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**MASS DISTRIBUTION
OF IVERMECTIN
TO CONTROL ONCHOCERCIASIS
IN SUCHITEPEQUEZ PROVINCE
GUATEMALA**

**A Detailed Implementation
Plan**

**Cooperative Agreement Number:
DPE-5948-A-00-1039-00**

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the
International
Eye Foundation

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I EXECUTIVE SUMMARY

The International Eye Foundation (IEF) is submitting this Detailed Implementation Plan to the U.S. Agency for International Development (USAID) for a three-year pilot project to control and possibly eliminate onchocerciasis in the Suchitepequez Province in the Republic of Guatemala.

The project goal is to establish an effective, safe and locally sustainable model for the biannual distribution of ivermectin in endemic communities. This model will be of a nature as to allow its replication on a national scale. Through the distribution of the drug, the project will significantly reduce the intensity of onchocercal infections, along with attendant morbidity, in the entire Suchitepequez Province. In addition, the project may decrease the prevalence of infection, and interrupt transmission of the causative helminthic agent, Onchocerca volvulus.

The project will be implemented in Suchitepequez Province with a target population of approximately 43,000, living in at least 142 communities in five municipalities. While data collected by the Ministry of Health indicate high prevalence of onchocerciasis in certain areas, the exact epidemiological situation is yet to be determined by the project.

IEF will execute this project in direct collaboration with the National Committee for the Blind and Deaf (NCBD) of Guatemala, the Universidad del Valle de Guatemala (UVG), and the Onchocerciasis Control Division of the Ministry of Health (SNEM). Technical backstopping and special services will be provided by the Tulane University School of Public Health and Tropical Medicine (TUSPH&TM).

Project objectives are to: (1) Conduct surveys to determine or reconfirm prevalence and intensity of infection, and to update census figures; (2) train project staff; (3) educate community members about onchocerciasis and motivate them to participate in the distribution campaigns; (4) provide a bi-annual dose of ivermectin to the eligible population; (5) establish an H/MIS with emphasis on quality assurance; and (6) evaluate, document and disseminate the results of this pilot program to the MOH and other institutions involved in onchocerciasis control.

The project is designed to be implemented over a period of three years commencing October 1991. Actual distribution is scheduled to begin in April 1992, targeting 85% of the eligible population (approximately 35,000) during each of the four treatment cycles. A fifth treatment cycle is planned but will depend on the availability of additional funds.

Total project expenses are estimated to amount to \$474,947 of which AID has committed \$420,202, with additional contributions, both in-kind and in cash, of \$54,745 coming from the IEF, NCBD, and the MOH.

II BACKGROUND

A. General

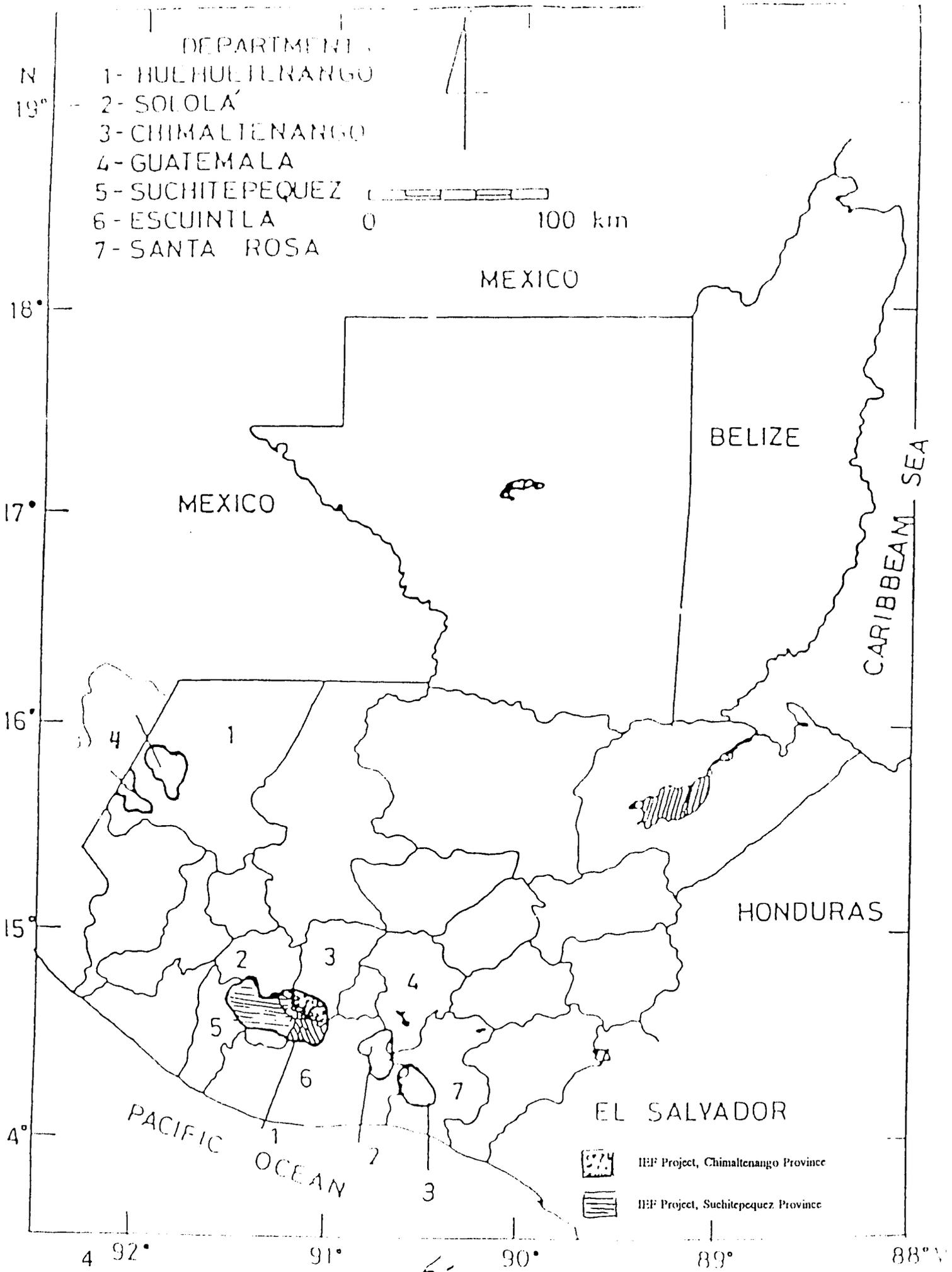
The introduction of the drug ivermectin has had a dramatic impact on the modern management of human onchocerciasis (summarized by Taylor and Greene, 1989). Ivermectin has now been proven superior to diethylcarbamazine as a microfilaricidal agent in treatment of onchocerciasis. Ivermectin generates fewer and less severe side-effects with the death of the microfilariae. Population-based chemotherapy programs using ivermectin are now feasible, and offer a radically different approach to control of onchocerciasis which have in the past concentrated on expensive and logistically awkward vector control. Distribution of the drug to affected communities is further stimulated by the offer by Merck, Sharp and Dohme, Inc. of free provision of ivermectin to approved programs in endemic countries. Ivermectin, however, is not effective against the adult stages of Onchocerca volvulus, and thus is a suppressive, not a curative, therapy. In order to keep skin and ocular microfilaria at minimum levels, ivermectin should be given as a single oral dose of 150 mcg/kg total body weight (TBW) every 6-18 months. The required duration of such therapy is unknown, probably at least 7 years.

The dramatic shift in onchocerciasis control possibilities and the Merck & Co. offer presents the public health community both a marvelous opportunity and a number of challenging programmatic decisions and operational questions. The successful use of ivermectin on a national scale requires a broad public health program designed to assure appropriate distribution, monitoring, community education, and record keeping. In Guatemala, there are additional opportunities since recent research indicates that interruption of transmission - eventually resulting in eradication of the disease - is feasible (Dr. Ed Cupp, personal communication). This project is designed to serve as a pilot for developing a national strategy that aims to eradicate onchocerciasis in all of Guatemala.

B. Onchocerciasis in Guatemala

Control of onchocerciasis in Guatemala has traditionally been the responsibility of a division of the Ministry of Health known as SNEM. SNEM estimates that 450,000 Guatemalans live in regions containing endemic foci of onchocerciasis (Suzuki, 1983). Of these, approximately 50,000 (in 500 communities) are thought to be infected. Although the World Health Organization estimates that only 600 Guatemalans have been blinded by onchocerciasis, it is likely that a much larger number suffer severe visual impairment or other morbidity caused by the disease which limits their ability to function as productive members of society. Four distinct pockets of infection were noted and are described below (see map on following page):

ONCHOCERCIASIS ENDEMIC FOCI IN GUATEMALA



- 1) A zone of 1,921 km² covering adjoining parts of Chimaltenango, Sololá and Suchitepequez Provinces (referred to as the CHISOLOSUI focus).

This is the largest known endemic zone of onchocerciasis in Guatemala. Existing census data indicate that 155,000 people live in this region, with at least 55,000 residing in endemic communities. These data however, may be inaccurate. Recent estimates show much larger numbers. The population living in endemic areas may be as high as 43,000 in the Suchitepequez Province alone, which makes up approximately one half of the focus. This document describes the detailed plan for the treatment of all the endemic areas within the Suchitepequez Province.

The IEF, in collaboration with the NCBD, is currently distributing ivermectin in the department of Chimaltenango, as part of a three year pilot program (see map, on previous page). In year one of the program, 9900 residents received ivermectin in the Yepocapa Municipio. In 1991 (year two), 12,000 persons were treated in the same area. For year three, 15,000 people are slated for treatment in Yepocapa and Acatenango Municipalities.

Other institutions are active in onchocerciasis control and research in the Central Focus. In the municipios of Acatenango (Chimaltenango Province) and Chicacao (Suchitepequez Province), investigators at the Centro de Investigaciones en Enfermedades Tropicales (CIET), Universidad del Valle de Guatemala, (Drs. Ricardo Luján, Rodolfo Zea and Frank Richards) have been collecting epidemiological and immunological data in five hyperendemic communities for several years as part of an on-going research program.

The neighboring Patulul Municipio (Suchitepequez Province) was the site of a Ministry of Health project sponsored by the World Health Organization/Special Program for Research and Training in Tropical Diseases (WHO-TDR). Investigators included Drs. Ed Cupp and Richard Collins (University of Arizona) and Drs. Guillermo Zea-Flores, Julio Castro, and Onofre Ochoa (MOH). The project, for the last three years (1988-90) distributed ivermectin to the inhabitants of 5 hyperendemic communities (total population of about 1,500). Results, which are soon to be published in the American Journal of Tropical Medicine, indicated that mass distribution of ivermectin interrupted transmission of onchocerciasis in these communities.

- 2) A zone of 1,468 km² on the down-slope of the volcano of Pacaya in Esquintla Province ("San Vicente Pacaya" focus).

