds of the loan and provides information and guidance to you in implementing your project in conformity with the Loan Agreement ("Agreement"). Except as provided by the Agreement, nothing in this letter or its attachments alters the scope of the Agreement or the terms of the specific sections that are referred to explained in this communication. Instructions in this letter and the attachments may be supplemented or modified by subsequent Implementation Letters as required.

PART ONE

PROJECT DESCRIPTION

I. THE PROJECT

The project as approved by A.I.D. is described in Annex I to the Loan Agreement covering this loan. If this does not conform with your understanding of the project, please advise us in writing of any differences.

(a) Proposed FY 1969 and FY 1970 MEX Budgets

We understand that the proposed FY 1969 and FY 1970 budgets for East and West Pakistan Malaria eradication programs are as follows:

<u>East Pakistan</u>	<u>Internal</u>	<u>External</u>	<u>Total</u>
	(In Million Rupees)		
FY 1969	24.0	9.1	33.1
FY 1970	20.0	5.4	25.4
<u>West Pakistan</u>			
FY 1969	24.0	5.0	29.4
FY 1970	23.7	4.3	28.0

(b) Dollars

An estimate of the Dollar requirements and the items to be financed by the Loan are indicated on page #3.

III. IMPLEMENTATION PLAN

The commodities being financed by this Loan will be procured by the GCP/NEB (Consignee=Provincial Chief NEB East Pakistan/West Pakistan) through commercial channels, in accordance with A.I.D. regulations, except for DDT and spraying equipment which will be procured by the National Communicable Diseases Centre (NCDC) through the General Services Administration (GSA), and thereafter, will be distributed by the respective Provincial Chiefs to field stations as allocated under the Plan of Distribution.

Every effort must be made to adhere to the schedule for the procurement of DDT and for the spraying seasons in both West and East Pakistan. Please see following pages for schedule:

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## ESTIMATED FOREIGN EXCHANGE COSTS OF MEP FOR FY 1969 & FY 1970

COMMODITY	EAST PAKISTAN		WEST PAKISTAN		TOTALS		GRAND TOTAL
	1969	1970	1969	1970	1969	1970	
1. DT - 75% WDP	\$1,775,025	\$1,146,159	\$1,079,740	\$339,640	\$2,854,765	\$1,485,799	\$4,340,564
2. <u>TRANSPORT</u>							
a. Vehicles	44,600	NIL	80,000	NIL	124,600	NIL	124,600
b. Spare Parts	14,000	15,000	60,000	60,000	75,000	75,000	150,000
c. Tools	10,000	2,000	5,000	5,000	15,000	7,000	22,000
3. <u>LABORATORY EQUIPMENT</u>							
a. Microscopes	80,000	NIL	NIL	NIL	80,000	NIL	80,000
b. Microscope Spare Parts	5,000	5,000	5,000	5,000	10,000	10,000	20,000
c. Misc. (incl. slides, chemicals, drugs, etc.)	55,000	55,000	5,000	5,000	60,000	60,000	120,000
4. <u>SPRAY EQUIPMENT</u>							
a. Sprayers	84,000	NIL	NIL	NIL	84,000		84,000
b. Sprayer spares	141,000	140,000	31,500	31,500	772,500	171,000	344,000
c. Nozzle tips	40,000	16,000	NIL	NIL	40,000	16,000	56,000
Sub-Total	\$2,245,825	\$1,379,159	\$1,230,240	\$446,140	\$3,515,865	\$1,825,299	\$5,341,164
5. COMMISSIONS (7%)	157,472	96,541	86,637	31,230	246,111	127,771	373,882
6. FREIGHT & INSURANCE (12%)	286,955	155,489	151,950	53,537	421,905	219,036	640,941
7. TECHNICIANS (10)					200,000	200,000	400,000
TOTALS :	\$2,677,054	\$1,641,199	\$1,409,027	\$530,907	\$4,383,981	\$2,372,106	\$6,755,907
				JAY	\$4,400,000	\$2,400,000	\$6,800,000

SCHEDULE OF ORDERING, DELIVERING AND SPRAYING DATE  
FOR REQUIRED AMOUNT OF 75% DDT - EAST AND WEST  
PAKISTAN MALARIA ERADICATION PROGRAM IN CY 1969\*

