

PD-ABP-679  
95323

AGENCY FOR INTERNATIONAL DEVELOPMENT <b>PROJECT DATA SHEET</b>	1. TRANSACTION CODE <input type="checkbox"/> A = Add <input type="checkbox"/> C = Change <input type="checkbox"/> D = Delete	Amendment Number _____ DOCUMENT CODE 3
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2. COUNTRY/ENTITY Africa Regional	3. PROJECT NUMBER 698-0481
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4. BUREAU/OFFICE AFR/TR/HPN	5. PROJECT TITLE (maximum 40 characters) New Strategies: Malaria in Africa
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6. PROJECT ASSISTANCE COMPLETION DATE (PACD) MM DD YY 11 01 91	7. ESTIMATED DATE OF OBLIGATION (Under 'B.' below, enter 1, 2, 3, or 4) A. Initial FY 910 B. Quarter <input type="checkbox"/> C. Final FY 912
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8. COSTS (\$000 OR EQUIVALENT \$1 = )						
A. FUNDING SOURCE	FIRST FY			LIFE OF PROJECT		
	B. FX	C. L/C	D. Total	E. FX	F. L/C	G. Total
AID Appropriated Total	\$303,133	----	\$303,133	\$303,133	----	\$303,133
(Grant)	(303,133)	( )	(303,133)	(303,133)	( )	(303,133)
(Loan)	( )	( )	( )	( )	( )	( )
Other U.S. 1.						
Other U.S. 2.						
Host Country						
Other Donor(s)						
<b>TOTALS</b>	303,133			\$303,133		

9. SCHEDULE OF AID FUNDING (\$000)									
A. APPRO- PRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE		D. OBLIGATIONS TO DATE		E. AMOUNT APPROVED THIS ACTION		F. LIFE OF PROJECT	
		1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan	1. Grant	2. Loan
(1)	RA590	974		0	0	\$303,133	0	\$303,133	0
(2)									
(3)									
(4)									
<b>TOTALS</b>						\$303,133	0	\$303,133	0

10. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each)	11. SECONDARY PURPOSE CODE
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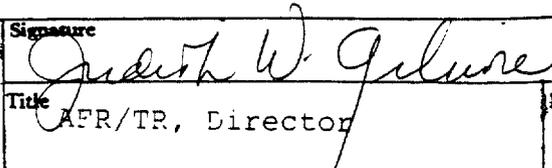
12. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)							
A. Code	R/H						
B. Amount							

13. PROJECT PURPOSE (maximum 480 characters)

To develop a strategy for the Africa Bureau's approach to the problem of malaria.

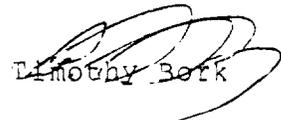
14. SCHEDULED EVALUATIONS Interim MM YY MM YY Final MM YY	15. SOURCE/ORIGIN OF GOODS AND SERVICES <input checked="" type="checkbox"/> 000 <input type="checkbox"/> 941 <input type="checkbox"/> Local <input type="checkbox"/> Other (Specify)
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16. AMENDMENTS/NATURE OF CHANGE PROPOSED (This is page 1 of a \_\_\_\_\_ page PP Amendment.)

17. APPROVED BY	Signature  Title AFR/TR, Director	Date Signed MM DD YY 04/13/91	18. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION MM DD YY
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AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON D C 20523

ACTION MEMORANDUM FOR THE ACTING ASSISTANT ADMINISTRATOR FOR  
AFRICA

FROM: AFR/PD,  Timothy Berk

SUBJECT: New Strategies to Prevent and Control Malaria in  
Africa (698-0481)

I. Proposed Action: Your approval is requested to (1) authorize the New Strategies: Malaria in Africa Project, involving total planned obligations of \$303,133 from the Development Fund for Africa (DFA), all of which will be obligated in FY90 and (2) award a grant to the American Association for the Advancement of Science (AAAS) to undertake the subject project.

II. Discussion:

A. Project Development

The AAAS has submitted to AFR/TR a proposal to develop for the Bureau a possible strategy regarding malaria in Africa. This proposal was accepted by AFR/TR after numerous conversations between Dr. Amy Wilson of the AAAS and AFR/TR personnel clarified AFR/TR's requirements for this activity. This solicited proposal is being accepted noncompetitively on the basis of AAAS's predominant capability to undertake the proposal, in accordance with Handbook 13, Chapter 2, Section 2B3b.

B. Project Description

The purpose of this activity is to develop a strategy for the Bureau's future approach to the problem of malaria. The Bureau's current approach to malaria involves treatment of the disease (especially in pregnant women and children) with chloroquine, and tracking of the disease in Africa. The Bureau's current approach needs to be revised for several reasons.

First, resistance to chloroquine, the major chemotherapeutic agent, is on the increase. Part of the reason for this is that adulterated chloroquine has proliferated in some countries, such as Nigeria. As a result, there is currently no standard recommended prophylaxis of malaria.

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Second, much of the recent eradication focus has been on developing vaccines. However, it is unlikely that anything other than a parasite-specific vaccine could be developed, and there is a great variety of parasites worldwide. Even if an effective vaccine could be developed, "experience with distribution of other vaccines currently available suggests that no more than 20% of children in some rural African communities would ever receive the vaccine" (AAAS proposal, Page 8). Again, this argues against a purely biomedical approach to malaria.

A third factor complicating the approach to malaria in Africa is the fact that recent rural and urban development involving irrigation and deforestation are all increasing the opportunity for mosquitoes to breed and for the disease to spread among humans.

These developments argue for a new approach to malaria which can address these social, economic and medical factors responsible for the resurgence of malaria in Africa. The AAAS proposal calls for a 15 month project, consisting of a planning session, a joint agenda-setting meeting, (both in the U.S.) and a malaria strategies workshop (to be held in Africa). The planning session will be conducted by a group of 3 to 5 experts from the principal disciplines which focus on malaria. The agenda-setting meeting will include the "most appropriate representatives from African scientific and health organizations" and the principal task will be to agree on topics for the workshop in Africa.

At the workshop in Africa, working groups will be charged with weighing costs and benefits of possible strategies to combat malaria in Africa and offering recommendations to a workshop group at large. After the workshop, AAAS staff and consultants will distill the deliberations and recommendations of the workshop, compile a draft report and produce a final report in French and English that clearly sets forth workable strategies for addressing malaria in Africa.

Currently, the Institute of Medicine (IOM) of the National Academy of Sciences is conducting an 18 month study of the prevention and control of malaria worldwide. This study will emphasize medical chemoprophylaxis, immunological approaches, vector control, and cost benefit analyses. This study is being funded by the Vector Biology Control project, an S&T initiative which provides technical assistance in vector control to missions. This AAAS proposal was intentionally designed to complement the IOM study. AFR/TR will establish a liaison arrangement which involves S&T/HPN, IOM, AFR/TR and AAAS. The

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purpose of this arrangement will be to synthesize a strategy toward malaria which is not only biomedically but sociologically and economically feasible within the African context. This strategy should complement the S&T Bureau's vector control strategy, which addresses ten vector-borne diseases, one of which is malaria. The strategy should also be feasible in terms of the objectives of the DFA and of the Agency's health policy paper.

The proposal calls for a workshop approach to developing a new strategy because it is necessary to integrate the skills and knowledge of experts from diverse fields, many of which have not heretofore been represented in the field of malariology, and therefore a "study" relying on currently published material would not be adequate. This project would not lead to new projects to address malaria, but would rather impact the way in which current Agency projects involving malaria, such as the African Child Survival Initiative - Combatting Childhood Communicable Diseases (ACSI-CCCD) Project (698-0421), are carried out.

The Bureau has not attempted to come up with a multidisciplinary approach to malaria to date. Personnel in AFR/TR are not aware of any similar workshops held recently or in planning.

Since pregnant women and children under age 5 have no immunity to malaria, they are at high risk for contracting the disease, and therefore they would be the beneficiaries of this project in the long run. The immediate beneficiaries would be the scientists who would participate in the conference.