Of the 37,500 residents thought to live in this zone, 5,000 or more are living in endemic communities. Between 1975 and 1983, the MOH collaborated with a research program sponsored by the Japanese government (JICA) to control black fly breeding through seasonal application of the non-residual pesticide Temephos to the local rivers in the San Vicente Pacaya focus. Although the chemical is biologically effective, the program has come to a halt as the Ministry cannot afford the Temephos and its application in remote mountain streams is logistically difficult. SNEM now has plans to begin mass distribution of 3,000 tablets of ivermectin to the residents of 20 to 30 hyperendemic communities in this zone.

- 3) A lowland zone of approximately 590 km² around and south of Guanagazapa in the Province of Santa Rosa.

Of the estimated 62,000 residents, at least 10,000 live in endemic zones. Current data suggest that this zone is hypoendemic and does not warrant mass distribution of ivermectin (Dr. Guillermo Zea-Flores, personal communication). Plans for a clinic-based distribution scheme are under consideration.

- 4) The territory adjacent to the Mexican border in the Huehuetenango Province (this is contiguous with an endemic area in Chiapas on the Mexican side of the border).

As many as 60,000 people may live in endemic communities in this zone, but civil conflict has interfered with efforts to gather accurate census figures or disease prevalence data. Some of the population migrates back and forth across the international border. Meanwhile, the Mexican government has begun a program to mass distribute ivermectin on its own side of the border. In many of the villages in nearby Guatemalan territory, two Catholic sisters, both physicians, have for several years been training local promoters (village health workers). IEF has begun to explore the possibility of assisting these "doctor-sisters" to train their local promoters to mass distribute ivermectin. However, prior to any mass distribution campaign, this area should be surveyed and mapped epidemiologically.

III PROJECT DESCRIPTION

A. Goal

The project goal is to establish an effective, safe and locally sustainable model for the biannual distribution of ivermectin in endemic communities. This model will be of a nature as to allow its replication on a national scale. Through the distribution of the drug, the project will significantly reduce the intensity of onchocercal infections, along with attendant morbidity, in the entire Suchitepequez Province. In addition, the project may decrease the prevalence of infection, and interrupt transmission of the causative helminthic agent, Onchocerca volvulus.

B. Objectives

1. To undertake baseline epidemiological studies using indicator groups, school surveys, and study communities to determine and/or reconfirm the prevalence and intensity of onchocerciasis infection, at the community level, in all communities of Suchitepequez Province that are located between 500 and 1,500 meters above sea level.
2. To survey each treated community epidemiologically at least once more during the course of the project to facilitate evaluation of the impact of ivermectin treatment on parasitologic indices of onchocerciasis.
3. To develop a system for processing and dissemination of information collected over the course of the project.
4. To assess the project by a set of defined indicators.
5. To capacitate project staff, as well as at least 60 members of affected communities, to motivate the communities and distribute ivermectin.
6. To educate all affected communities to increase the level of public awareness about the disease and the distribution program and to achieve high acceptance of the treatment.
7. To deliver the appropriate dose of ivermectin on a bi-annual basis to at least 85% of the eligible population of all communities endemic for onchocerciasis, including those located within a 5 km radius of endemic communities.
8. To develop a distribution plan that can be extended to the whole nation and can be sustained by local structures for as long as it is required to interrupt transmission (at least 10-15 years).

C. Location

The project will establish an ivermectin delivery system in all endemic communities of the Suchitepequez Province. While there are no reliable data concerning the number of people living in areas endemic for onchocerciasis, it is estimated that as many as 40,000 persons may require treatment.

The Suchitepequez Province has been chosen as the project area for two reasons:

1) Suchitepequez makes up part of the Central Focus, which is the largest contiguous area endemic for onchocerciasis in Guatemala. The MOH, who has made a commitment to combat onchocerciasis nationwide, has expressed a strong desire that the IEF and NCBBD concentrate their ivermectin distribution efforts in this area.

2) IEF, in collaboration with NCBBD, has established an ivermectin distribution program in the adjacent Province of Chimaltenango, which forms another part of this focus. 1992 will be the third year of that project. It is expected that the proposed project in Suchitepequez will profit from the experience and infrastructure established during the last two years in Chimaltenango. Indeed, this new effort in Suchitepequez may be viewed as an expansion of the active and successful project in the adjacent Chimaltenango Province in this major endemic zone. Together, the two projects will cover approximately 75% of the Central Focus.

D. Project Design

The project will consist of the following main steps:

- 1) Establishing baseline epidemiological data in all communities suspected of having onchocerciasis. This will be achieved by implementing surveys designed to establish prevalence and intensity of infection in the Suchitepequez Province. A small number of communities (7) will be evaluated in detail for morbidity and transmission baseline indices of morbidity. Del Valle University will hold the primary responsibility for this component of the project.
- 2) Training of IEF/NCBD and SNEM staff for community education/motivation and ivermectin distribution. These personnel will be equipped with vehicles and constitute the mobile teams. Community-based volunteer distributors will be selected and trained in the second year of the project. The NCBBD will be in charge of the training component.
- 3) Establishing a distribution plan that will deliver ivermectin to "eligibles" (men, women who are not pregnant or in the first week of lactation, and children over 15 kg body weight) in all communities in which onchocerciasis is prevalent, as well as in any community within 5 km of an infected community.

- 4) Conducting community education and motivation to prepare the communities for their participation in the upcoming distribution campaign. During the first year, i.e. the first two rounds of treatment, mobile distribution teams will be responsible for the education/ motivation campaign. During subsequent rounds of treatment, community-based health workers (CHWs) will conduct the campaign in at least 50% of the communities. In order to be able to fulfill this task, the CHWs will receive training by members of the mobile teams. They will receive a modest incentive (per diem) during the training but work on a voluntary basis. SNEM and NCBD will implement the motivation, as well as, the distribution component described below.
- 5) Distribution of ivermectin and monitoring of adverse reactions. As described for the education/ motivation campaign, mobile teams will distribute the drug during the first two rounds of treatment and then train CHWs for the task. Starting during the third round of ivermectin, CHWs, under the supervision of members of the mobile teams, will assume distribution activities in some villages. CHWs will also learn how to recognize adverse reactions, treat mild cases and refer more severe cases to health personnel of the mobile team, who will be available nearby for several days after the treatment.
- 6) Evaluation: Management, treatment, and epidemiological indices will be evaluated on a routine basis. Baseline epidemiological data will be compared to data collected in repeated surveys. Monthly, midterm and final reports will be prepared.

Project activities are described in greater detail under Section VII, Program Elements.

E. Log Frame

Project Name : Ivermectin Distribution Program in Suchitepequez Province, Guatemala

Est. Completion : Sept. 30, 1994

Date of Revision: March 23, 1992

Design Team : Jack Blanks, Christine Witte

Narrative Summary (NS)	Measurable Indicators (OVI)	Means of Verification (MOV)	Important Assumptions
<p>Goal:</p> <p>1 To reduce the level of onchocerciasis infection to a point at which no more transmission will occur.</p>	<p>1.1 Reduction of intensity of infection</p> <p>1.2 Reduction of incidence</p> <p>1.3 Reduction of L3 larvae in Simuliac</p>	<p>1.1 skin snips</p> <p>1.2 nodule survey in school children</p> <p>1.3 DNA probing of Simuliac¹</p>	<p>(goal to supergoal)</p> <p>1.1 Skin snip technique sensitive enough to detect microfilaria below levels at which transmission is not thought to occur any more.</p> <p>1.3 Only the two known vectors, <i>S. ochraceum</i> and <i>S. metallicum</i> are capable of transmitting <i>O.volvulus</i>.</p>
<p>Purpose:</p> <p>1 To establish an effective, safe and locally sustainable model for the biannual distribution of ivermectin in endemic communities in the target area.</p>	<p>1.1 Costs of delivering ivermectin are at low levels, i.e. comparable to IEP's first IDP in Guatemala, which is thought to have reached cost levels low enough for sustainability.</p> <p>1.2 At least 85% of the eligible population has received the correct dose of ivermectin on a biannual basis.</p> <p>1.3 At least 60 CHWs have been trained for motivation and distribution to begin the phase-out to community-based distribution which is part of the sustainability plan.</p>	<p>1.1 Financial Records.</p> <p>1.2 Household Ivermectin Treatment Records (HITRs).</p> <p>1.3 Training Records.</p>	<p>1 Ivermectin will continue to be a safe and available drug.</p>

¹ Pending additional funding.

<p>Outputs:</p> <p>1 Baseline and follow-up epidemiological surveys conducted to determine and/or reconfirm the prevalence and intensity of infection.</p> <p>2 Development of a H/MIS to process and disseminate information collected over the course of the project.</p> <p>3 Project staff and CHWs trained to perform motivation and distribution activities.</p> <p>4 Health education message delivered to all communities requiring treatment.</p> <p>5 Ivermectin distributed to the eligible population according to TMEC guidelines.</p> <p>6 Accounting system in place with special emphasis on tracking cost per intervention.</p>	<p>1.1 All communities between 500 and 1,500 m skin snipped.</p> <p>1.2 All skin snips counted and classified as positive or negative.</p> <p>1.3 Based on the survey results, # of communities targeted for treatment.</p> <p>2.1 Appropriate forms are programmed in a data base and ready for use.</p> <p>3.1 Targeted number of project staff (10) hired and trained.</p> <p>3.2 Targeted number of CHWs (60) selected and trained.</p> <p>4.1 Targeted number of communities educated about onchocerciasis, ivermectin and the program.</p> <p>4.2 Community members understand basic concepts of the IDP.</p> <p>5.1 At least 85% of the eligible population has received the appropriate dose of ivermectin.</p> <p>5.2 Everybody experiencing adverse reactions has been treated properly.</p> <p>6.1 Appropriate accounting system has been distributed to the accountant of the project.</p>	<p>1.1 SNEM records, GIS, epidemiological survey records..</p> <p>1.2 epid. survey records.</p> <p>1.3 GIS, epid. survey records.</p> <p>2.1 H/MIS records and site visits.</p> <p>3.1 Personnel- and training records.</p> <p>3.2 Training records.</p> <p>4.1 Field records.</p> <p>4.2 Quality Assurance check lists.</p> <p>5.1 HITRs.</p> <p>5.2 Adverse Reaction Forms and Quality Assurance check lists.</p> <p>6.1 Reports received in headquarters and site visits.</p>	<p>1.1 In Guatemala, onchocerciasis is only found between 500 and 1,500 m altitude.</p> <p>1.2 Skin snips are a reliable technique for determination of infection.</p> <p>2.1 Dr. Kleinau knows what he is doing.</p> <p>3.2 Community members are willing to participate in the project.</p> <p>4.2 Checklist questions are asked in culturally appropriate ways.</p> <p>5.2 Adverse reactions are monitored properly.</p>
<p>Other Activities:</p> <p>In Field:</p> <p>1 Provide headquarters with monthly reports.</p> <p>2 Write quarterly and annual reports to headquarters who will submit them to USAID.</p> <p>In Headquarters:</p> <p>3 Procurement of capital equipment.</p> <p>4 General Backstopping.</p> <p>5 Assistance with quarterly and annual reports.</p> <p>USAID/VBC:</p> <p>6 Provide technical assistance with H/MIS.</p> <p>7 Organize and conducts midterm- and final evaluation.</p>	<p>1.1 Monthly reports received regularly.</p> <p>2.1 Reports are received in timely fashion to be submitted to USAID.</p> <p>3.1 Equipment in place and functional</p> <p>4.1 Help/assistance required by field staff is provided</p> <p>5.1 Reports are written and submitted in timely fashion.</p> <p>6.1 H/MIS in place.</p> <p>7.1 Evaluations take place after 18, resp. 36, months</p>	<p>1.1 Headquarters records.</p> <p>2.1 Headquarters and USAID records.</p> <p>3.1 Inventory lists.</p> <p>4.1 Monthly reports, site visits, evaluations.</p> <p>5.1 USAID receives reports in regular intervals.</p> <p>6.1 Records from the field, evaluations.</p> <p>7.1 Evaluation reports.</p>	