	<u>Date Round I</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>Date Round II</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>'Arrival'</u> <u>Date</u> <u>in port of</u> <u>entry, no</u> <u>later than</u>	<u>To be ordered</u> <u>no later</u> <u>than</u>	<u>Cost/Order</u>
<u>EAST PAKISTAN</u>					
Total CY 1969 requirement = 7,717,500 lbs.	March 1, 1969 5,733,125 lbs.		Jan. 1, 1969	July 1, 1968	\$1,331,268.75
		Sept. 1, 1969 1,923,375 lbs.	July 1, 1969	June 1, 1969	443,756.25
<u>WEST PAKISTAN</u>					
Total CY 1969 requirements = 4,694,500 lbs.	June 1, 1969 2,347,260 lbs.		April 1, 1969	Oct. 1, 1968	\$539,369.80
		Aug. 1, 1969 2,347,260 lbs.	June 1, 1969	Dec. 1, 1968	\$539,369.80
Total DDT requirement CY 1969 = <u>12,412,000 lbs.</u>				Total costs:	<u>\$2,854,765.00</u>

\*A six month lead time is allowed between ordering and arrival in port of entry. This is absolutely minimum for safety. Two months are allowed after arrival for distribution in the field prior to commencing spraying. This is also an absolute minimum time.

SCHEDULE OF ORDERING DELIVERING AND SPRAYING DATES  
FOR REQUIRED AMOUNT OF 75% DDT - EAST AND WEST  
PAKISTAN MALARIA ERADICATION PROGRAM IN CY 1970\*

	<u>Date Round I</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>Date Round II</u> <u>Spraying begins</u> <u>and DDT</u> <u>requirement</u>	<u>Arrival</u> <u>Date</u> <u>in port of</u> <u>entry, no</u> <u>later than</u>	<u>To be ordered</u> <u>no later</u> <u>than</u>	<u>Cost/Order</u>
<u>EAST PAKISTAN</u>					
Total CY 1970 requirement = 4,983,300 lbs.	March 1, 1970 3,737,475 lbs.		Jan. 1, 1970	July 1969	\$859,619.25
		1,245,825 lbs.	July 1, 1970	Jan. 1969	283,539.75
<u>WEST PAKISTAN</u>					
Total CY 1970 requirement = 1,475,680 lbs.	June 1, 1970 738,340 lbs.		April 1, 1970	Oct. 1969	339,636.40
		August 12, 1970 738,340	June 1, 1970	Dec. 1969	339,036.40
Total DDT requirement CY 1970 = 6,459,980 lbs.					
			Total costs:		<u>\$1,482,795.40</u>

\*A six month lead time is allowed between ordering and arrival in port of entry. This is absolutely minimum for safety. Two months are allowed after arrival for distribution in the field prior to commencing spraying. This is also an absolute minimum time.

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PART TWO

LOAN IMPLEMENTATION

I. Conditions Precedent to Use of Loan Proceeds

In accordance with the requirements of Article III of the Loan Agreement and prior to establishing the first Letter of Commitment under the Loan, or disbursement by other methods, you are requested to comply with the following conditions precedent in form and substance satisfactory to A.I.D.:

Note: In order to prevent delays in fulfillment of Conditions Precedent with respect to one Province from affecting malaria eradication operations in the other Province, Conditions Precedent 3.01(d)-(h) below shall be satisfied independently for each Province. Upon satisfaction of conditions precedent with respect to one Province, A.I.D. will authorize disbursements or the issuance of Letters of Commitment for Eligible Items for that portion of the Malaria Eradication Program to be executed in that Province.

A. To be fulfilled by GCF

(a) Legal Opinion and Supporting Documents. Section 3.01(a)

An opinion of the Minister of Law of Pakistan or of other counsel acceptable to A.I.D. that this Agreement has been duly authorized or ratified by, and executed on behalf of the Borrower, and that it constitutes a valid and legally binding obligation of the Borrower in accordance with all of its terms. See Attachment 'A' for guidance.