C. Financial Summary

The life of project funding will be \$303,133, with all obligations incurred in FY90. The estimated breakdown is as follows:

Salaries	\$100,734
Fringe	23,169
Consultants/Production Services	23,350
Travel and Per Diem	85,095
Other Direct	9,000
Indirect Costs at 25.6%	61,785
Total	\$303,133

#### D. Committee Review and Findings

Per Africa Bureau guidelines for unsolicited proposals, on January 23, 1990, a formal review chaired by AFR/PD/CCWAP approved the proposal. The review was conducted by a Project Committee (PC) consisting of representatives from S&T/H, AFR/PD/CCWAP, MS/OP, AFR/TR/HPN, AFR/DP and PPC/PDPR. The PC determined after careful review that the proposal is realistic and establishes a reasonable timeframe for carrying out the Project. The following modifications were recommended:

1. Budget and Process Consultant - The PC recommended that AFR/TR attempt to negotiate a total cost for the activity which is lower than that presented in the proposal. The PC also recommended that AAAS retain the services of a process consultant from the inception of the activity through delivery of final product, in order to ensure that the workshop delivers a more useful product to the Africa Bureau.

Since the PC recommended adding the process consultant, and AAAS has agreed to this no-cost addition, further negotiations on the budget at this stage are unnecessary. If any budget reductions are possible, they should occur during negotiations on the specific support grant between AAAS and the contracts officer.

2. Coordination with S&T/Health - The PC recommended that personnel in AFR/TR take into account the scope of the recently inaugurated eighteen-month study of the prevention and control of malaria worldwide being conducted by the National Academy of Science's Institute of Medicine (IOM) when implementing the AAAS activity so that the two activities will not be duplicative, but rather will offer complementary and contrasting perspectives on the malaria problem. Coordination should be carried out through Dennis Long, project officer for the Vector Biology Control project (out of which the IOM project is being funded).

3. Assistance Mechanism - The PC recommended that the activity be funded through a direct grant or cooperative agreement with AAAS. The grant or cooperative agreement would be administered by AFR/TR. This would be a different funding mechanism than that presented in the proposal, which envisions a "buy-in" to an existing grant between AAAS and the Office of the Science Advisor (OSA). The PC felt that the OSA does not have sufficient capacity to administer the new activity proposed. The funding for this new project will be offset by a decrease in funding for the ACSI-CCCD project (698-0421).

E. Grantee Selection

Handbook 13, Chapter 2, Section 2B3b permits the responsible Assistant Administrator or his/her designee to authorize an assistance award of a grant or cooperative agreement without competition when the award is for one recipient "considered to have exclusive or predominant capability, based on experience, specialized facilities or technical competence..." AFR/TR believes that AAAS meets this criterion based on its unique combination of qualifications and experience.

Through the AAAS Consortium of Affiliates for International Programs the AAAS can call upon a broad spectrum of individuals from the science, engineering, and health community. Other associations such as the Institute of Medicine offer a more narrow, medically-based approach. The American Association for Tropical Disease was considered, but again was thought to be too narrowly focused for this project. Because it is mandatory that the incumbent organization have the capacity to evaluate and integrate many interdisciplinary issues, the AAAS appeared to be the most appropriate candidate for the study. Further, the AAAS will address this issue with a specific emphasis on the African community.

AAAS has established a collegial working relationship with many African scientists and their institutions through their Sub-Saharan African Program. This ability to draw from such an exceptional and diverse international pool of U.S. and African talent is unmatched. After having explored numerous options and sources, AFR/TR concluded that the AAAS presents an exclusive resource and meets the requirements for the exceptions to competition.

F. Special Conditions

This activity is authorized provided that the recommendations under section D, with regard to obtaining the services of a process consultant and coordinating with S&T/H, are stated in the grant or cooperative agreement.

III. Method of Financing:

This proposal will be funded by a Specific Support Grant or Cooperative Agreement in accordance with Handbook 13 regulations. The method of financing will be a Federal Reserve Letter of Credit.

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IV. Waivers: No waivers are anticipated at this time.

V. Justification to the Congress: The Congressional Notification was submitted to Congress on April 5, 1990. The notification period expired without objection on April 19, 1990. Obligation may be incurred on April 20, 1990.

VI. Environmental Review: A categorical exclusion has been approved by the Bureau Environmental Officer and GC/AFR.

VII. Authority: Pursuant to Delegation of Authority No. 400, the Acting Assistant Administrator for Africa has the authority to authorize project assistance.

VIII. Recommendation: That you sign the attached Project Authorization and thereby authorize (1) life-of-project funding of \$303,133 for this project and (2) the award of a specific support grant or cooperative agreement without full and open competition (based upon the justification provided herein) to the American Association for the Advancement of Science.

IX. Attachments:

1. Project Authorization
2. Proposal
3. Categorical Exclusion

Clearances:

PPC/PDPR/SP:NPielemeier	draft
AFR/TR/HPN: JShepperd	draft
MS/OP/O/AFR:JHacken	draft
AFR/DP:JWestley	draft
S&T/H:JAustin	draft
GC/AFR:PJohnson	<i>[Signature]</i> 4/25/90
AFR/PD/CCWAP:SMerrill	draft
DAA/AFR:ELSaiers	<i>[Signature]</i>

drafted by: afr/pd/ccwap:pliefert:3/16/90 *Pat Saifert*  
doc. no. 0061K

AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON D C 20523

PROJECT AUTHORIZATION

Name of Country: Africa Regional  
Name of Grantee: American Association for the  
Advancement of Science  
Project Title: New Strategies: Malaria in Africa  
Project Number: 698-0481

1. Pursuant to Section 104 of the Foreign Assistance Act of 1961, as amended, and the section entitled "Sub-Saharan Africa, Development Assistance" of the Foreign Operations, Export Financing, and Related Programs Appropriations Act, 1990, I hereby authorize the New Strategies: Malaria in Africa Project (the "Project") for the Africa Regional, involving planned obligations of not to exceed Three Hundred Two Thousand Eight Hundred Ninety-three United States Dollars (US \$303,893) in grant funds (the "Grant") over an eighteen-month period from the date of authorization, subject to the availability of funds in accordance with the A.I.D. OYB/allotment process, to help in financing foreign exchange and local currency costs for the Project. The planned Project Assistance Completion Date ("PACD") is September 30, 1991.

2. The Project consists of the development of strategies for the Africa Bureau's future approach to the problem of malaria control. Project activities will include planning meetings and workshops to be attended by U.S. and African scientists.

3. The Project Grant Agreement which may be negotiated and executed by the officer(s) to whom such authority is delegated in accordance with A.I.D. regulations and Delegations of Authority shall be subject to the following essential terms and covenants and major conditions, together with such other terms and conditions as A.I.D. may deem appropriate:

a. Source and Origin of Commodities, Nationality of Services

Commodities financed by A.I.D. under the Project shall have their source and origin in the United States and countries included in A.I.D. Geographic Code 935, except as A.I.D. may otherwise agree in writing. Except for ocean shipping, the suppliers of commodities or services shall have the United States and

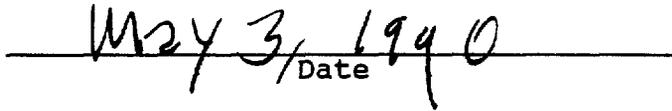
A.I.D. under the Project shall, except as A.I.D. may otherwise agree in writing, be financed only on flag vessels of the United States and countries included in A.I.D. Geographic Code 935.

b. Condition Precedent to Obligation

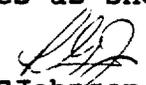
Prior to the obligation of funds under this Project, the Grantee will, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., the following:

Evidence that it has retained the services of a Process Consultant for the period from obligation of the Grant through delivery to and acceptance by A.I.D. of the final report.

  
\_\_\_\_\_  
Walter G. Bollinger  
Acting Assistant Administrator,  
Bureau for Africa

  
\_\_\_\_\_  
Date

Clearances as Shown on Action Memorandum

  
GC/AFR, PGJohnson/tim:03April90.Malaria

American  
Association  
for the Advancement of  
Science

1333 H STREET, N.W., WASHINGTON, D.C., 20005 (202)326-0000  
CABLE ADDRESS: ADVANCESCI

Office of International Science  
Telex: 248953 SCIEN UR

**A Proposal for**

**MALARIA IN AFRICA: NEW PREVENTION AND CONTROL STRATEGIES**

**Under**

**Grant No. DPE-5543-G-88-8057-01**

**Program of Activities to Strengthen the Role of  
Science and Technology in Development**

**Prepared by:**

**American Association for the Advancement of Science  
Directorate for International Programs**

**Submitted to:**

**United States Agency for International Development  
Africa Bureau**

**November 1989**

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## MALARIA IN AFRICA: NEW PREVENTION AND CONTROL STRATEGIES

Despite significant advances in medical science and health care, and large investments in malaria control and eradication, malaria remains a serious problem throughout Africa, one without clear scientific or technological solutions. Although even official figures vary widely, it is evident that some four fifths of the hundred million or more clinical cases of malaria worldwide each year occur in Africa. In response to the recent request of the Africa Bureau of the US Agency for International Development (AID), the American Association for the Advancement of Science (AAAS) proposes to undertake a fifteen-month project, currently expected to begin January 1990, that will employ specialized scientific knowledge and experience in order to develop new, more effective strategies to combat malaria in Africa.