IV IMPLEMENTING PARTIES

A. The International Eye Foundation

The International Eye Foundation (IEF) is a private voluntary organization dedicated to the prevention and cure of blindness in developing countries. IEF field operations provide training, equipment and medicines, clinical services, operational research and development of community-based programs through support for indigenous eye care organizations in 10 countries of Latin America, the Caribbean, Africa and Eastern Europe. A headquarters staff in Bethesda, Maryland provides support to IEF personnel in the field.

IEF was one of the first American PVOs to distribute ivermectin and is actively involved with five projects to control onchocerciasis in Guatemala, Nigeria, Cameroon and Malawi.

B. Tulane University School of Public Health and Tropical Medicine

TUSPH&TM in New Orleans has existed as a free-standing school since 1967, but the Department of Tropical Medicine has a much longer history as part of the Tulane School of Medicine. As one component of Tulane Medical Center, TUSPH&TM is composed of five academic departments (Biostatistics and Epidemiology, Health Systems Management, Tropical Medicine, Environmental Health and Applied Health Services) and an interdepartmental program (International Health). During the past decade, TUSPH&TM has established strong research, training, and technical assistance programs in a number of developing countries in Sub-Saharan Africa and Latin America.

TUSPH&TM, with its widely-recognized programs in tropical medicine and international health, is ideally prepared to work with IEF and Guatemalan institutions in the proposed pilot project. TUSPH&TM has a long history of fruitful collaboration in Latin America. Its 30 year collaborative linkage with the Universidad de Valle, Cali, Columbia, supported through NIH's International Collaboration in Medical Research (ICIDR) program has been a model of success, leaving in place in Cali a strong, self-sufficient research institution, Centro Internacional de Entrenamiento e Investigaciones Medicas (CIDEIM).

Most of the faculty of the Department of Tropical Medicine are fluent in Spanish, having worked and lived for years in Latin America. Faculty members offer several dimensions of expertise in onchocerciasis, including parasitological, clinical, chemotherapeutic, epidemiologic, and control methodologies.

By virtue of a close relationship with the Division of Parasitic Disease, Centers of Disease Control, some DTM faculty members such as Dr. Barnett Cline are very familiar with the University del Valle de Guatemala (UVG), and its CDC-supported research unit (MERTU). Good working relationships already exist

between UVG and DTM, for example, a Tulane student is currently at UVG working on a malaria control research project.

C. The National Committee for the Blind and Deaf (Comite Nacional Prociegos y Sordomudos)

NCBD was founded in 1950 as a Guatemalan non-governmental organization. It is currently a leader in the delivery of services to the blind and deaf in Guatemala. It has been given the mandate by the Government of Guatemala to provide all services for the prevention and cure of blindness in over one third of the country. NCBD operates Robles Eye and Ear Hospital, a major specialty center in Guatemala City that trains residents in Ophthalmology from Guatemala and other Latin American countries. The NCBD also has 3 branch hospitals in the interior of the country and a total of 5 peripheral clinics throughout the Republic. In addition, through its Program of Blindness Prevention/Eye Health, it reaches out to communities by direct campaigns and by training teachers and health promoters in primary eye care.

NCBD's teaching hospital is named after Dr. Rodolfo Robles, the Guatemalan scientist who is credited with having first described the epidemiology of onchocerciasis in Central America. Thus, the committee considers that it has a special mandate to promote the treatment and control of this disease. The Committee, through its primary eye care programs, has supported efforts to diagnose and control onchocerciasis for decades through a program to remove nodules caused by the disease.

In 1980, the NCBD organized a National Council on Onchocerciasis made up of key members of government, multinational organizations, local universities and private industry. This Council, though inactive since 1985, has recently been reconvened by the MOH to assist in national policy and decision making.

The NCBD, as IEF's partner NGO in an on-going three-year program to deliver ivermectin in Chimaltenango has gained much experience in this field. Their clinical and primary eye care infrastructure, which already exists in the proposed target area, will be fully incorporated into the ivermectin distribution program.

D. SNEM (MOH)

This División de Enfermedades Metaxénicas (SNEM) is a part of the Ministerio de Salud Pública y Asistencia Social (MOH). The division is responsible for vector-borne disease control (principally malaria, onchocerciasis, dengue, and Chagas' Disease). In the 1970's a subdivision within SNEM was created specifically to combat onchocerciasis. The chief of this section is Dr. Julio Castro, a participant in this project. Since 1935, SNEM has collected data and carried out an ambitious program to surgically remove the nodules caused by onchocerciasis infection. The last serious analysis of this data was carried out for the decade 1970-79 (Yamagata et al., 1986).

SNEM has also conducted WHO-funded ivermectin trials and collaborated with the UVG and the University of Arizona on research to determine the effective use of ivermectin in Guatemala. The results are soon to be published (Dr. R. Collins, personal communication) and demonstrated that ivermectin use could interrupt transmission of onchocerciasis in Guatemala. In the new project in Suchitepequez, SNEM will continue to play a key role in the coordination of all activities aimed at eliminating onchocerciasis as part of a National Control Strategy.

E. Universidad del Valle, Guatemala (UVG)

Created in 1966 as an outgrowth of the American School of Guatemala, UVG is a leading university in Guatemala specializing in sciences, medicine, social and behavioral studies and education. The Centro de Investigaciones en Enfermedades Tropicales (Center for Research in Tropical Diseases-CIET) is internationally known for its wide range of research activities in parasitic diseases, including onchocerciasis. CIET is equipped with state of the art laboratories and has a number of well trained technicians to assist with survey work.

Currently Drs. Ricardo Luján and Rodolfo Zea-Flores are conducting research in the Acatenango area of the Chisolosui focus. Dr. Luján has played a key advisory role in most onchocerciasis activities over the past several years. Dr. Zea-Flores served as the supervisor of hospital and field activities for Phase III clinical trials of ivermectin in Guatemala (1985-1987) before joining CIET.

F. Medical Entomology Research and Training Unit/ Guatemala (MERTU/G)

MERTU is the Guatemalan research unit of the Division of Parasitic Diseases, Centers for Disease Control in Atlanta. MERTU has maintained a US national professional staff, office space, research facilities, and a national technical staff at UVG for the last 13 years. Since 1987, Dr. Frank Richards, a staff member of the Division of Parasitic Diseases, CDC, has been stationed at MERTU. He has worked in close collaboration with the professionals of CIET, SNEM and the University of Arizona on studies of ivermectin use for the control of onchocerciasis.

V HUMAN RESOURCES

The IEF/NCBD Project Manager will be Dr. Ricardo Luján, PhD. The SNEM teams will be coordinated by Dr. Julio Castro, MD, MPH. Dr. Rodolfo Zea-Flores, MD, will be responsible for supervision of field teams from UVG and NCBD. He will also assist Dr. Castro supervise SNEM teams (see Field Staff Organigram on the page 17).

The following personnel will participate in the project:

- 7 employees of the Universidad del Valle, Guatemala:
 - 1 field technician/driver (100%)
 - 1 field technician (50%)
 - 1 laboratory technician (75%)
 - 1 computer programmer (80%)
 - 1 data clerk (100%)
 - 1 student assistant (25%)
 - 1 secretary/ bookkeeper (35%);
- two SNEM teams for the Rapid Epidemiological Assessment (REA), consisting of 4 technicians each and 1 supervisor;
- 5 mobile teams (brigades) of 2 people each, responsible for health education/ motivation, consisting of 6 brigadistas hired through IEF/NCPD and 4 SNEM brigadistas plus one SNEM supervisor;
- 5 mobile teams (brigades) of 2 people (3 SNEM + 2 NCPD) responsible for distribution of ivermectin and handling of mild adverse reactions;

Over the life of the project, at least 60 community-based health workers (CHWs) will be trained and supervised by a group of motivation and distribution team brigadistas.

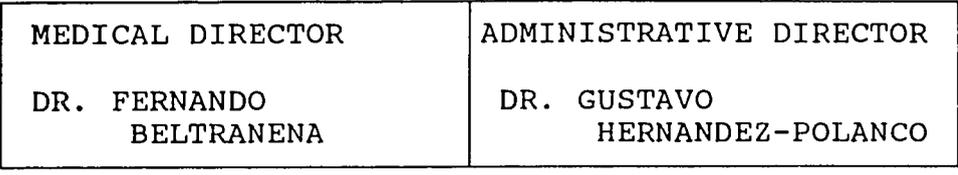
Dr. Barnett Cline, MD, PhD, Director of the Department of Tropical Medicine, School of Public Health and Tropical Medicine, Tulane University, and members of staff from Tulane University will link closely with CIET/MERTU with respect to epidemiologic and data system research opportunities and provide oversight and expertise in evaluating program elements (for a Letter of Understanding between IEF and Tulane University, see Appendix I).

Vector Control and Biology (VBC) will be requested to identify consultants for the economic analysis component as well as bear the costs for this extra-project activity.

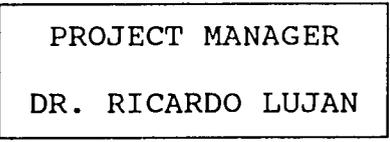
Dr. Frank Richards, MD, has been a member of the designing team for the Suchitepequez project from the onset. He will leave MERTU in April 1992, but will visit the project periodically as a consultant.

Backstopping from the IEF headquarters in Bethesda, USA, will be provided by Mr. Jack Blanks, MSc, Director of Programs and Dr. Christine Witte, PhD, MPH, Onchocerciasis Program Coordinator.