(b) Specimen Signatures - Section 3.01(b)

Evidence of the authority of the person or persons who will act as the representative or representatives of Borrower specified in Section 9.02 and a specimen signature of each such person certified as to its authenticity by either the person who renders the legal opinion or the person who executes the Agreement.

(c) Technical Advisors - Section 3.01(c)

Evidence of arrangements satisfactory to A.I.D. for the provision of technical advisors from the United States Public Health Service/National Communicable Disease Center (PHS/NCDC); such evidence to include the number, types and the duration of service of each such advisor.

B. To be fulfilled by WFPED & BINED Separately

(d) Relending or Other Financial Arrangements - Section 3.01(d)

Please furnish a statement outlining the procedures or arrangements for passing the loan on to the two Malaria Eradication Boards in West and East Pakistan, and insuring that effective means will be adopted to avoid delays in this regard. (Note: this section may be revised to describe direct Mission disbursement procedure).

(e) Plan of Operation & Derivative Plans of Action - Section 3.01(e)

Written assurance that the Borrower will execute the Malaria Eradication Program in its entirety according to the Plan of Operation adopted by the Government of Pakistan and W.F.C., in 1961 and the derivative annual Plans of Action, and that any material modifications to the Program must be mutually agreeable to the Borrower, W.F.C., A.I.D., and PHS/NCDC.

(f) Plan of Action - Section 3.01(f)

Evidence that a Plan of Action for the year 1969 has been adopted by the Government of Pakistan that is mutually agreeable to Borrower, W.F.C., A.I.D., and PHS/NCDC.

(g) Other Funds - Section 3.01(g)

Please furnish to A.I.D. written assurance that local currency, in an amount considered adequate by W.F.C. and A.I.D. to support a reasonable program of malaria eradication, is contained in the appropriate budgets and will be made available to the Directors of the Provincial Malaria Eradication Programs to implement the approved 1969 Plans of Action. The above assurance should show a total budget of approximately Rs. 2.94 crores for the WFPED for FY 1969, and Rs. 3.31 crores for EP MED for FY 1969, which are acceptable to A.I.D.

(h) Procurement of Goods - Section 3.01(h)

Evidence of arrangements for the procurement of goods, including a list of such goods, and the distribution and utilization thereof as required for the Project together with schedules for purchase, delivery, distribution and utilization thereof. Such arrangements shall assure that the Loan, to the maximum extent practicable, will not be used to finance the procurement of goods or services, otherwise eligible for financing hereunder, if comparable goods and services are produced and available in the country of the Borrower in sufficient quantity, of satisfactory quality and at a reasonable price.

Except as A.I.D. may otherwise agree in writing, the terminal date for fulfilling the above mentioned conditions is ninety(90) days from the date of the Agreement.

C. Conditions Precedent to Disbursement for the 1970 Malaria Eradication Program - Section 3.02

As in the case of the conditions precedent in 3.01 above, the conditions precedent in this Section shall be satisfied independently for each Province. Upon satisfaction of conditions precedent with respect to one province, A.I.D. will authorize disbursements or the issuance of Letters of Commitment for Eligible Items for that portion of the 1970 Malaria Eradication Program to be executed in that Province.

Prior to the first disbursement or the issuance of Letters of Commitment for any Eligible Items for that portion of the Malaria Eradication Program to be executed during calendar year 1970, the Borrower shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D. in form and substance satisfactory to A.I.D.:

(a) Evidence that Borrower has submitted to A.I.D. the plans required by Sections 3.01 and 3.02. (See para II below).

(b) Evidence that a Plan of Action for 1970 has been adopted by the Government of Pakistan that is mutually agreeable to Borrower, W.H.O., A.I.D., and PHS/NCDC.

(c) Evidence that local currency, in an amount considered adequate by WHO, A.I.D., and PHS/NCDC to support a reasonable program of malaria eradication, is contained in the appropriate budgets and will be made available to the Directors of the Provincial Malaria Eradication Programs to implement the approved 1970 Plans of Action. The above assurance should include a statement that the total budget for the MPEEP for FY 1970 is Rs. 2.00 crores and for the EPMEEP for FY 1970 is Rs. 2.54 crores, which figures are acceptable to A.I.D.