Drawing upon its broad interdisciplinary base, and especially upon the readily tapped expertise within the mainstream US science and engineering societies that comprise the AAAS Consortium of Affiliates for International Programs (CAIP), AAAS will convene a US steering group meeting and two results-oriented international meetings. According to the present anticipated schedule, the US steering group will have its planning meeting in January/February 1990. An agenda-setting session, which includes participants from Africa, will be held in the US in winter/spring 1990. By fall 1990 we expect to convene a multidisciplinary workshop in Africa so that by fifteen months from project inception AAAS will have incorporated recommendations made at the workshop and produced a report that constitutes a practical blueprint for action. Details of the project workplan and its budget are provided below.

Throughout the project AAAS staff will work in close cooperation with AID staff, both in Washington and in African missions. From the earliest planning stages of the project, AAAS will also fully utilize the productive, collegial working relationships we have already established with African scientists and engineers, and their institutions. Such international partnerships, among peers, are a hallmark of the AAAS Sub-Saharan Africa Program, and indeed of all the Association's activities with developing and developed countries. In addition, the AAAS African malaria strategies project is designed to complement other, parallel undertakings, in particular the recently inaugurated eighteen-month study of the prevention and control of malaria worldwide being conducted by the Institute of Medicine (IOM), National Academy of Sciences (NAS), with funding from AID as well as from the Department of Defense and the National Institute of Allergy and Infectious Diseases, and the work of the World Health Organization (WHO), including its ongoing programs for malaria action, vector biology and control, and tropical disease research and its November 1989 meeting of the Experts Committee on Malaria.

## Malaria in Africa: The Problem

Over 90 percent of the Sub-Saharan African population lives in malarious areas. As reported in Bioscience in 1987, "200 million people south of the Sahara are chronically infected with malaria and about a third of them 'suffer acute manifestations of the disease in the course of the year.'" With a few exceptions (Cape Verde, Ethiopia, l'Ile de la Réunion, Lesotho, Mauritius, St. Helena, and the Seychelles) a large part of Sub-Saharan Africa faces continued meso- and, more frequently, hyper- or holo-endemicity, with transmission and infection levels remaining extremely high. In several Sub-Saharan African countries, such as the Republic of the Congo, where local malaria control programs had been run successfully at one time, these efforts have since been terminated because of a lack of financial and human resources. Consequently, since the 1970s there has been a resurgence in malaria in Africa; in some countries, Kenya, Madagascar, Rwanda, Sudan, and Zambia, it is on the increase. The magnitude of the problem in Africa is such that it cannot be compared to any other region of the world.

Despite the prevalence and severity of this disease in Sub-Saharan Africa, the region was not included in WHO's global eradication efforts of the 1950s and 1960s. Recent efforts, particularly those of the African Child Survival Initiative-Combating Childhood Communicable Diseases (ACSI-CCCD) project begun in 1982, do in fact focus on malaria prevention and control in Africa. ACSI-CCCD malaria strategies emphasize protection of high-risk groups--pregnant women and children--in 13 countries of Africa. Pregnant women, who lose their natural immunity to malaria, and children under the age of five, who have yet to develop immunity, account for a significant percentage of infected individuals. It is estimated that 5 percent of African children under the age of five die from the direct or indirect effects of malaria.

Several factors, including the increasing urbanization of the African population, contribute to the scope of the problem. Malaria, which had traditionally been most prevalent in rural regions, has now become an enormous health problem in the growing African towns and cities. Entomological studies in the rural areas surrounding Brazzaville, for example, have estimated the intensity of transmission by *Anopheles gambiae* (considered the most important vector of human malaria in Africa) to be one infective bite per night per person. Now, poor sewage and sanitation and lack of drainage for rainwater or irrigation projects, as well as the presence of pools of water accompanying new construction sites, all exacerbate the urban problem by providing ideal breeding sites for *Anopheles gambiae*. The economic impact of urban malaria, unless checked, could be devastating to further development in Sub-Saharan Africa.

Malaria, among the most ancient diseases, remains one of the single greatest health problems in Sub-Saharan Africa. The very resilient natures of both the vector and the parasite make it a complicated disease to eliminate or even control. The tremendous heterogeneity among vectors and parasites indigenous to Africa constitutes a particularly complex situation. The vector transmitting the parasite to the human host, the mosquito, has been shown to

develop resistance to various insecticides; most notably, more than 50 DDT-resistant mosquito species have been identified by WHO.

The parasite most often cited as the culprit in Africa, *Plasmodium falciparum*, has been reported since the early 1970s to be resistant to chloroquine, the drug that had once been among the most widely used forms of malaria chemoprophylaxis, largely because of its relatively low cost. Incidence of chloroquine resistance in Africa was first documented in the eastern region, but it now appears to be spreading rapidly. In many cases, this resistance has developed as a result of the systematic use of chloroquine for chemoprophylactic purposes, especially in endemic regions where the inhabitants would have developed natural immunity; in turn, natural immunity is reported to have been weakened, thereby leading to greater susceptibility to malaria transmission.

In addition to these vector-control and chemoprophylaxis efforts, much of the recent eradication focus has been on developing vaccines. Because of the tremendous variety in the parasites worldwide as well as the complexity of their life cycle, it is extremely unlikely that anything other than species- and stage-specific vaccines could be developed. Thus far this task has proved exceedingly difficult, partially because of inadequacies in vaccines developed to date, which only attack the parasite at one stage of its life within the human host.

Additional problems thwart each approach to control and/or eradication. In terms of health care delivery, even if a malaria vaccine were to be successfully developed, experience with distribution of other vaccines currently available suggests that no more than 20 percent of children in some rural African communities would even receive the malaria vaccine. One positive note is the ability of chloroquine, despite the above-noted resistance problem, to decrease the severity of the infection and lower the morbidity rate. However, it appears that in much of Sub-Saharan Africa, when chloroquine is used to treat malaria in children, it is usually improperly administered because of the often obsolete medical information available to local medical personnel as well as a general lack of guidance from public health officials. In addition, pregnant women who are counseled to be treated with chloroquine as a chemoprophylaxis often do not receive the dosages required insofar as they frequently do not receive prenatal care either until very late in their pregnancy or at all. Nor has chloroquine proved to be as effective against placental infection as originally believed. One possible alternative to chloroquine chemoprophylaxis, with its several shortcomings, the use of recently developed drugs such as fansidar, has to be temporarily dismissed as impractical because of its substantial cost and side effects.

Better-informed health care is vital to the prevention and control of malaria in Africa. To this end, the ACSI-CCGD project also stresses development of national malaria control guidelines as well as means to monitor implementations effected according to their guidelines. Health education should use already-established community groups and schools for effective transmission of information. It is also essential that efforts to design specialized health education programs consider each African community's perception of the disease and of various possibilities for treatment.

Crucial to the development and implementation of successful malaria prevention and control strategies for Africa is adequate consideration of the economic realities unique to many African countries today. Their extensive poverty, limited available resources (human and financial), and current debt situation, inter alia, together render many countries vulnerable to reliance on external resources for combatting malaria and addressing similar health problems. This dependency in turn generally impedes the development of indigenous, sustainable health care systems and disease control programs. This same difficult set of economic conditions limits the funding that can be devoted to malaria control, even in countries where such control is a national priority. There has been a paucity of cost-benefit analyses or other economic research evaluating various approaches to malaria control. What is apparent is that the current malaria situation in Africa hampers worker productivity, further aggravating unfavorable economic conditions.

In light of the many characteristics unique to malaria, particularly its manifestations in Africa, the AAAS approach to prevention and control of malaria in Africa must be a far-reaching effort that gives primary weight to local factors--economic, political, sociocultural, and behavioral--and benefits from research and applications derived from entomology, epidemiology, parasitology, and immunology, among other fields, insofar as they are grounded in the African context.