FIELD STAFF ORGANIGRAM
 SUCHITEPEQUEZ PROJECT

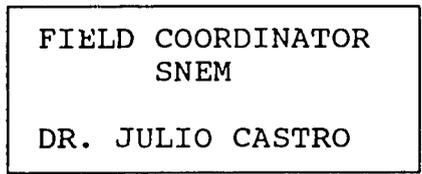
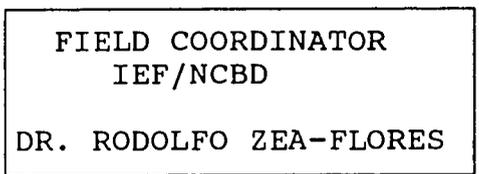


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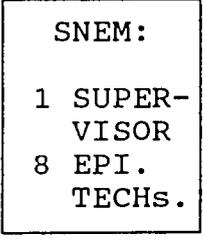
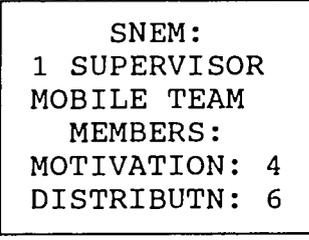
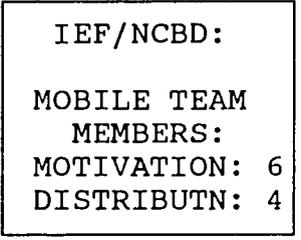
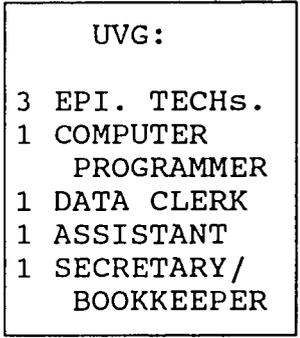


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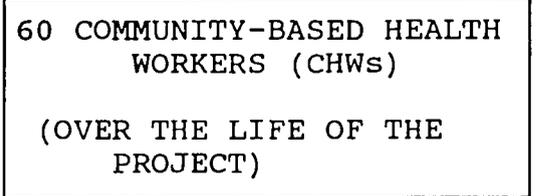
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VII PROGRAM ELEMENTS

A. Procurement/ Logistics

Objective: To purchase, ship and deliver all the supplies needed for operating the project.

In the beginning of the first year, the project will purchase 6 motorcycles. These will serve as project vehicles for the part that is played by the IEF in conjunction with the NCBD, while SNEM will provide transportation for it's own teams.

For the data management system the purchase of a computer plus a printer is required. This, as well as the purchase of other office/medical equipment and supplies will be arranged through IEF headquarters. Smaller items of office supply will be procured locally.

The population of the entire project area to be treated is estimated to be 43,000 people. A Mectizan Application Form for 90,000 tablets for biannual treatment in year one has been filled out and is attached as Appendix II.

B. Epidemiological Studies

Objective: 1. To undertake baseline epidemiological studies using indicator groups, school surveys, and study communities to determine and/or reconfirm the prevalence and intensity of onchocerciasis infection, at the community level, in Suchitepequez.

2. To survey each treated community epidemiologically at least once more during the course of the project to facilitate evaluation of the impact of ivermectin treatment on parasitologic indices of onchocerciasis.

Epidemiological survey activities will be constant and wide-reaching throughout the project area. Mobile teams will perform the evaluations using three techniques:

- 1) All communities in the department of Suchitepequez lying between 500-1500 meters above sea level will be considered "at risk." These are the elevations where the Simulium ochraceum vector densities are greatest. All communities at risk will be classified by endemicity; we know of at least 142 such communities in the department of Suchitepequez.

Communities will be epidemiologically classified as follows: First, a thorough review will be made of SNEM data collected over the last 5 years. After the review, the field visits will then be directed towards all communities at risk for which we have no recent epidemiologic information. Visits will also be made to those communities where available data is judged to be incomplete. During the visit, which should last no more than a day in each community at risk, a rapid assessment of onchocerciasis endemicity will be performed, which is described in detail below. This process will be called Rapid Epidemiological Assessments (REAs).

REAs will consist of an examination of a sample consisting of 20-30 males, 15 years of age and above (the so-called "indicator group"). The indices of the REA will be the geometric mean microfilarial density of the indicator group (total microfilarial density-indicator group-or TMFD-IG), the geometric mean microfilarial density of just the positives in the group (positive microfilarial density-indicator group or PMFD-IG), and the microfilarial prevalence among the indicator group (microfilaria prevalence-indicator group, or MP-IGMP-IG). This team will also perform examinations for nodules, which will be expressed as a percentage figure (nodule prevalence-indicator group, or NP-IG). There are three reasons for limiting the sample to older males: 1) Age-sex adjustments are unnecessary to compare results between communities or between treatment rounds, 2) older males are most affected by onchocerciasis (Brandling-Bennett, 1981), and 3) women are more reluctant to be snipped and examined.

The REAs will be performed by two field workers during late afternoon and evening hours after the men have returned from the fields. The collected skin snips will be placed in microtiter plates, incubated for 24 hours, fixed, and returned to the laboratory at CIET for reading. Skin samples from different communities will be kept separate. Further details on processing of samples are given later in this section. A special form will be completed for each REA and returned weekly to the CIET office.

All communities treated with ivermectin will be evaluated by rapid assessment at least once more over the course of the project. Rapid epidemiological assessments will allow evaluation of program impact on prevalence and intensity of infections among the population strata most affected by onchocerciasis, adult males.

- 2) School Nodule Surveys: The same team responsible for REAs will also perform school nodule surveys (SNS). These will be completed by visiting schools in communities at risk during school hours and examining the children under 15 years of age for nodules on head and thorax. Children will be asked their age and if they have ever had a nodulectomy; the site of the operation will be confirmed during the examination. A specialized form will be completed for each SNS and returned weekly to the CIET office. A small talk on la filaria should be given in each school visit that focuses on what the nodule is (the adult worm), and introducing the term microfilaria. The talk should also mention the transmission cycle of onchocerciasis and the role of ivermectin. The indices produced by the SNS will include age specific prevalence rates of nodules among all children, and among those without previous history of nodulectomy. These data will be used to evaluate transmission impact of ivermectin distribution. Although we will probably not see a change in this indicator over the life of the project, SNSs may be invaluable over the long term, and can provide continued surveillance activities through the CHWs, who will be taught the technique in the final year of the project.

- 3) In-depth surveys will be performed annually during the project in 7 meso- and hyperendemic communities (e.g., more than 30% of the population skin biopsy positive). These will be known as the Study Communities (SC) The surveys will strive to examine all individuals for onchocerciasis (e.g., presence of palpable nodules and microfilarial skin densities), evidence of ocular disease (visual acuity test, exam for ocular lesions and counting of microfilaria in the eye) and dermal disease (physical examination). Given the depth of the studies, surveys of the SCs will require the presence of a laboratory technician and a physician, as well as an ophthalmologic resident or -technician. The indices produced by the SCs will include (both age-sex standardized and stratified values for) community microfilarial load (CMFL), the mean microfilarial load among positives (MMFL), microfilarial prevalence, and nodule prevalence. The SCs will provide data to evaluate the program's impact on morbidity (visual acuity and dermal disease) and transmission (age-specific prevalence rates and incidence among previously negative persons). Other special studies directed to answering important research issues may be undertaken in the SCs using outside funds. In these cases, written protocols must be submitted for review by the participating institutions, ethics committees (when necessary), and final approval by the project director.

Laboratory procedures: All biopsy samples will be processed according to standard procedures: Skin biopsies ("skin-snips") weighing 1-2 mg are taken from over the left scapula and left posterior superior iliac crest with a corneo-scleral punch (Holth type; 2.0 mm). Between patients, the instruments are washed sequentially with 2% glutaraldehyde, water, and alcohol, and then air dried. Alternatively, instruments may be soaked for 20 minutes in 90% alcohol. Skin snips are placed in individual wells of polystyrene microtiter plates, each well containing 0.2 ml of RPMI 1640 with antibiotics added. After being incubated for 24 hours at room temperature, two 2 drops of 2% formalin were added to each well. In the case of the SCs, after the 24 hour incubation, the snips are removed, and two 2 drops of 2% formalin were added to each well. The snips are passed to a corresponding microtiter plate and fixed in Schulz-Key solution. Later they are blotted dry on smooth filter paper and weighed individually on an analytical balance. Microfilaria (Mf) are counted at 100X magnification. Mf counts are expressed per snip in the REAs and both per snip and per mg in the SCs. Geometric means (mfd) are calculated using the log n + 1 method (Williams, 1937).

C. HIS/MIS

- Objectives:
- 1) To develop a system for processing and dissemination of information collected over the course of the project.
 - 2) To provide routine reports to the project participants and USAID.
 - 3) To assess the project by a set of defined indicators.

A health information system (HIS), management information system (MIS), and geographic information system (GIS) will be developed during the life of the project. All programs and data bases will be developed for IBM-compatible microcomputers. The basic objective of these files and programs will be to aid in targeting program resources, delivery of services, determination of drug coverage, and evaluation of the impact of the elimination effort. To facilitate the process of data collection, Dr. Eckard Kleinau, an expert on health information systems subcontracted by VBC, has developed a set of forms. Of these, 18 were selected by project staff and the Onchocerciasis Program Coordinator of IEF in a meeting that took place in March 1992. It should be noted, however, that these forms are still subject to change, both the number of forms as well as their content. The preliminary selection of forms can be found in Appendix VI. Dr. Kleinau will spend two weeks with the project in April 1992 to provide templates for the forms in the appropriate data base (FoxBase). At this point he and the project staff will make the final decisions about the number and content of the forms.

The processing and analysis of the collected data will be carried out by the UVG in consultation with professionals from the MERTU and Tulane University. The majority of the work for this project will be done on the UVG campus, although an office will be maintained at SNEM during the first year of the project to facilitate retrospective review of MOH files. Data generated by the project and their analyses will be shared with all parties involved in this project.

Activities:

1. Review of MOH Service Statistics: We will review the SNEM statistics generated by the nodulectomy brigades going back at least five years (1987-1991). Using a standardized form, we will extract from the MOH records the date of the brigade visit, the community name, municipality, department, population size (by age and sex groupings), number of persons examined during the visit, microfilaria rates in skin snips (when available) and nodule rates. We will also extract counts of microfilaria in skin snips for the first 30 males (aged 15 and above) registered for that community visit. We will then enter into the computer the information recorded on the standard forms and regularly print those files so that the hard copy may be checked against the standard forms for accuracy. The computer file will be an important source of baseline information that will allow evaluation of the ivermectin control program and direct epidemiological and distribution activities and priorities (see preceding "Survey" section).
2. Ongoing Data Management and Entry System: Once the review of MOH data is completed, routine data entry for the program will be provided that will help to schedule treatment activities, maintain census, determine coverage and participation rates and monitor epidemiological impact of distribution. Access to data will be improved by developing a series of "user friendly" HIS and MIS programs in collaboration with Dr. Kleinau. We also will evaluate the usefulness of a microcomputer GIS (ATLAS-GIS™) that can directly access data files and dynamically represent activities in operational areas (local prevalence, transmission indices, schedules of retreatment, etc.). The HIS/GIS applications have already been developed to a great extent by Dr. Frank Richards (MERTU/CDC). He will continue to serve as consultant/adviser to the project in these areas.