(d) Evidence of arrangements for the procurement of goods, including list and prices of such goods, and the distribution and utilization thereof as required for the Project together with schedules for purchase, delivery, distribution and utilization thereof.

Except as A.I.D. may otherwise agree in writing, the terminal date for fulfilling the above mentioned conditions is July 31, 1969.

A.I.D. will notify the Borrower when the conditions precedent required by Sections 3.01 and/or 3.02 for each Province have been fulfilled to the satisfaction of A.I.D. Thereafter, A.I.D. will issue disbursing authorizations (L/CCMs and P/PAs) requested by the Borrower.

## II. General Covenants

Your particular attention is called to the following covenants set forth in the loan agreement:

(1) Section - 4.02 (b)

Borrower agrees not to use U.S. PL 480 funds to procure DDT from local producers whose price is substantially in excess of a reasonable CIF cost. In the event such DDT is procured in place of imported DDT, Borrower shall provide sufficient additional funds to cover the increased local currency costs of the Project so that the Project can be fully executed.

(2) Section - 5.01

The Borrower shall submit to A.I.D. prior to December 31, 1968, a satisfactory plan developed in collaboration with PHS/NCDC and WHO following thorough investigation of the urban malaria eradication problem, including details on time phasing, for the effective surveillance and eradication of malaria in urban areas, indicating how the plan will be financed and implemented and which organization will be responsible for its execution. The plan submitted will carry the endorsement of PHS/NCDC and WHO.

(3) Section - 5.02

The Borrower shall submit to A.I.D. prior to December 31, 1968, a satisfactory plan, including details on time phasing, for the effective transfer to and effective implementation by, the local Health Services of the responsibility for maintenance of malaria-free zones after malaria has been eliminated. Financial and implementation plans should be detailed to indicate the level of financial support and staffing that will be required by the Health Services to effectively carry out these responsibilities.

(4) Section - 5.03

The Borrower shall cause the procedures set forth in the Supply and Transport Manuals approved by the Government of Pakistan, WHO and A.I.D. to be implemented by the Malaria Eradication Board in a manner mutually agreeable to Borrower and A.I.D.

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III. Financing Procedure & Documentation - Sections 7.01 & 7.02

A.I.D. anticipates that the financing of Eligible Items to be procured under the Agreement will be handled in two ways:

- A. Through the U.S. General Services Administration (GSA) by means of orders placed on the Borrower's behalf by A.I.D. for the purchase of Sprayers, Sprayer Spares and DDT, and
- B. By Letters of Commitment opened by A.I.D. upon Borrower's request for the procurement of all other items to be financed under this loan.

In requesting A.I.D. to place orders with GSA, please submit the following information:

- a) Item - with the specification in sufficient detail to identify the item adequately.
- b) Quantity required.
- c) Value of funds to be set aside under the loan.
- d) Schedule for delivery by port of destination and by quantity.

A.I.D. can place two types of orders with GSA: One whereby GSA will procure as large a quantity of the item as funds included in the request will permit at the market price obtaining at that time (funds controlling), and two, an order whereby GSA will procure either the requested quantity of a given item, or, in the event the market price is higher than anticipated in the request, the quantity of an item which can be procured with funds set aside in the request. You should indicate in your request the basis on which the order would be placed.

In placing orders for sprayers, please refer to A.I.D. Specification No. 7705-4,\* indicating tank capacity and optional items desired. The procedure governing the issuance of Letters of Commitment is set fourth in Attachment D. The item to be financed under Letters of Commitment should bear the appropriate A.I.D. four digit code. It is not necessary to assign a dollar value to each code, but the approximate quantity to be procured under each code should be indicated.

Please note that unless A.I.D. may otherwise agree in writing, the terminal date for requesting issuance of Letters of Commitment is December 31, 1969 and for disbursement December 31, 1970. If circumstances arise which you consider necessitate an extension of the

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\*or latest revision

terminal disbursement date; please refer to Attachment 'C' to this letter for guidance.

IV. Procurement

A. Competitive Bidding

Except as A.I.D. may otherwise hereafter agree in writing, commodities procured shall be eligible for financing hereunder only if procured through formal competitive bid procedures in accordance with Section 201.22 of A.I.D. Regulation I.