#### Africa Malaria Strategies: Workplan

##### Scope

Over a fifteen-month period, presently scheduled to begin in January 1990, AAAS will conduct an extensive science-based study for AID that recommends new weapons for combatting malaria in Africa. (See Attachment 1 for a copy of the June 2 letter request to AAAS from AID and its attachments.) AAAS conceives this project to be decidedly interdisciplinary in scope, with significant attention given to extra-medical factors. Above all, we are committed to deriving effective near- and longer-term strategies for coping with and controlling malaria in Africa that together constitute a practical approach for African countries themselves, for AID, and for other concerned donors and agencies. These strategies include solutions such as the use and improvement of bednets and spraying techniques; more sophisticated forms of chemotherapy and chemoprophylaxis; as well as those provided by agricultural engineering and the behavioral and policy sciences, among other disciplines. An important component of our work will be economic in nature, weighing relative costs and benefits of various options, including assessing the impact on African countries of alternative health interventions.

Although the project will employ comparative data and will benefit from generic research, its explicit focus is malaria in Africa. As outlined above, malaria problems in Africa are not only quantitatively of a different scale but also biologically and operationally unique. In order to formulate appropriate strategies for Africa, our project must give adequate attention to the local policy environment (including legal and regulatory aspects),

economic factors idiosyncratic to African nations, and indigenous sociocultural and behavioral variables.

### Results and Timetable

As soon as this AAAS malaria strategies proposal receives funding, AAAS staff is prepared to move ahead immediately in implementing the fifteen months of activities outlined directly below. AAAS will deliver to AID, at the end of the project, a succinct report, plus executive summary, setting forth policy recommendations for action. This report, to be issued in English and French, will be the result of a tightly structured, sequenced process, benefitting from the collective wisdom and knowledge of US, African, and European researchers and practitioners.

In addition to informing AID staff in Washington and in Africa, the primary audience, the AAAS malaria strategies report will be distributed to other major institutions concerned with malaria in Africa, including WHO headquarters and regional offices; the Centers for Disease Control, the National Institutes of Health, and Walter Reed; the World Bank and bilateral agencies such as the International Development and Research Centre and the Canadian International Development Agency; and tropical medicine centers in the US, Europe, and elsewhere. Special attention will be given to sharing results with front-line African organizations--especially scientific research institutes and public health units, up to the ministry level, that deal with malaria prevention and control on a daily basis. When the report is published, AAAS further expects to issue a press release that targets affiliated science and engineering societies and the news media, where science journalists increasingly cover significant science and science policy issues.

AAAS, through the Sub-Saharan Africa Program, now has a several-year history of working effectively on selected problems related to science, technology, and development in Africa, always in collaboration with African scientific organizations (See Attachment 2 for a description of Sub-Saharan Africa Program activities). We have also had successful experience constructing and then employing a several-step model to carry out our joint activities. Prior to a large meeting of African and foreign scientific leaders in 1984, convened in Grand Bassam, Côte d'Ivoire, a small joint planning session was held in Swaziland, bringing together a few US scientists and African counterparts who had been identified by a AAAS steering group. This sequential model enabled AAAS to produce a detailed agenda for involving African and developed world scientific and engineering societies more constructively in the development process. The recommendations made at the African Regional Seminar in Grand Bassam were disseminated through a widely distributed proceedings volume and report, published in English and French versions. (See Attachment 3, The Role of Scientific & Engineering Societies in Development: African Regional Seminar Report, 1985.) Several of those recommendations constituted the genesis of a AAAS Sub-Saharan Africa Program and have been incorporated into our projects.

For the AAAS Africa malaria strategies project, the initial planning session, presently scheduled for January or February 1990, will bring together

a US steering group, three to five experts from the principal disciplines that focus on malaria. The steering group will meet for a day in Washington in order to conceptualize and map out the next, agenda-setting phase. In addition, the group will ensure that the agenda-setting meeting, held in winter/spring 1990, probably also in Washington, includes the most appropriate representatives from African scientific and health organizations, who will themselves constitute a small African steering group. Finally for the joint agenda-setting session, the US steering group will draw up a roster of US participants who are recruited sufficiently widely from our own scientific community in terms of institutional representation and disciplinary span--and who are experienced at achieving results through interdisciplinary teamwork.

In all, there should be no more than ten or twelve participants in the day and a half agenda-setting meeting in order for it to be optimally efficient and productive. Their principal task is to agree on major themes and subtopics for an international workshop in Africa, to be held approximately a half year later. At the agenda-setting meeting closure should also be reached on types of participants to be included; short lists of prospective US, African, and European attendees; specifications for participants' papers; candidates for rapporteurial assignments; deadlines that must be met, etc.

According to our present timetable, we expect to convene the workshop on African malaria strategies in fall 1990, in Africa, possibly Nairobi or Abidjan. An African scientific organization with which AAAS is familiar would be the local co-organizer. Some two dozen participants--African, US, and European specialists--will come together for three days of intensive interactions, consisting of plenary sessions and smaller working group meetings. By six weeks before the meeting, each participant will have submitted a synopsis of his/her specialty, written according to specifications developed at the agenda-setting meeting. Papers will be distributed to all participants prior to the Africa meeting, and will be the basis for group discussions. Three or four working groups will be charged with weighing costs and benefits of subsets of possible strategies and offering their respective recommendations to the workshop group at large. All recommendations will therefore be thoroughly vetted first in specialized working groups and later in the larger workshop setting. Above all, these prospective solutions for malaria prevention and control must be technically sound and practicable in the context of Africa today. It is critical therefore to select workshop participants who are as adept at process as they are at science, and who have an understanding of and appreciation for African circumstances and exigencies.

#### Statement of Products

After the workshop (no later than March 31, 1991 according to the present schedule, which assumes startup January 1, 1990), AAAS staff, assisted by three participant-rapporteurs from the workshop, a technical editor, and translator, will have distilled the deliberations and recommendations of the workshop; compiled a draft report manuscript that is then reviewed and accordingly revised; and produced a final project report, in French and English, that cogently and clearly sets forth workable strategies for addressing malaria in Africa. In order to be effective and efficient, the

report itself will be approximately 20 pages in length and will include as annexes important ancillary documentation. The report will be introduced by a two- to three-page Executive Summary (which can also stand alone) that outlines four to five major recommendations.

### Scientific Resources Available to AAAS

#### **Affiliated Societies**

To cover this necessarily extensive terrain so as to formulate more effective approaches for combatting malaria in the region, the AAAS Sub-Saharan African Program will utilize the expertise resident in two major AAAS constituencies: mainstream US science and engineering societies and counterpart scientific groups in Africa.

In all its national and international programs, AAAS is able to capitalize on its structure as a broadbased membership organization and as a federation of scientific and engineering associations in order to call upon a diverse pool of exceptional scientific talent. Moreover, US scientists who participate in AAAS-sponsored activities typically do so as volunteers, demonstrating their commitment to having science serve society and leveraging substantially the contributions of AAAS program staff.

Of particular value in carrying out international activities is the AAAS Consortium of Affiliates for International Programs (CAIP), a multidisciplinary organization of more than 70 professional societies that coordinates and amplifies their mutual international interests. (See Attachment 4 for a description of CAIP and its activities).

First, to conduct the Africa malaria strategies project, AAAS will draw upon the relevant specialized knowledge within several members of CAIP:

- o Affiliated societies whose members are professionally concerned with sociocultural and behavioral factors critically affecting the perception, treatment, and control of malaria among individuals, households, and communities. These factors include macroeconomic variables such as level of socioeconomic development, migration, and urbanization patterns, etc. Special attention will be given to involving US scientists with solid African experience.

- American Anthropological Association
  - American Economic Association
  - American Sociological Association
  - Ruth Institute of Biological Society
  - Society for Applied Anthropology
  - Society for Research in Child Development

- o US scientific groups that analyze problems of health care financing and delivery systems and of drug reliability and availability with emphasis on

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developing countries, especially the constraints inherent in the contemporary African context.

American Association of Colleges of Pharmacy  
American Medical Association  
American Society for Pharmacology and Experimental Therapeutics

o Organizations whose members address critical environmental and ecological issues affecting malaria outcomes and can offer workable technical solutions for African countries.