3. Monitoring and Evaluation: The project will be monitored on an ongoing basis, and monthly reports to the Onchocerciasis Program Coordinator at IEF/Bethesda will be produced by the Project Director. The information collected for monitoring and evaluation purposes will include a standard set of indicators, yet to be provided by Dr. Kleinau. These will be determined for each round of treatment. Correlation analyses of these indicators will be possible (when appropriate) between community, mode of distribution (CHWs or mobile teams), and distribution round. A preliminary - but not necessarily complete - list of indicators can be found in Appendix III.

Using the MIS, financial reports will be prepared by the Project Field Coordinator on a monthly basis. Reports to USAID will be provided on a quarterly basis. The format for these has been developed by Dr. Kleinau and can be found in Appendix IV. In addition to the quarterly reports, the Project Manager will prepare a very detailed annual report in which he will report on past year's activities as well as evaluate the project with respect to the achievement of objectives and long term goals. As for the quarterly reports, Dr. Kleinau developed a format for the annual report which can be found in Appendix V. A midterm project review at the 18 month point and an end-of-project evaluation at the end of three years will be conducted using a team selected by USAID. The implementing parties request that Dr. Guillermo Zea, former director of the SNEM Departamento de Enfermedad de Robles, be invited to participate as an outside evaluator of the program. An economic evaluation will be performed with the assistance of Dr. Kleinau and, possibly, a Tulane health economist, who will assist in developing the conceptual framework (Scope of Work) for an externally funded consultant to address economic issues relevant to onchocerciasis control in the Guatemalan context. Members of the implementing parties may be associated with the evaluation and the results will be made accessible to the local organizations who will be able to integrate the results into work plans for a national strategy. Publication, by outside evaluators, of data collected by project information systems, will be forbidden without the written consent of participating parties.

D. Training

Objective: To capacitate project staff, as well as at least 60 members of affected communities, to motivate the communities and distribute ivermectin.

The first two cycles of treatment will be carried out by mobile teams only. Therefore, the first round of training will exclusively focus on training the mobile team members for either community education/motivation or distribution of ivermectin/handling of adverse reactions.

The motivation team will consist of 3 brigades of two people hired through IEF/NCBD and 2 brigades of two people from SNEM. The distribution team will consist of 3 brigades of two people from SNEM and 2 brigades of two people from IEF/NCBD. This brings the total number of mobile team members to 20. However, since SNEM has 10 employees capable of motivating communities and 8 persons experienced in ivermectin distribution, they will all receive training and then rotate in their field assignments. Thus, there will be a total of 28 people to be trained for the first two rounds of treatment.

The IEF/NCBD brigadistas will be recruited during February 1992 and most likely will have had no prior exposure to onchocerciasis control programs. Thus they will require rigorous training. Starting in March 1992, they will begin a one-month training period. During the first two weeks, they will be taught about onchocerciasis, ivermectin and the IDP. This theoretical training will be followed by two weeks of in-field training. For this, they will be teamed up with experienced motivators from SNEM and begin with them the motivation campaign which is scheduled to start on March 16, 1992. After the one-month training, the Project Manager together with the IEF/NCBD Field Coordinator will decide who will be hired as a full-time brigadista.

Following the one-month training, there will be a five-day workshop in the week of April 6, 1992, in Guatemala City. The purpose of this workshop is to gather all the brigadistas, both from SNEM and IEF/NCBD, to prepare them for the distribution campaign, as well as evaluate the first month's experience of motivation. After the workshop, the brigadistas will continue to work as either health educators or as distributors.

The workshop will be organized and conducted by staff from IEF/NCBD, UVG and SNEM. Also, the five promoters from the ivermectin distribution project in Chimaltenango Province will join the training staff for one day to share their experience with the trainees. Except for those trainers who will have to travel to the workshop from outside Guatemala City, the trainers will work on an honorary basis. The trainees will receive a per diem, as well as a T-shirt.

During cycle three and four, an increasing number of community health workers (CHWs) will be involved in both motivational and distribution activities. For this they need to receive training. This will be performed by the members of the mobile team who will have gone through a five-day "Training of Trainers (TOT)" workshop which is planned for January 1993 and will be held in the field headquarters of the project whose location is yet to be determined. (Most likely, the headquarters will be in Rio Bravo, as it is centrally located and can be easily reached from Guatemala City by a good road.) The workshop will be organized and taught by experienced staff from IEF/NCBD, UVG and/or SNEM (approximately 2-3 persons). During the first two days, 5-7 persons, consisting of supervisors and brigadistas, will receive training in how to train the CHWs. In days three and four, 20 CHWs will join the workshop where they will be trained for both motivation and distribution by the newly trained project staff.

The CHWs will receive an incentive of Q10/day plus a T-shirt and will be provided with either free transportation or a transportation allowance. They are, however, expected to work on a voluntary basis.

In June 1993, 40 additional CHWs will be trained for both motivation and distribution, thus bringing the total number of CHWs trained in 1993 to 60. The workshop for this will be very similar to the one held in January 1993 as it will consist of two days refreshing/training of the trainers followed by three days of training the CHWs.

E. Community Education/Motivation Campaign

Objective: To educate all affected communities to increase the level of public awareness about the disease and the distribution program and to achieve high acceptance of the treatment.

Over the life of the project, at least four motivation campaigns will occur, covering the entire affected population of approx. 43,000 in each campaign. Two motivation campaigns/year of approximately 4 months each will occur to coincide with the two scheduled rounds of treatment. The first motivation campaign will start on March 16 1992, and will be performed by mobile teams only. In the first year, the 5 mobile teams of two brigadistas each (6 IEF/NCBD brigadistas + 4 SNEM brigadistas) will motivate/educate the communities in three steps:

- 1) During the first contact with the community, the motivation brigades will try to identify community leaders/managers and inform them about the upcoming campaign. With their help they will set a date for a community meeting at a time which is convenient for most members of the community. Also, they will leave posters at various locations throughout the village to inform the people about the planned meeting and to insure maximal turnout.
- 2) The second visit will be the announced community meeting in a central location. The brigades will use flipcharts and posters to inform the audience about the disease, the parasite, the vector and the drug. They will also hand out cards with pictures of several components of the disease which will be used in a game that will make the session more interactive with the audience. Dates for treatment will be set at this general community meeting.
- 3) In the third step, teams will go from house-to-house in order to enhance project promotion, and/or to clarify census information. For this, questions concerning the number of people living in the household, how many of them are ineligible for treatment (however, the final decision concerning eligibility will be made by the distribution teams) and whether they were treated before will be asked.

Ideally, these visits should be combined with further discussions of the project between the brigadistas and the community members. However, there might not be enough time in a bi-annual treatment schedule for such additional motivation activities. The Project Manager will decide during the course of the project whether it will be feasible to add on further delivery of health education messages during the collecting of census data.

In the second year a gradual transition will take place whereby the motivation and education of the community will be taken over by the CHWs. They will be trained and supervised by the mobile teams. Twenty CHWs will be selected to motivate their communities in the 3rd round of treatment scheduled for March-June, 1993. An additional 40 CHWs will be selected, and trained in July 1993 to promote and educate their communities for the 4th round of treatment (August-November). As the project proceeds into the final year, less and less help from the mobile teams should be necessary as the CHWs will be more and more familiar with the message and the distribution procedure. Since the CHWs are members of the community they are treating, they will be able to combine education with treatment, all in one session. If the program is able to conduct a 5th round of treatment in 1994, the entire distribution will be carried out by CHWs. This 5th round will take place only if additional funding is secured for the project. Any treatment provided after years one and two will occur on an annual basis as the intensity of infection will be sufficiently low as not to warrant bi-annual treatment.

F. Distribution of Ivermectin/ Monitoring of Adverse Reactions

Objective: To deliver the appropriate dose of ivermectin on a bi-annual basis to at least 85% of the eligible population of all communities endemic for onchocerciasis, including those located within a 5 km radius of endemic communities.

The distribution component will include 5 brigades of two persons each. Three brigades will be provided by SNEM and two will be recruited from the local area by the NCBD. Four rounds of distribution will take place in 1992 and 1993. The first two rounds of distribution will be completed by mobile teams only, with rounds three and four making the transition to community-based distribution, i.e. through CHWs.

The distribution teams will travel by 4WD vehicle or motorcycle to a predetermined village where educational and motivational activities have recently been completed. The medical professional and technicians who make up the teams then register and weigh the villagers in a central location (or possibly by going house-to-house), and dispense ivermectin to the eligible population. Moving on to distribute the drug in neighboring villages, the team members will return regularly to monitor and treat adverse reactions. Once a cluster of communities has been covered, the team will remain in the area for several days to revisit all the villages and fincas to assure proper diagnosis and treatment should there be any delayed adverse reactions. To ensure adequate handling of adverse reactions over the weekends during the first two cycles of treatment, one IEF/NCBD brigadista will remain in close proximity all of Saturdays and Sundays. He will be compensated for this time during the week.

During distribution rounds three and four, the responsibilities of the mobile teams will expand from handling the distribution themselves to also supervising the newly trained CHWs (20 in round three and 60 in round four).

The CHWs will distribute ivermectin by going house-to-house. Since they live in the community, they will be able to combine motivation and distribution activities. Each distributor will be responsible for no more than 300 people and will require approximately two weeks to complete treatment. After the two weeks, a supervisor will collect the remaining ivermectin and distribution forms, as well as the scales, from the CHWs.

G. Plan for Sustainability and National Strategy

Objective: To develop a distribution plan that can be extended to the whole nation and can be sustained by local structures for as long as it is required to interrupt transmission (at least 10-15 years).

Following the PAHO initiative to eliminate onchocerciasis in Latin America by the year 2000, this project specifically aims at developing a strategy that can serve as a basis for a national strategy for Guatemala. The size of the population to be treated (approx. 43,000) is thought to be large enough to allow extrapolation to a national strategy.

In order to attain this objective, the project is designed to be a well balanced combination of carefully planned epidemiological surveys, a sophisticated information system and the introduction of an affordable and safe community-based mechanism of distributing ivermectin.

IEF's experience in Chimaltenango Province has shown that using a community-based mechanism can reduce the cost of distributing ivermectin drastically. In year three of the Chimaltenango Province project, we expect to treat 15,000 people with approximately \$32,000, with the total project costs expected to drop to approximately \$20,000 in year four. At this level it is highly likely that a local organization such as the NCBD will be able to sustain the project for the next five to ten years.

Furthermore, great efforts have been made to involve all the Guatemalan key players involved and interested in onchocerciasis control programs, i.e. the NCBD, SNEM and UVG. Successful collaboration of these organizations in this project will lay the groundwork for future joint efforts to control and eliminate onchocerciasis in the entire Republic of Guatemala.