B. Notification for U.S. Business of Proposed Procurement of Goods - Section 6.08

In complying with this requirement, please refer to Attachment 'C' to this letter. Please also refer to Attachment 'F' regarding commodity eligibility under A.I.D. financing.

C. United States Government Owned Excess Property Section 6.09

This will be the subject of a subsequent Implementation Letter. In the meantime, both Borrower and A.I.D. will ascertain the availability of these Excess Property items which can be properly used in the Project.

D. Eligible Source of Procurement

In accordance with Section 6.01 of the Agreement, loan proceeds can be used only to finance eligible items, including transportation, commodities, services, and marine insurance, having their origin in and procured from the United States. For details refer to Attachment 'I' to this letter.

E. Limitation on Shipping Facilities

In accordance with Section 6.07, items otherwise eligible for financing under the A.I.D. loan will not be so financed if shipped on transportation media owned or controlled by any of the following countries:

The Union of Soviet Socialist Republics, Albania, Bulgaria, Czechoslovakia, East Germany, Danzig, Hungary, Poland, Rumania, Latvia, Lithuania, Estonia, North Vietnam, North Korea, China (Mainland) and other Communist-controlled areas, Outer Mongolia, Tibet and Cuba.

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## F. Special Shipping Limitation

In accordance with Section 3.07, items otherwise eligible for financing under the A.I.D. loan will not be so financed if shipped on vessels which A.I.D. from time to time declares ineligible for the carriage of A.I.D. financed goods.

## G. Payment of Local Agent Representative Commissions, Discounts and Similar Fees. Section 4.08

Please refer Attachment 'Y' for guidance.

## H. Eligibility Date - Section 3.02

The eligibility date shall be the date of this Loan Agreement which is .....

## V. Marking

In accordance with the provisions of Section 3.10 the Borrower shall cooperate with A.I.D. in making information concerning the loan public and shall have the Eligible Items and their shipping containers suitably marked. Attachment 'F' to this letter discusses the marking requirement in greater detail. In addition, the Borrower is requested to erect signs at the project site identifying A.I.D. with the project. Attachment 'Q' describes the types of signs to erected.

## VI. Reports

In accordance with the requirements of Section 4.16 of the Agreement, the following reports should be submitted to A.I.D.:

- A. Quarterly Progress Report - Procurement
- B. Quarterly Progress Report - Operations
- C. Quarterly Shipping Report,

All of the above mentioned reports shall be in the same format as the ones now being furnished under Loan 391-H-128. The first such reports should be for the quarter ending \_\_\_\_\_ and be submitted to A.I.D. no later than \_\_\_\_\_. Subsequent reports should be submitted within thirty days from the end of the reporting quarter.

## VII. Correspondence - Section 9.01

Correspondence should be addressed as indicated below:

- I. Correspondence originating from the authorized representative(s)

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of the Borrower (excluding Office of Small Business OSB notices):

United States Agency for  
International Development  
Al-Falah Building, The Mall  
Lahore.

2. Correspondence to the Office of Small Business (OSB):

(See Attachment 'C' to this letter)

The A.I.D. will be glad to discuss with your representatives any problem or questions you may have concerning the implementation of the loan, or relative to this letter and its Attachments.

Sincerely yours

Raymond C. Hilley  
Assistant Director  
Capital Development &  
Private Enterprise

Drafted by: RJafar:all - AD/CDFE  
4/19/68

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Attachments:

The alphabetical nomenclature of the attachments has been standardized. Those which are omitted are not applicable to this project.

- A. Guidance for Preparing Legal Opinion.
- C. Borrower's notice to U.S. Business.
- D. Disbursement of Loan Funds - Letter of Commitment Procedure.
- F. Commodity Eligibility under A.I.D. Financing.
- I. Source Eligibility Requirements.
- O. Justification for Extension of Terminal Disbursement Dates.
- P. Marking Requirements - Goods & Shipping Containers.
- Q. Publicity & Signs at Project Sites.
- Y. Payment of Local Agent Representative Commissions, Discounts and Similar Fees.

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