American Society for Agricultural Engineers  
American Society of Civil Engineers  
Ecological Society of America  
Society of American Foresters  
Volunteers in Technical Assistance

o US associations in which natural science research has applications for malaria prevention and control in Africa, including the use of larvicides, chemotherapy, and chemoprophylaxis.

American Chemical Society  
American Fisheries Society  
American Institute of Biological Sciences  
American Institute of Chemists  
American Society for Microbiology  
Entomological Society of America

o Member societies with methodological expertise in such vital areas as epidemiology, statistics, and operations research.

American Statistical Association  
Operations Research Society

#### Other Linkages

In addition, AAAS will consult with and involve, as necessary, US groups and individuals outside CAIP specializing in such pertinent fields as parasitology and immunology; tropical medicine and public health; economics of health care and development; and agricultural and sanitary engineering, among others. Liaison will also be maintained with the malaria efforts of such key US and international organizations as the relevant regional and technical bureaus and missions of AID; the Centers for Disease Control; the National Institutes of Health; the Walter Reed Army Institute of Research; IOM/NAS; and WHO.

#### African Collaborators

The AAAS African malaria strategies project demands close collaboration with African social scientists, natural scientists, engineers, and health professionals, and with their home institutions and professional associations. Africans best understand local conditions and will therefore bring to the

project unique perspectives derived from years of first-hand experience studying and controlling malaria. In turn, in this partnership activity and others carried out under the aegis of the AAAS Sub-Saharan Africa Program, the active participation of African professional societies and other scientific organizations can facilitate and enhance institution-building and the development of specialized human resources in the region. AID, WHO, and numerous other non-African organizations, public and private, provide invaluable technical assistance and support to African countries in their fight against malaria, but as outsiders their role is necessarily limited in scope and duration. Ultimately it is African researchers and health specialists who are--and will continue to be--relied upon by their own governments and communities to find ways to ameliorate local malaria problems. Efforts such as this collaborative project, which is designed to utilize and strengthen African scientific and technological capacity, are able to contribute to the long-term sustainability of malaria prevention and control programs on the continent.

### **Leadership**

AAAS has already named a chair for the US steering group, Dr. William Sawyer, who is both a physician and microbiologist, with extensive administrative experience and deep familiarity with developing country medical/scientific issues. Dr. Sawyer is no stranger to Africa; he was a key participant in the 1984 Grand Bassam Seminar, noted earlier, where he established a working relationship with leading African scientists from universities and institutes throughout the continent. (A copy of Dr. Sawyer's curriculum vitae is included in Attachment 5.)

At the same time AAAS has recently initiated preliminary discussions with African scientific counterparts concerning prospective participation in this collaborative project. Dr. Thomas Odhiambo, a Kenyan scientist of world renown who is both director of the International Centre for Insect Physiology and Ecology (ICIPE) and president of the African Academy of Sciences, enthusiastically endorses launching a multidisciplinary science-based attack on Africa's enormous malaria problem, and having AAAS spearhead this partnership work. Although Dr. Odhiambo's many commitments preclude his serving as chair of the African steering group, he has already pledged ICIPE cooperation in the malaria strategies project and provided suggestions concerning steering group members. Similarly, AAAS has already received expressions of interest and offers of collaboration from the directors of African operations with malaria programs such as the Kenya Medical Research Institute and the Tanzanian Institute for Medical Research, Dr. Davy Koech and Dr. W.L. Kileleshwa respectively.

### **Project Management**

Dr. Amy Wilson, Director of the AAAS Sub-Saharan Africa Program, will serve as principal investigator and project manager for the AAAS malaria strategies project, for which we request AID support. She is also the designated principal investigator at AAAS for the AID grant housed in the Office of the Science Advisor, which supports selected AAAS activities aimed

at strengthening science and technology capacity for development. (We expect this proposed malaria project to be funded under that grant, number DPE-5543-G-SS-8057000, as described immediately below, under Funding Mechanism.) Dr. Wilson has had more than a decade of experience in Washington managing international science and engineering programs and has traveled extensively in the developing world. In the upcoming African malaria strategies project, Dr. Wilson (.50FTE) will be assisted by a Senior Program Associate (.20 FTE) and Research Assistant (1.00 FTE), as well as support staff personnel (.50 FTE). The senior program associate slot in the AAAS Africa Program is currently unoccupied. Until that vacant position is filled, outside consultants, with appropriate technical expertise, will be used to augment AAAS staff assigned to the malaria project. Both Dr. Wilson and Research Assistant Carole Mitnick bring French language capability to the project; Ms. Mitnick is an exceptionally well-qualified linguist who recently taught in France. (See Attachment 5 for staff biographical information.)

#### AAAS and AID: More than a Decade of Cooperation

AID and AAAS have maintained an active, multifaceted cooperative relationship since the early 1970s. The most ambitious undertaking, the AAAS Science, Engineering and Diplomacy Fellowship Program, has been conducted in collaboration with the Department of State since 1980 and AID since 1982. The growing Fellowship program provides a special public policy learning experience through its demonstration of the value and practicality of scientific and technological understanding in dealing with certain foreign policy problems. In addition to the Diplomacy Fellows Program, AAAS has worked cooperatively with AID on a variety of other activities in recent years, especially in Latin America and Asia, and now increasingly in Africa. AID provided partial support for the 1984 African Regional Seminar on the Role of Scientific and Engineering Societies in Development, noted earlier in this proposal. In 1988 the Africa Bureau at AID made a three-year supplementary grant to the AAAS Sub-Saharan Africa Journal Distribution Program (which receives principal funding from the Carnegie Corporation of New York and additional funding from the Ford Foundation) that has supported monitoring and evaluation activities, under the guidance of an Advisory Committee.

#### Funding Mechanism

In effect since 1988, AID Grant Number DPE-5543-G-SS-8057-00 is expected to be the mechanism under which the proposed AAAS Africa malaria strategies project will be funded. This grant, an extension of more than a decade of productive AAAS-AID collaboration, provides AAAS support for selected activities that supplement the ongoing AAAS effort to strengthen science and technology for development. Specifically, the AID grant enables AAAS and its affiliated societies to plan and execute projects that perform the following general functions:

(1) Use the networking capacities of AAAS and its affiliates to provide efficient, expert advice and consultation of value to AID, to developing country institutions and governments, and to scientific and engineering communities in the US and the developing world.

(2) Convene workshops, conferences, symposia, and other meetings addressing critical issues concerning science, technology, and development in areas where AAAS and its related scientific and engineering organizations have a significant comparative advantage.

(3) Initiate, expand, and maintain networks of scientific and engineering organizations and individuals that contribute to institution-building in the developing world.

(4) Plan and manage specialized science- and technology-related programs capitalizing upon the essential operating mode and attributes of AAAS and its affiliated organizations.

#### Budget

AAAS has prepared a budget (copy immediately following, on pages 12-13), covering direct and indirect costs for this fifteen-month Africa malaria strategies project, expected to begin January 1990. Direct costs for "products"--meetings and final report--are estimated at \$102,615; direct costs for operations, totaling \$102,714, cover staff salaries and staff travel as well as office expenditures for communications, etc. According to the most recently negotiated agreement, in all AAAS contracts with US government agencies, indirect costs are currently calculated at 25.6 percent of direct costs. Thus in the AAAS Africa malaria strategies budget, total direct costs are \$205,329 and indirect costs are \$52,564, with total costs at \$257,893.