Control efforts are underway in three of the four foci and discussions of standardization of data collection, distribution- and other program methodologies are taking place.

VIII REFERENCES

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GUATEMALA ONCHOCERCIASIS PROGRAM

BUDGET SUMMARY

CATEGORY	Year 1		Year 2		Year 3		TOTAL	
	AID	IEF/Oth	AID	IEF/Oth	AID	IEF/Oth	AID	IEF/Oth
Equipment & Supplies	\$3,600	\$27,380	\$3,250	\$11,560	\$2,900	\$6,880	\$9,750	\$45,820
Personnel	42,056	0	59,923	0	39,378	0	\$141,357	\$0
Technical Services	43,194	0	59,800	0	29,779	0	132,773	0
Travel/Per Deim	15,600	0	22,697	0	13,570	0	51,867	0
Other Direct Costs	7,975	700	8,710	700	7,150	5,700	23,835	7,100
Indirect/G & A	18,659	1,441	25,710	562	16,251	1,782	60,620	3,785
TOTAL	\$131,084	\$29,521	\$180,090	\$12,822	\$109,028	\$14,362	\$420,202	\$56,705

31-Mar-92

HEADQUARTERS BUDGET

GUATEMALA ONCHOCERCIASIS PROGRAM

	Year 1		Year 2		Year 3		Totals		Total
	AID	IEF	AID	IEF	AID	IEF	AID	IEF	
I. PROCUREMENT									
SUPPLIES									
General office	300	200	300	200	300	200	900	600	1,500
Computer software	450	0	450	0	450	0	1,350	0	1,350
SUBTOTAL (PROC.)	750	200	750	200	750	200	2,250	600	2,850
II. EVALUATION									
Admin/Report Costs	100	0	100	0	100	0	300	0	300
SUBTOTAL (EVAL.)	100	0	100	0	100	0	300	0	300
III. INDIRECT COSTS (See G & A Line Item on Next Page)									
IV. OTHER PROGRAM COSTS									
A. PERSONNEL									
TECHNICAL									
ONCHO Coordinator (28%)									
Salary (\$36,000)	10,000	0	10,500	0	11,000	0	31,500	0	31,500
Fringe (25%)	2,500	0	2,625	0	2,750	0	7,875	0	7,875
IEF Pro. Dir.(6%)									
Salary (\$51,000)	3,060	0	3,210	0	3,375	0	9,645	0	9,645
Fringe (25%)	765	0	803	0	844	0	2,411	0	2,411
PROGRAM SUPPORT STAFF									
Admin/Fin Officer(5%)									
Salary (\$40,000)	2,000	0	2,100	0	2,200	0	6,300	0	6,300
Fringe (25%)	500	0	525	0	550	0	1,575	0	1,575
SUBTOTAL (PERS.)	18,825	0	19,763	0	20,719	0	59,306	0	59,306

31-Mar-92

HEADQUARTERS BUDGET

GUATEMALA ONCHOCERIASIS PROGRAM

	Year 1		Year 2		Year 3		Totals		Total
	AID	IEF	AID	IEF	AID	IEF	AID	IEF	
B. TRAVEL COSTS									
International Travel									
ONCHO Coordinator									
2 RT airefare pa	1,300	0	1,350	0	1,400	0	4,050	0	4,050
10 days per diem pa	750	0	800	0	850	0	2,400	0	2,400
IEF Pro. Dir.									
3 RT airfares	600	0	630	0	660	0	1,890	0	1,890
14 days per diem	400	0	400	0	400	0	1,200	0	1,200
USA Travel									
IEF Pro. Dir.									
1 RT airfare pa	275	0	300	0	325	0	900	0	900
2 days per diem pa	200	0	200	0	200	0	600	0	600
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SUBTOTAL (Trav.)	3,525	0	3,680	0	3,835	0	11,040	0	11,040
C. OTHER DIRECT COSTS									
Office Operations									
Telephone	500	500	500	500	500	500	1,500	1,500	3,000
Postage/Courier	200	200	200	200	200	200	600	600	1,200
A-110 Audit Fees	500	0	500	0	500	0	1,500	0	1,500
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Subtotal (Other)	1,200	700	1,200	700	1,200	700	3,600	2,100	5,700
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SUBTOTAL (IV)	23,550	700	24,643	700	25,754	700	73,946	2,100	76,046
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SUBTOTAL I,II,IV	24,400	900	25,493	900	26,604	900	76,496	2,700	79,196
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G&A (24.41%)	5,956	220	6,223	220	6,494	220	18,673	660	19,333
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TOTAL HQ. COSTS	30,356	1,120	31,716	1,120	33,098	1,120	95,169	3,360	98,529

GUATEMALA ONCHOCERCAISIS PROGRAM

COUNTRY BUDGET	Year 1		Year 2		Year 3		Totals		
	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	IEF/ OTHER	TOTAL
I. PROCUREMENT									
A. EQUIPMENT and SUPPLIES									
TECHNICAL									
1. Vehicle (2)	0	4,680	0	9,360	0	4,680	0	18,720	18,720
2. Motorcycles (6)	0	11,500	0	0	0	0	0	11,500	11,500
3. Medical Equipmen	0	2,000	0	500	0	500	0	3,000	3,000
OFFICE EQUIPMENT									
1. Computer	0	2,200	0	0	0	0	0	2,200	2,200
2. Generator	0	700	0	0	0	0	0	700	700
3. Photocopier	0	1,000	0	0	0	0	0	1,000	1,000
4. Printer	0	250	0	0	0	0	0	250	250
5. Volt Reg./UPS	0	400	0	0	0	0	0	400	400
6. Office Furniture	0	1,500	0	0	0	0	0	1,500	1,500
7. FAX	0	500	0	0	0	0	0	500	500
SUPPLIES									
1. General Office	1,600	0	1,700	0	1,800	0	5,100	0	5,100
2. Paper/Printing	250	0	300	0	350	0	900	0	900
3. Train. Materials	500	500	500	500	0	500	1,000	1,500	2,500
4. Medical Supplies	500	1,500	0	1,000	0	1,000	500	3,500	4,000
5. Computer Softwar	0	450	0	0	0	0	0	450	450
B. SERVICES									
University Services:									
Tulane									
Salaries/Fringe	6,237	0	6,540	0	6,859	0	19,636	0	19,636
Travel	650	0	1,275	0	700	0	2,625	0	2,625
Per Diems	1,000	0	1,300	0	1,200	0	3,500	0	3,500
Telephone	500	0	500	0	500	0	1,500	0	1,500
Postage	200	0	200	0	200	0	600	0	600
Gen. & Admin.	4,417	0	5,014	0	4,844	0	14,275	0	14,275
Del Valle									
Salaries/Fringe	18,995	0	29,340	0	9,985	0	58,320	0	58,320
Travel	3,370	0	4,980	0	1,660	0	10,010	0	10,010
Per Diems	1,887	0	2,785	0	812	0	5,484	0	5,484
Supplies	2,000	0	2,000	0	1,000	0	5,000	0	5,000
Gen. & Admin.	3,938	0	5,866	0	2,019	0	11,823	0	11,823
SUBTOTAL I.	46,044	27,180	62,300	11,360	31,929	6,680	140,273	45,220	185,493

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GUATEMALA ONCHOCERCAISIS PROGRAM

COUNTRY BUDGET	Year 1		Year 2		Year 3		Totals		
	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	IEF/ OTHER	TOTAL
II. EVALUATIONS									
Consultants	0	0	0	0	0	0	0	0	0
Travel/Per Diem	0	0	0	0	0	0	0	0	0
Admin/Report Cost	0	0	0	0	0	0	0	0	0
Final Evaluation	0	0	0	0	0	0	0	0	0
SUBTOTAL II.	0	0	0	0	0	0	0	0	0
III. INDIRECT COSTS (See G & A line item)									
IV. OTHER PROGRAM COSTS									
A. PERSONNEL									
1. Proj. Admin.Dir.	1,500	0	2,000	0	2,200	0	5,700	0	5,700
2. Proj. Mgr./IEF	5,950	0	8,400	0	2,450	0	16,800	0	16,800
3. Fld.Coord./SNEM	4,250	0	6,000	0	1,750	0	12,000	0	12,000
4. Fld. Coord./IEF	2,231	0	3,300	0	1,006	0	6,537	0	6,537
5. Motivate Tm(6pr)	5,580	0	12,276	0	6,752	0	24,608	0	24,608
6. Distrib. Tm(4pr)	3,720	0	8,184	0	4,501	0	16,405	0	16,405
SUBTOTAL IV. A.	23,231	0	40,160	0	18,659	0	82,050	0	82,050
B. TRAVEL AND PER DIEM									
1. In-Country									
NCBD per diem	1,050	0	2,100	0	1,150	0	4,300	0	4,300
SNEM per diem	6,525	0	11,917	0	5,395	0	23,837	0	23,837
SNEM travel	2,400	0	3,400	0	990	0	6,790	0	6,790
2. International									
Mgt./Prof. Meetings									
Airfare (5)	1,100	0	600	0	1,200	0	2,900	0	2,900
PerDiems	1,000	0	1,000	0	1,000	0	3,000	0	3,000
Subtotal IV. B.	12,075	0	19,017	0	9,735	0	40,827	0	40,827

GUATEMALA ONCHOCERCAISIS PROGRAM

COUNTRY BUDGET	Year 1		Year 2		Year 3		Totals		
	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	SNEM/IEF NCBD	AID	IEF/ OTHER	TOTAL
C. OTHER DIRECT COSTS									
1. Vehicle Operat.									
Fuel	600	0	1,200	0	600	4,000	2,400	4,000	6,400
Maint./Spares	1,190	0	1,680	0	490	1,000	3,360	1,000	4,360
Ins/Lic/Reg	300	0	300	0	300	0	900	0	900
2. Office Operations									
Telephone	85	0	0	0	0	0	85	0	85
Postage/Courier	600	0	630	0	660	0	1,890	0	1,890
Office rent (X2)	2,400	0	2,600	0	2,800	0	7,800	0	7,800
Freight/Ins.	1,500	0	1,000	0	1,000	0	3,500	0	3,500
Subtotal IV. C.	6,675	0	7,410	0	5,850	5,000	19,935	5,000	24,935
SUBTOTAL IV. A.B.C.	41,981	0	66,587	0	34,244	5,000	142,812	5,000	147,812
SUBTOTAL	88,025	27,180	128,887	11,360	66,173	11,680	283,085	50,220	333,305
G & A (24.41%)	12,703	1,221	19,487	342	9,758	1,562	41,948	3,125	45,073
TOTAL	100,728	28,401	148,374	11,702	75,931	13,242	325,033	53,345	378,378
HEADQUARTERS BUDGET	30,356	1,120	31,716	1,120	33,098	1,120	95,169	3,360	98,529
	131,084	29,521	180,090	12,822	109,029	14,362	420,202	56,705	476,907

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X APPENDICES

- I Letter of Understanding between IEF and Tulane University
- II Mectizan Application
- III Preliminary List of Indicators
- IV Format for Quarterly Reports
- V Format for Annual Reports
- VI Preliminary List of H/MIS Forms

Tulane University Medical Center

School of Public Health and Tropical Medicine
Office of the Dean
1430 Tulane Avenue
New Orleans, Louisiana 70112
(504) 588-5397

March 1, 1991

Mr. Jack Blanks
Director of Programs
International Eye Foundation
7801 Norfolk Avenue
Suite 200
Bethesda, MD 20814

Dear Mr. Blanks,

This letter expresses the intent of Tulane University School of Public Health and Tropical Medicine to collaborate with International Eye Foundation in implementing several USAID-funded ivermectin distribution programs. The likely sites of these programs will be Cameroon, Guatemala, and Zaire. They will be conducted over a 3 year period with a starting date of approximately 7/1/91.