AAAS SUB-SAHARAN AFRICA PROGRAM  
AFRICA MALARIA STRATEGIES

Fifteen-Month Budget<sup>1</sup>

MEETINGS AND REPORT

A. US Steering Group Meeting	
Washington, January/February 1990	
3 out-of-town participants	
in a 1-day meeting <sup>2</sup>	
Travel and subsistence for 3 people	\$ 1,200
B. Joint Agenda-Setting Meeting	
Washington, Winter/Spring 1990	
12 participants in a 14-day meeting <sup>3</sup>	
7 from US (outside Washington)	
Travel and 2 days subsistence for 7 people	\$ 4,494
3 from Africa	
Travel and 5 days subsistence for 3 people	10,815
Miscellaneous meeting costs	350
Subtotal	\$ 15,659
C. Malaria Strategies Workshop	
Africa, Fall 1990	
24 participants in a 3-day meeting <sup>4</sup>	
6 US participants @ \$3,600 travel	\$21,600
2 European participants @ \$2,110 travel	4,220
15 African participants @ \$900 travel	13,500
Subsistence for 24 participants for 5 days	14,760
2 US staff @ \$3,600 travel	7,200
Subsistence for 2 staff for 6 days	1,476
Bilingual interpreters	2,000
Honoraria for 3 rapporteurs @ \$1,000	3,000
Administrative, local travel, and other	
logistical costs incurred by	
African co-organizer	4,000
Translation, production, and pre-meeting	
distribution of workshop materials	1,200
Subtotal	\$ 72,956
D. Report	
Production and dissemination	\$ 8,000
Technical editor @ \$20/hour x 120 hours	2,400
Translator (French-English)	2,400
Subtotal	\$ 12,800
Meetings and Report Subtotal	\$102,615

OPERATIONS

A. Staff Salaries and Fringe @ 23%	
Project manager (.5 FTE)	\$32,288
Senior professional (.2 <del>XXX</del> FTE) (1FTE)	45,859
Research assistant (1.0 FTE)	30,996
Secretary (.5 FTE)	14,760
Subtotal	<u>123,903</u>
B. Staff Travel	
Domestic travel	\$ 1,000
Europe/Africa travel, one trip	
Travel and subsistence for 10 days	4,830
Subtotal	<u>\$ 5,830</u>
C. AAAS Office Costs	
Communications, photocopying, etc., @ \$600/month for 15 months	\$ 9,000
Operations Subtotal	<u>\$ 138,733</u>
Meetings and Report Subtotal (from page 1)	<u>\$102,615</u>
TOTAL DIRECT COSTS	\$241,347
Indirect Costs @ 25.6%	\$ 61785
TOTAL COSTS	<u>\$303,133</u>

- 
- 1 This budget assumes startup in January 1990; the fifteen-month project could begin whenever AID funding becomes available.
  - 2 Assuming one or two members of the four- to five-person US steering group reside in Washington.
  - 3 Assuming that at least two participants at this Washington meeting reside in Washington.
  - 4 Assuming that at least one participant at the African meeting resides in the meeting city.

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5C(2) - PROJECT CHECKLIST

Listed below are statutory criteria applicable to projects. This section is divided into two parts. Part A includes criteria applicable to all projects. Part B applies to projects funded from specific sources only: B(1) applies to all projects funded with Development Assistance; B(2) applies to projects funded with Development Assistance loans; and B(3) applies to projects funded from ESF.

CROSS REFERENCES: IS COUNTRY CHECKLIST UP TO DATE? HAS STANDARD ITEM CHECKLIST BEEN REVIEWED FOR THIS PROJECT?

A. GENERAL CRITERIA FOR PROJECT

1. FY 1989 Appropriations Act Sec. 523; FAA Sec. 634A. If money is sought to obligated for an activity not previously justified to Congress, or for an amount in excess of amount previously justified to Congress, has Congress been properly notified? Yes
2. FAA Sec. 611(a)(1). Prior to an obligation in excess of \$500,000, will there be (a) engineering, financial or other plans necessary to carry out the assistance, and (b) a reasonably firm estimate of the cost to the U.S. of the assistance? N/A
3. FAA Sec. 611(a)(2). If legislative action is required within recipient country, what is the basis for a reasonable expectation that such action will be completed in time to permit orderly accomplishment of the purpose of the assistance? N/A

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4. FAA Sec. 611(b); FY 1989 Appropriations Act Sec. 501. If project is for water or water-related land resource construction, have benefits and costs been computed to the extent practicable in accordance with the principles, standards, and procedures established pursuant to the Water Resources Planning Act (42 U.S.C. 1962, et seq.)? (See A.I.D. Handbook 3 for guidelines.)  
N/A
  
5. FAA Sec. 611(e). If project is capital assistance (e.g., construction), and total U.S. assistance for it will exceed \$1 million, has Mission Director certified and Regional Assistant Administrator taken into consideration the country's capability to maintain and utilize the project effectively?  
N/A
  
6. FAA Sec. 209. Is project susceptible to execution as part of regional or multilateral project? If so, why is project not so executed? Information and conclusion whether assistance will encourage regional development programs.  
This project is a regional project. Its purpose is to develop a strategy to guide A.I.D.'s anti-malarial efforts, so a multi-lateral project would not be appropriate.
  
7. FAA Sec. 601(a). Information and conclusions on whether projects 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 savings and loan associations;  
(d) discourage monopolistic practices;  
(e) improve technical efficiency of industry, agriculture and commerce; and  
(f) strengthen free labor unions.  
N/A
  
8. FAA Sec. 601(b). Information and conclusions on how project will encourage U.S. private trade and investment abroad and encourage private U.S. participation in foreign assistance programs (including use of private trade channels and the services of U.S. private enterprise).  
N/A

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9. FAA Secs. 612(b), 636(h). Describe steps 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 U.S. are utilized in lieu of dollars. N/A
10. FAA Sec. 612(d). Does the U.S. own excess foreign currency of the country and, if so, what arrangements have been made for its release? N/A
11. FY 1989 Appropriations Act Sec. 521. If assistance is for the production of any commodity for export, is the commodity likely to be in surplus on world markets at the time the resulting productive capacity becomes operative, and is such assistance likely to cause substantial injury to U.S. producers of the same, similar or competing commodity? N/A
12. FY 1989 Appropriations Act Sec. 549. Will the assistance (except for programs in Caribbean Basin Initiative countries under U.S. Tariff Schedule "Section 807," which allows reduced tariffs on articles assembled abroad from U.S.-made components) be used directly to procure feasibility studies, prefeasibility studies, or project profiles of potential investment in, or to assist the establishment of facilities specifically designed for, the manufacture for export to the United States or to third country markets in direct competition with U.S. exports, of textiles, apparel, footwear, handbags, flat goods (such as wallets or coin purses worn on the person), work gloves or leather wearing apparel? N/A
13. FAA Sec. 119(g)(4)-(6) & (10). Will the assistance (a) support training and education efforts which improve the capacity of recipient countries to prevent loss of biological diversity; (b) be provided under a long-term agreement in which the recipient country agrees to protect ecosystems or other N/A

wildlife habitats; (c) support efforts to identify and survey ecosystems in recipient countries worthy of protection; or (d) by any direct or indirect means significantly degrade national parks or similar protected areas or introduce exotic plants or animals into such areas?

14. FAA Sec. 121(d). If a Sahel project, has a determination been made that the host government has an adequate system for accounting for and controlling receipt and expenditure of project funds (either dollars or local currency generated therefrom)? N/A
  
15. FY 1989 Appropriations Act. If assistance is to be made to a United States PVO (other than a cooperative development organization), does it obtain at least 20 percent of its total annual funding for international activities from sources other than the United States Government? N/A
  
16. FY 1989 Appropriations Act Sec. 538. If assistance is being made available to a PVO, has that organization provided upon timely request any document, file, or record necessary to the auditing requirements of A.I.D., and is the PVO registered with A.I.D.? N/A
  
17. FY 1989 Appropriations Act Sec. 514. If funds are being obligated under an appropriation account to which they were not appropriated, has prior approval of the Appropriations Committees of Congress been obtained? N/A
  
18. State Authorization Sec. 139 (as interpreted by conference report). Has confirmation of the date of signing of the project agreement, including the amount involved, been cabled to State L/T and A.I.D. LEG within 60 days of the agreement's entry into force with respect to the United States, and has the full text of the agreement been pouched to those same offices? (See Handbook 3, Appendix 6G for agreements covered by this provision). N/A

B. FUNDING CRITERIA FOR PROJECT

1. Development Assistance Project Criteria

- a. FY 1989 Appropriations Act Sec. 548  
(as interpreted by conference report for original enactment). If assistance is for agricultural development activities (specifically, any testing or breeding feasibility study, variety improvement or introduction, consultancy, publication, conference, or training), are such activities (a) specifically and principally designed to increase agricultural exports by the host country to a country other than the United States, where the export would lead to direct competition in that third country with exports of a similar commodity grown or produced in the United States, and can the activities reasonably be expected to cause substantial injury to U.S. exporters of a similar agricultural commodity; or (b) in support of research that is intended primarily to benefit U.S. producers?