The role of Tulane will be to provide technical assistance and special services as required for the successful implementation of the programs and as mandated by USAID in their Request for Application.

Tulane, as per our mutual understanding, will be remunerated through a subcontract that will be described in detail in the project proposal.

Sincerely,



J.T. Hamrick, M.D., M.P.H.
Acting Dean
Tulane University School of Public Health
and Tropical Medicine

APPLICATION FOR MECTIZAN® — UPDATE

<input checked="" type="checkbox"/>	Continuation Application
<input type="checkbox"/>	Application Amendment
PLEASE CHECK APPROPRIATE BOX	

International Eye Foundation
Applicant Institution

October 31, 1991
Date (Month, Day, Year)

PART A: Applicant Institution

Applicant Institution: International Eye Foundation		
Address: Street: 7801 Norfolk Avenue City: Bethesda, MD 20814 Province/State: Country: U.S.A.		
Telephone Number: (301) 986-1830	Telex:	FAX: (301) 986-1876
Name of person to be contacted about this application: Jack B. Blanks		
Title: Director of Programs		
Telephone Number: same as above	Telex:	FAX: same as above

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PART B: Mectizan® Treatment Program Changes/Additions

1. Will any of the major staff positions (Program Director, Medical Supervisor, or Mectizan® Inventory Controller) be held by people other than those last reported?

Yes No

If "Yes," list the position, name, affiliation, and title for each new person.

Dr. Guillermo Zea-Flores has recently joined the IEF/NCBD staff. He will coordinate Mectizan distribution activities in Suchitepequez, an area adjacent to the Chimaltenango treatment area.

His title is Project Manager - Suchitepequez Mectizan Distribution Project.

All other senior staff remain the same.

- Please include curriculum vitae or résumé for new Program Director or Medical Supervisor, and a copy of the medical practice license or equivalent certification for the Medical Supervisor.

2. Have there been, or are you proposing, changes in the geographic area or population group in which your program will operate?

Yes No

If "Yes," describe the changes. (Include place names, maps, population figures, prevalence estimates, etc. as appropriate.)

This year, the project will be expanded to cover endemic areas in Acatenango Municipality and Suchitepequez Province. These areas are part of the Central Focus and lie around the southwest border of the current target area.

3. Have there been, or are you proposing, changes in the size of the target population for your program?

Yes No

If "Yes," how many people will you plan to treat? $\frac{18,000 \text{ Chimaltenango}}{33,000 \text{ Suchitepequez}}$
Total 51,000

4. Are you proposing changes in program strategy (e.g., how your program will operate, who will/will not be treated, how often treatment will be given)?

Yes No

We will continue to use both mobile and community-based distribution methods.

If "Yes," describe each change.

PART C: Computation of Tablets Needed

5. Compute the number of Mectizan® tablets your program will need during the next 12 months of operation.

- a. Estimate the number of people in each weight category to be *retreated* with Mectizan® (i.e., those who have been treated before) and make the following calculations to determine how many tablets will be needed to treat them during each retreatment cycle:

Patient Weight (Kg)	Number of People	Tablets per Person			Total Number of Tablets
15 - 25	<u>1,950</u>	X	$\frac{1}{2}$	=	<u>975</u>
26 - 44	<u>8,750</u>	X	1	=	<u>8,750</u>
45 - 64	<u>4,000</u>	X	1½	=	<u>6,000</u>
65 or more	<u>300</u>	X	2	=	<u>600</u>
Total number of PEOPLE to be treated in each retreatment cycle:		Total number of TABLETS needed for each retreatment cycle:			<u>16,325</u>
<u>15,000</u>					

The above represents annual treatment of the Yepocapa Municipality: third treatment in 1992.

b. Estimate the number of people in each weight category to receive *initial* treatment during the next 12 months and make the following calculations to determine how many tablets will be needed to treat them during **each** treatment cycle:

Patient Weight (Kg)	Number of People	Tablets per Person			Total Number of Tablets
15 - 25	<u>4,700</u>	X	$\frac{1}{2}$	=	<u>2,350</u>
26 - 44	<u>21,000</u>	X	1	=	<u>21,000</u>
45 - 64	<u>9,600</u>	X	1½	=	<u>14,400</u>
65 or more	<u>700</u>	X	2	=	<u>1,400</u>
Total number of PEOPLE to be treated initially in each cycle:		<u>36,000</u>		Total number of TABLETS needed for initial treatments in each cycle: <u>39,150</u>	

c. Add the total number of tablets needed (from "a" and "b" above).

Total number of tablets needed for EACH cycle: 55,475

d. If you plan to treat people TWICE each year, make the following calculation.¹ (This will give the number of tablets needed during the next 12 months.)

Number of Tablets for Each Cycle	Total Number of Tablets
<u>(19,325 x 1) + (36,150 X 2)*</u>	<u>91,625</u>

* Residents of Chimaltenango Province will be treated annually, with the residents of Acatenango Municipality receiving their initial treatment. Residents of Suchitepequez Province will be treated on a bi-annual basis.

¹ If only one treatment cycle is planned, omit this step.

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MECTIZAN® TREATMENT PROGRAM ANNUAL REPORT

Application Number

REPORTING INSTITUTION

Institution: International Eye Foundation

Country: Guatemala

Program Director: Dr. Fernando Beltranena

TIME PERIOD COVERED BY REPORT

From January 15, 1991 through October 30, 1991
Month, Day, Year Month, Day, Year

POPULATION UNDER TREATMENT

Total number of people in the treatment area: 15,176

Current estimate of onchocerciasis prevalence: 60 %

TREATMENT STRATEGY

Treatment program objective was to treat:

- All persons eligible to receive Mectizan® (community-based mass treatment)
- Only confirmed and suspected cases of onchocerciasis (laboratory and/or clinical evidence of infection)
- Only confirmed cases of onchocerciasis (laboratory evidence of infection)

Treatment was given at intervals of:

- 12 months 6 months

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TREATMENT PROGRAM ACCOMPLISHMENTS DURING THIS REPORTING PERIOD

Total number of people treated: 8,182 + 3000 = 11,100 *

If this total number includes people treated in two cycles, indicate:

Number treated in first cycle: _____

Number treated in second cycle: _____

ADVERSE TREATMENT EXPERIENCES

Total number of people with an adverse experience: 925

Number whose adverse experience was considered serious: 0

Number needing physician care: 0

Number with severe hypotension: 0

Number with other kind of serious problem: 0

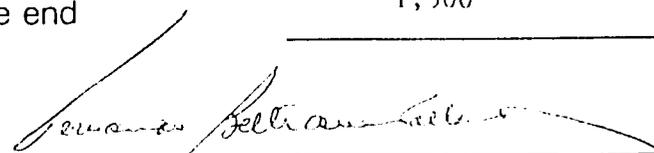
Examples:

MECTIZAN® SUPPLY

Number of tablets available at the start of this reporting period: 10,000

Number of tablets received during this reporting period: 5,000

Number of tablets remaining at the end of this reporting period: 1,500 *



Signature of Program Director

Fernando Beltranena, MD

Name - Please type or print

October 31, 1991

Date (Month, Day, Year)

* The project year includes November 1991. During this month, approximately 3,000 more inhabitants of Yepocapa Town will be treated and are therefore added to the 8,182 already treated by the end of October, resulting in an estimated total of 11,100 people treated. For the same reason, the number of tablets remaining are an estimate.

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TREATMENT PROGRAM ACCOMPLISHMENTS DURING THIS REPORTING PERIOD

Total number of people treated: 8,182 + 3000 = 11,100 *

If this total number includes people treated in two cycles, indicate:

Number treated in first cycle: _____

Number treated in second cycle: _____

ADVERSE TREATMENT EXPERIENCES

Total number of people with an adverse experience: 925

Number whose adverse experience was considered serious: 0

Number needing physician care: 0

Number with severe hypotension: 0

Number with other kind of serious problem: 0

Examples:

MECTIZAN® SUPPLY

Number of tablets available at the start of this reporting period: 10,000

Number of tablets received during this reporting period: 5,000

Number of tablets remaining at the end of this reporting period: 1,500 *

Fernando Beltranena
 Signature of Program Director
 Fernando Beltranena, MD
 Name - Please type or print
 October 31, 1991
 Date (Month, Day, Year)

* The project year includes November 1991. During this month, approximately 3,000 more inhabitants of Yepocapa Town will be treated and are therefore added to the 8,182 already treated by the end of October, resulting in an estimated total of 11,100 people treated. For the same reason, the number of tablets remaining are an estimate.

APPENDIX III, Preliminary List of Indicators

Preliminary List of Indicators:

- # health staff trained
- # of village health workers trained
- % of targeted villages covered by the education campaign
- # of ivermectin tablets distributed
- # of tablets missing or in excess
- # of supervision visits performed
- # monthly reports from the field received
- other cost indicators to be determined with VBC consultants
- total # of persons treated
- population coverage= % of people eligible for treatment who are treated
- village coverage= % of villages targeted for treatment that are treated
- # and % of adverse reactions recorded and treated
- In REAs, microfilarial density/prevalence and nodule prevalence
- In SNSs, age-specific prevalence of nodule prevalence
- In SCs, age/sex standardized microfilarial density and prevalence and nodule rates; evaluation of transmission and morbidity indices.