N/A

- b. FAA Secs. 102(b), 111, 113, 281(a). Describe extent to which activity will (a) effectively involve the poor in development by extending access to economy at local level, increasing labor-intensive production and the use of appropriate technology, dispersing investment from cities to small towns and rural areas, and insuring wide participation of the poor in the benefits of development on a sustained basis, using appropriate U.S. institutions; (b) help develop cooperatives, especially by technical assistance, to assist rural and urban poor to help themselves toward a better life, and otherwise encourage democratic private and local governmental

At this point there would be no direct impact on the poor, since this project purely involves research and holding workshops. However, the eventual aim of the project is to enable A.I.D. to help to prevent and control malaria in cooperating countries. Such a result would benefit the poor, would benefit especially mothers and their children due to their susceptibility to malaria, and would generally be an aspect of development with widespread benefits. In addition

institutions; (c) support the self-help efforts of developing countries; (d) promote the participation of women in the national economies of developing countries and the improvement of women's status; and (e) utilize and encourage regional cooperation by developing countries.

the project is designed so that African scientists from many countries will collaborate in their work on malaria.

c. FAA Secs. 103, 103A, 104, 105, 106, 120-21; FY 1989 Appropriations Act (Development Fund for Africa). Does the project fit the criteria for the source of funds (functional account) being used?

Yes, this project will address disease prevention and control, health planning and research, and the special health needs of children and mothers.

d. FAA Sec. 107. Is emphasis placed on use of appropriate technology (relatively smaller, cost-saving, labor-using technologies that are generally most appropriate for the small farms, small businesses, and small incomes of the poor)?

N/A

e. FAA Secs. 110, 124(d). Will the recipient country provide at least 25 percent of the costs of the program, project, or activity with respect to which the assistance is to be furnished (or is the latter cost-sharing requirement being waived for a "relatively least developed" country)?

N/A

f. FAA Sec. 128(b). If the activity attempts to increase the institutional capabilities of private organizations or the government of the country, or if it attempts to stimulate scientific and technological research, has it been designed and will it be monitored to ensure that the ultimate beneficiaries are the poor majority?

Yes. The project is designed such that a multidisciplinary approach to malaria will be developed. This will allow economic and social factors to be addressed, ultimately producing a strategy toward malaria which can control malaria for all groups, including the poor.

- g. FAA Sec. 281(b). Describe extent to which program recognizes the particular needs, desires, and capacities of the people of the country; utilizes the country's intellectual resources to encourage institutional development; and supports civil education and training in skills required for effective participation in governmental processes essential to self-government. This project emphasizes collaboration with African scientists in achieving its purpose.
- h. FY 1989 Appropriations Act Sec. 536. Are any of the funds to be used for the performance of abortions as a method of family planning or to motivate or coerce any person to practice abortions? NO
- Are any of the funds to be used to pay for the performance of involuntary sterilization as a method of family planning or to coerce or provide any financial incentive to any person to undergo sterilizations? NO
- Are any of the funds to be used to pay for any biomedical research which relates, in whole or in part, to methods of, or the performance of, abortions or involuntary sterilization as a means of family planning? NO
- i. FY 1989 Appropriations Act. Is the assistance being made available to any organization or program which has been determined to support or participate in the management of a program of coercive abortion or involuntary sterilization? NO
- If assistance is from the population functional account, are any of the funds to be made available to voluntary family planning projects which do not offer, either directly or through referral to or information about access to, a broad range of family planning methods and services? N/A

- j. FAA Sec. 601(e). Will the project utilize competitive selection procedures for the awarding of contracts, except where applicable procurement rules allow otherwise? N/A
- k. FY 1989 Appropriations Act. What portion of the funds will be available only for activities of economically and socially disadvantaged enterprises, historically black colleges and universities, colleges and universities having a student body in which more than 40 percent of the students are Hispanic Americans, and private and voluntary organizations which are controlled by individuals who are black Americans, Hispanic Americans, or Native Americans, or who are economically or socially disadvantaged (including women)? This is a grant to a PVO based upon an unsolicited proposal, and therefore, this does not apply.
- l. FAA Sec. 118(c). Does the assistance comply with the environmental procedures set forth in A.I.D. Regulation 16? Does the assistance place a high priority on conservation and sustainable management of tropical forests? Specifically, does the assistance, to the fullest extent feasible: (a) stress the importance of conserving and sustainably managing forest resources; (b) support activities which offer employment and income alternatives to those who otherwise would cause destruction and loss of forests, and help countries identify and implement alternatives to colonizing forested areas; (c) support training programs, educational efforts, and the establishment or strengthening of institutions to improve forest management; (d) help end destructive slash-and-burn agriculture by supporting stable and productive farming practices; (e) help conserve forests which have not yet been degraded by helping to increase Yes.  
N/A

production on lands already cleared or degraded; (f) conserve forested watersheds and rehabilitate those which have been deforested; (g) support training, research, and other actions which lead to sustainable and more environmentally sound practices for timber harvesting, removal, and processing; (h) support research to expand knowledge of tropical forests and identify alternatives which will prevent forest destruction, loss, or degradation; (i) conserve biological diversity in forest areas by supporting efforts to identify, establish, and maintain a representative network of protected tropical forest ecosystems on a worldwide basis, by making the establishment of protected areas a condition of support for activities involving forest clearance or degradation, and by helping to identify tropical forest ecosystems and species in need of protection and establish and maintain appropriate protected areas; (j) seek to increase the awareness of U.S. government agencies and other donors of the immediate and long-term value of tropical forests; and (k) utilize the resources and abilities of all relevant U.S. government agencies?

- m. FAA Sec. 118(c)(13). If the assistance will support a program or project significantly affecting tropical forests (including projects involving the planting of exotic plant species), will the program or project (a) be based upon careful analysis of the alternatives available to achieve the best sustainable use of the land, and (b) take full account of the environmental impacts of the proposed activities on biological diversity?

N/A

- n. FAA Sec. 118(c)(14). Will assistance be used for (a) the procurement or use of logging equipment, unless an environmental assessment indicates that all timber harvesting operations involved will be conducted in an environmentally sound manner and that the proposed activity will produce positive economic benefits and sustainable forest management systems; or (b) actions which will significantly degrade national parks or similar protected areas which contain tropical forests, or introduce exotic plants or animals into such areas? No
- o. FAA Sec. 118(c)(15). Will assistance be used for (a) activities which would result in the conversion of forest lands to the rearing of livestock; (b) the construction, upgrading, or maintenance of roads (including temporary haul roads for logging or other extractive industries) which pass through relatively undegraded forest lands; (c) the colonization of forest lands; or (d) the construction of dams or other water control structures which flood relatively undegraded forest lands, unless with respect to each such activity an environmental assessment indicates that the activity will contribute significantly and directly to improving the livelihood of the rural poor and will be conducted in an environmentally sound manner which supports sustainable development? NO
- p. FY 1989 Appropriations Act. If assistance will come from the Sub-Saharan Africa DA account, is it (a) to be used to help the poor majority in Sub-Saharan Africa through a process of long-term development and economic growth that is equitable, participatory, environmentally sustainable, and self-reliant; (b) being provided in accordance with the policies contained in section 102 of the FAA; Yes. Yes.

(c) being provided, when consistent with the objectives of such assistance, through African, United States and other PVOs that have demonstrated effectiveness in the promotion of local grassroots activities on behalf of long-term development in Sub-Saharan Africa; (d) being used to help overcome shorter-term constraints to long-term development, to promote reform of sectoral economic policies, to support the critical sector priorities of agricultural production and natural resources, health, voluntary family planning services, education, and income generating opportunities, to bring about appropriate sectoral restructuring of the Sub-Saharan African economies, to support reform in public administration and finances and to establish a favorable environment for individual enterprise and self-sustaining development, and to take into account, in assisted policy reforms, the need to protect vulnerable groups; (e) being used to increase agricultural production in ways that protect and restore the natural resource base, especially food production, to maintain and improve basic transportation and communication networks, to maintain and restore the renewable natural resource base in ways that increase agricultural production, to improve health conditions with special emphasis on meeting the health needs of mothers and children, including the establishment of self-sustaining primary health care systems that give priority to preventive care, to provide increased access to voluntary family planning services, to improve basic literacy and mathematics especially to those outside the formal educational system and to improve primary education, and to develop income-generating opportunities for the unemployed and underemployed in urban and rural areas?

No.

Yes

Yes

- q. FY 1989 Appropriations Act Sec. 515.  
If deob/reob authority is sought to be exercised in the provision of DA assistance, are the funds being obligated for the same general purpose, and for countries within the same general region as originally obligated, and have the Appropriations Committees of both Houses of Congress been properly notified? N/A

2. Development Assistance Project Criteria  
(Loans Only) N/A

- a. FAA Sec. 122(b). Information and conclusion on capacity of the country to repay the loan at a reasonable rate of interest.
- b. FAA Sec. 620(d). If assistance is for any productive enterprise which will compete with U.S. enterprises, is there an agreement by the recipient country to prevent export to the U.S. of more than 20 percent of the enterprise's annual production during the life of the loan, or has the requirement to enter into such an agreement been waived by the President because of a national security interest?
- c. FAA Sec. 122(b). Does the activity give reasonable promise of assisting long-range plans and programs designed to develop economic resources and increase productive capacities?

5C(3) - STANDARD ITEM CHECKLIST

Listed below are the statutory items which normally will be covered routinely in those provisions of an assistance agreement dealing with its implementation, or covered in the agreement by imposing limits on certain uses of funds.

These items are arranged under the general headings of (A) Procurement, (B) Construction, and (C) Other Restrictions.

A. PROCUREMENT

1. FAA Sec. 602(a). Are there arrangements to permit U.S. small business to participate equitably in the furnishing of commodities and services financed? N/A
2. FAA Sec. 604(a). Will all procurement be from the U.S. except as otherwise determined by the President or determined under delegation from him? Yes
3. FAA Sec. 604(d). If the cooperating country discriminates against marine insurance companies authorized to do business in the U.S., will commodities be insured in the United States against marine risk with such a company? N/A
4. FAA Sec. 604(e); ISDCA of 1980 Sec. 705(a). If non-U.S. procurement of agricultural commodity or product thereof is to be financed, is there provision against such procurement when the domestic price of such commodity is less than parity? (Exception where commodity financed could not reasonably be procured in U.S.) N/A

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5. FAA Sec. 604(q). Will construction or engineering services be procured from firms of advanced developing countries which are otherwise eligible under Code 941 and which have attained a competitive capability in international markets in one of these areas? (Exception for those countries which receive direct economic assistance under the FAA and permit United States firms to compete for construction or engineering services financed from assistance programs of these countries.) No
6. FAA Sec. 603. Is the shipping excluded from compliance with the requirement in section 901(b) of the Merchant Marine Act of 1936, as amended, that at least 50 percent of the gross tonnage of commodities (computed separately for dry bulk carriers, dry cargo liners, and tankers) financed shall be transported on privately owned U.S. flag commercial vessels to the extent such vessels are available at fair and reasonable rates? N/A
7. FAA Sec. 621(a). If technical assistance is financed, will such assistance be furnished by private enterprise on a contract basis to the fullest extent practicable? Will the facilities and resources of other Federal agencies be utilized, when they are particularly suitable, not competitive with private enterprise, and made available without undue interference with domestic programs? Yes.
8. International Air Transportation Fair Competitive Practices Act, 1974. If air transportation of persons or property is financed on grant basis, will U.S. carriers be used to the extent such service is available? Yes.
9. FY 1989 Appropriations Act Sec. 504. If the U.S. Government is a party to a contract for procurement, does the contract contain a provision authorizing termination of such contract for the convenience of the United States? N/A

10. FY 1989 Appropriations Act Sec. 524. If assistance is for consulting service through procurement contract pursuant to 5 U.S.C. 3109, are contract expenditures a matter of public record and available for public inspection (unless otherwise provided by law or Executive order)? N/A

B. CONSTRUCTION

1. FAA Sec. 601(d). If capital (e.g., construction) project, will U.S. engineering and professional services be used? N/A
2. FAA Sec. 611(c). If contracts for construction are to be financed, will they be let on a competitive basis to maximum extent practicable? N/A
3. FAA Sec. 620(k). If for construction of productive enterprise, will aggregate value of assistance to be furnished by the U.S. not exceed \$100 million (except for productive enterprises in Egypt that were described in the CP), or does assistance have the express approval of Congress? N/A

C. OTHER RESTRICTIONS

1. FAA Sec. 122(b). If development loan repayable in dollars, is interest rate at least 2 percent per annum during a grace period which is not to exceed ten years, and at least 3 percent per annum thereafter? N/A
2. FAA Sec. 301(d). If fund is established solely by U.S. contributions and administered by an international organization, does Comptroller General have audit rights? N/A

3. FAA Sec. 620(h). Do arrangements exist to insure that United States foreign aid is not used in a manner which, contrary to the best interests of the United States, promotes or assists the foreign aid projects or activities of the Communist-bloc countries? N/A
4. Will arrangements preclude use of financing:
- a. FAA Sec. 104(f); FY 1989 Appropriations Act Secs. 525, 536. Yes  
(1) To pay for performance of abortions as a method of family planning or to motivate or coerce persons to practice abortions; (2) to pay for performance of involuntary sterilization as method of family planning, or to coerce or provide financial incentive to any person to undergo sterilization; (3) to pay for any biomedical research which relates, in whole or part, to methods or the performance of abortions or involuntary sterilizations as a means of family planning; or (4) to lobby for abortion?
- b. FAA Sec. 483. To make reimbursements, in the form of cash payments, to persons whose illicit drug crops are eradicated? Yes
- c. FAA Sec. 620(q). To compensate owners for expropriated or nationalized property, except to compensate foreign nationals in accordance with a land reform program certified by the President? Yes
- d. FAA Sec. 660. To provide training, advice, or any financial support for police, prisons, or other law enforcement forces, except for narcotics programs? Yes
- e. FAA Sec. 662. For CIA activities? Yes

- f. FAA Sec. 636(i). For purchase, sale, long-term lease, exchange or guaranty of the sale of motor vehicles manufactured outside U.S., unless a waiver is obtained? Yes
- g. FY 1989 Appropriations Act Sec. 503. To pay pensions, annuities, retirement pay, or adjusted service compensation for prior or current military personnel? Yes
- h. FY 1989 Appropriations Act Sec. 505. To pay U.N. assessments, arrearages or dues? Yes
- i. FY 1989 Appropriations Act Sec. 506. To carry out provisions of FAA section 209(d) (transfer of FAA funds to multilateral organizations for lending)? Yes
- j. FY 1989 Appropriations Act Sec. 510. To finance the export of nuclear equipment, fuel, or technology? Yes
- k. FY 1989 Appropriations Act Sec. 511. For the purpose of aiding the efforts of the government of such country to repress the legitimate rights of the population of such country contrary to the Universal Declaration of Human Rights? Yes
- l. FY 1989 Appropriations Act Sec. 516; State Authorization Sec. 109. To be used for publicity or propaganda purposes designed to support or defeat legislation pending before Congress, to influence in any way the outcome of a political election in the United States, or for any publicity or propaganda purposes not authorized by Congress? Yes
5. FY 1989 Appropriations Act Sec. 584. Will any A.I.D. contract and solicitation, and subcontract entered into under such contract, include a clause requiring that U.S. marine insurance companies have a fair opportunity to bid for marine insurance when such insurance is necessary or appropriate? N/A

INITIAL ENVIRONMENTAL EXAMINATION  
OR  
CATEGORICAL EXCLUSION

Country: Africa Regional  
Project Title: New Strategies to Prevent and Control Malaria in Africa (698-0481)  
Funding: U.S.\$ 303,133 FY(s): 1990-91  
IEE Prepared By: Patricia Liefert  
Program Analyst, AFR/PD/CCWAP

Environmental Action Recommended:

Positive Determination \_\_\_\_\_  
Negative Determination \_\_\_\_\_  
Categorical Exclusion   X    
Deferral \_\_\_\_\_

Summary of Findings:

This Project is eligible and recommended for categorical exclusion pursuant to the provision of 22 CFR 216.2(c)(1)(i) because it will not have an effect on the natural and physical environment; and pursuant to the provisions of 22 CFR 216.2(c)(2)(iii) because it will fund analyses, studies, academic or research workshops and meetings.

Concurrence: John Gaudet  
Bureau Environmental  
Officer, AID/AFR,  
John Gaudet

APPROVED: \_\_\_\_\_  
DISAPPROVED \_\_\_\_\_  
DATE: 7/20/90

Clearance: L. Johnson  
GC/Africa Bureau

DATE: 23 Apr 90