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1 Abstract of IDP progress report (1/3 page)

3 Inputs realized during the reporting period

3.1 Personnel input (amount and costs)

3.1.1 Personnel financed by PVO (long term and short term)

JDP - "country"		Personnel provided by PVO (long term and short term, salary, indemnities, etc.)																MM total	Remarks	
Position & Name		1991				1992				1993				1994						
		JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND			
1. Staff	planned actual costs																			
2. Staff	planned actual costs																			
3. Staff	planned actual costs																			
Sum of man months per quarter	planned																			
	actual																			
Percent of target																				
Costs per quarter																				

3.1.2 Personnel provided by partner organization

IDP - "country"	Personnel provided by partner organization (salary, indemnities, etc.)																MM total	Remarks																													
Position & Name	1991				1992				1993				1994																																		
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND																															
1. Staff	planned																	actual													costs																
2. Staff	planned																	actual													costs																
3. Staff	planned																actual													costs																	
Sum of man months per quarter	planned																actual																														
Percent of target																																															
Costs per quarter																																															

3.2 Financial input

3.2.1 Major investment by PVO (vehicles, equipment, construction, etc.)

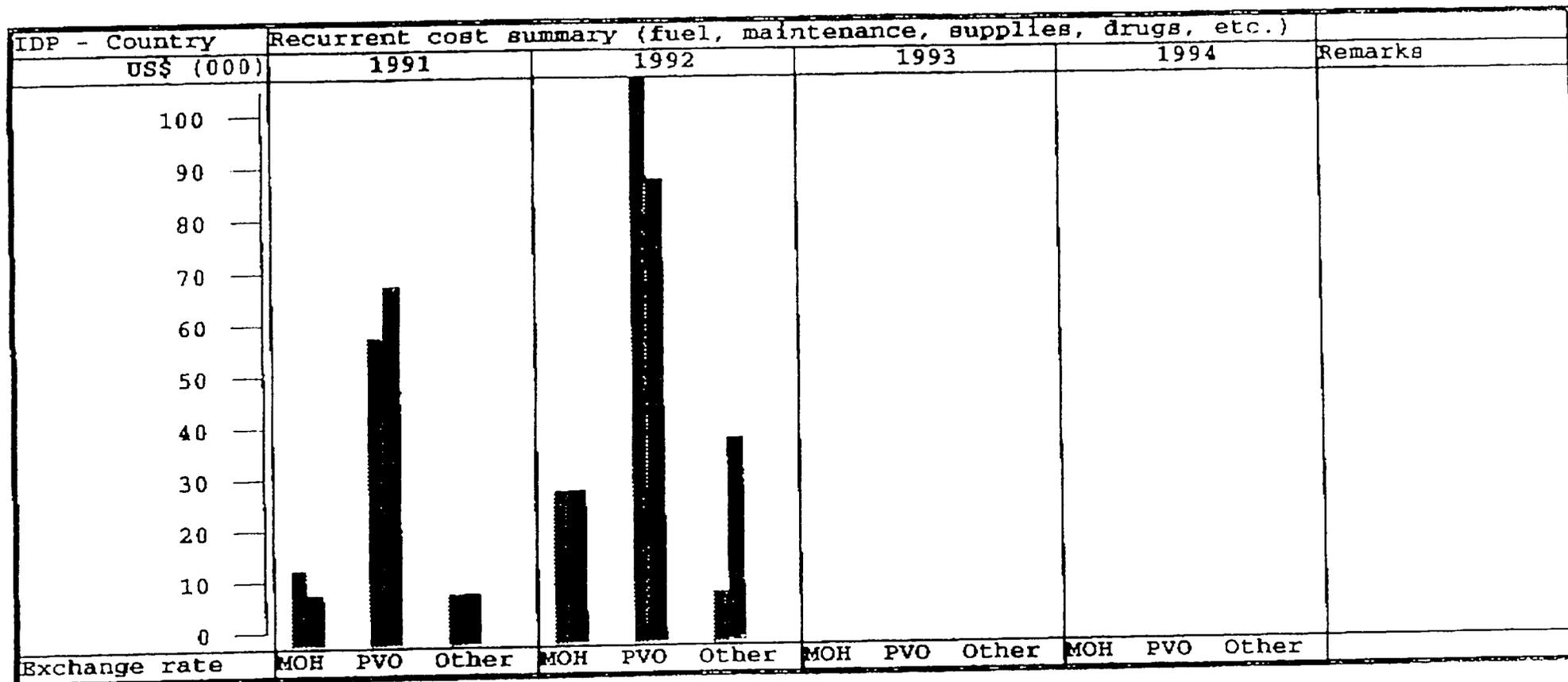
IDP - "country"	Major investment by PVO (vehicles, equipment, construction, etc.): Quantity and Costs																Cost in 000 US\$	Remarks
Description	1991				1992				1993				1994				total	
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		
1.	planned																	
	actual																	
	% actual																	
	costs																	
2.	planned																	
	actual																	
	% actual																	
	costs																	
3.	planned																	
	actual																	
	% actual																	
	costs																	
4.	planned																	
	actual																	
	% actual																	
	costs																	
Sum of costs per quarter	planned																	
	actual																	

3.2.2 Investment by partner organization
(vehicles, equipment, construction, etc.)

IDP - "country"	Major investment by partner organization (vehicles, equipment, construction, etc.): Quantity and Costs																Cost in 000 US\$	Remarks	
Description		1991				1992				1993				1994				total	
		JFM	AMJ	JAS	OND														
1.	planned																		
	actual																		
	% actual																		
	costs																		
2.	planned																		
	actual																		
	% actual																		
	costs																		
3.	planned																		
	actual																		
	% actual																		
	costs																		
4.	planned																		
	actual																		
	% actual																		
	costs																		
Sum of costs per quarter	planned																		
	actual																		

AS

3.2.3 Recurrent cost summary
 (fuel, maintenance, supplies, drugs, etc. by IDP objective)



■ Budgeted
 Expenditure

**3.2.4 Recurrent costs by PVO
(fuel, maintenance, supplies, drugs, etc. by IDP objective)**

Summary table from accounting

**3.2.5 Recurrent costs by partner organization
(fuel, maintenance, supplies, drugs, etc. by IDP objective)**

Summary table from accounting

**3.2.6 Personnel costs by PVO
(travel allowances, etc.)**

Summary by IDP objective only

**3.2.7 Personnel costs by partner organization
(travel allowances, etc.)**

Summary by IDP objective only

4 Description of problems and discussion of solutions

Summary description of outputs during the report period

(following the logical framework above, but more detailed)

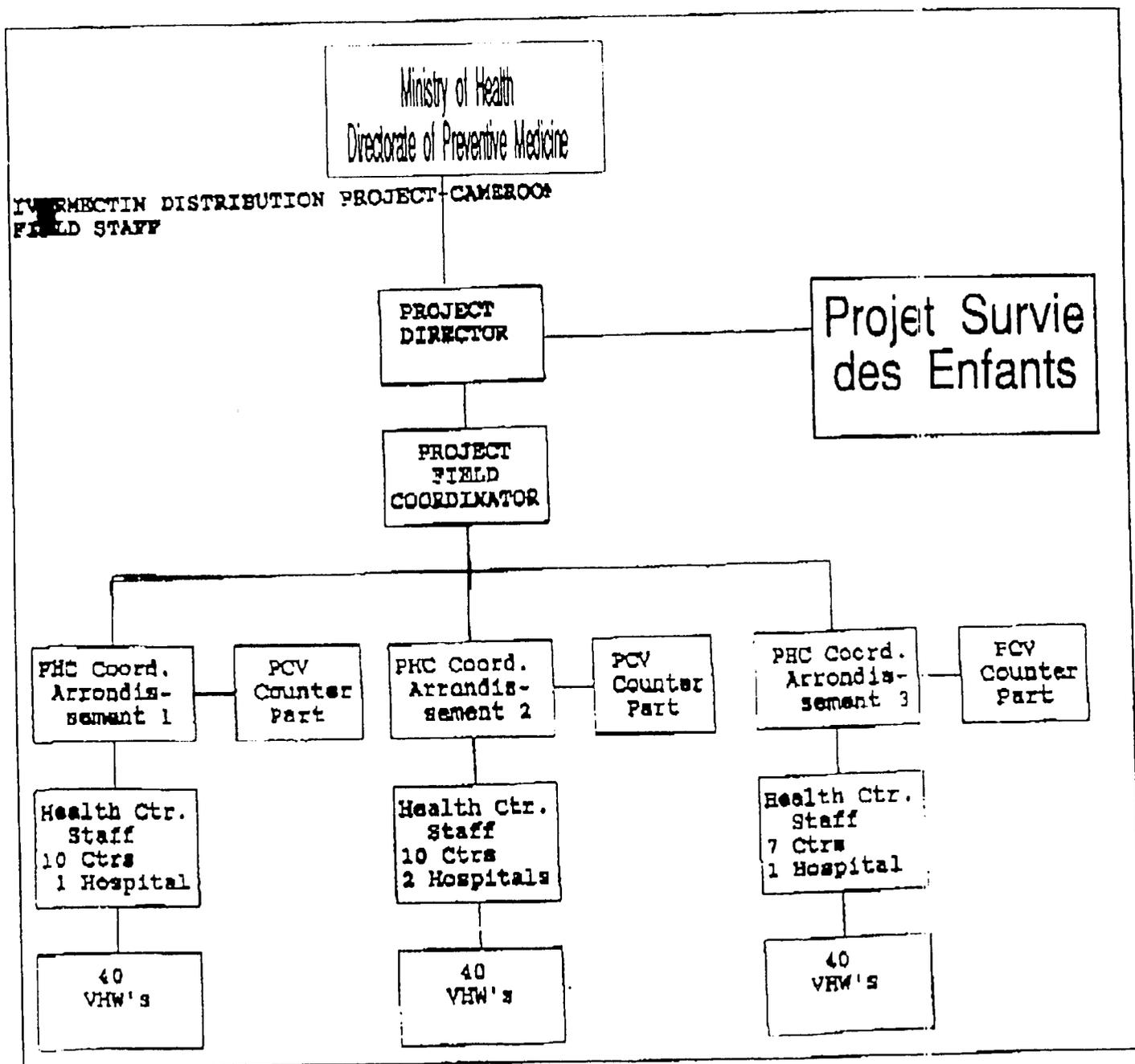
Proposed IDP report format

1. Abstract of IDP progress report (1/3 page)
2. Organization chart indicating the position of the IDP relative to the partner country's health services
3. Inputs realized during the reporting period
4. Description and appraisal of outputs during the report period
5. Realization of project purpose
6. Actualized plan of operations for the following report period
7. Appendix

1 Abstract of IDP progress report (1/3 page)

2 Organization chart indicating the position of the IDP relative to the partner country's health services

A modified IEF chart for IDP Cameroon is shown as an illustrative example only:



3 Inputs realized during the reporting period

3.1 Personnel input (amount and costs)

3.1.1 Personnel financed by PVO (long term and short term)

JDP - "country"	Personnel provided by PVO (long term and short term, salary, indemnities, etc.)																MM total	Remarks		
	Position & Name		1991				1992				1993				1994					
			JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ			JAS	OND
1. Staff	planned																			
	actual																			
2. Staff	planned																			
	actual																			
3. Staff	planned																			
	actual																			
Sum of man months per quarter	planned																			
	actual																			
Percent of target																				
Costs per quarter																				

3.1.2 Personnel provided by partner organization

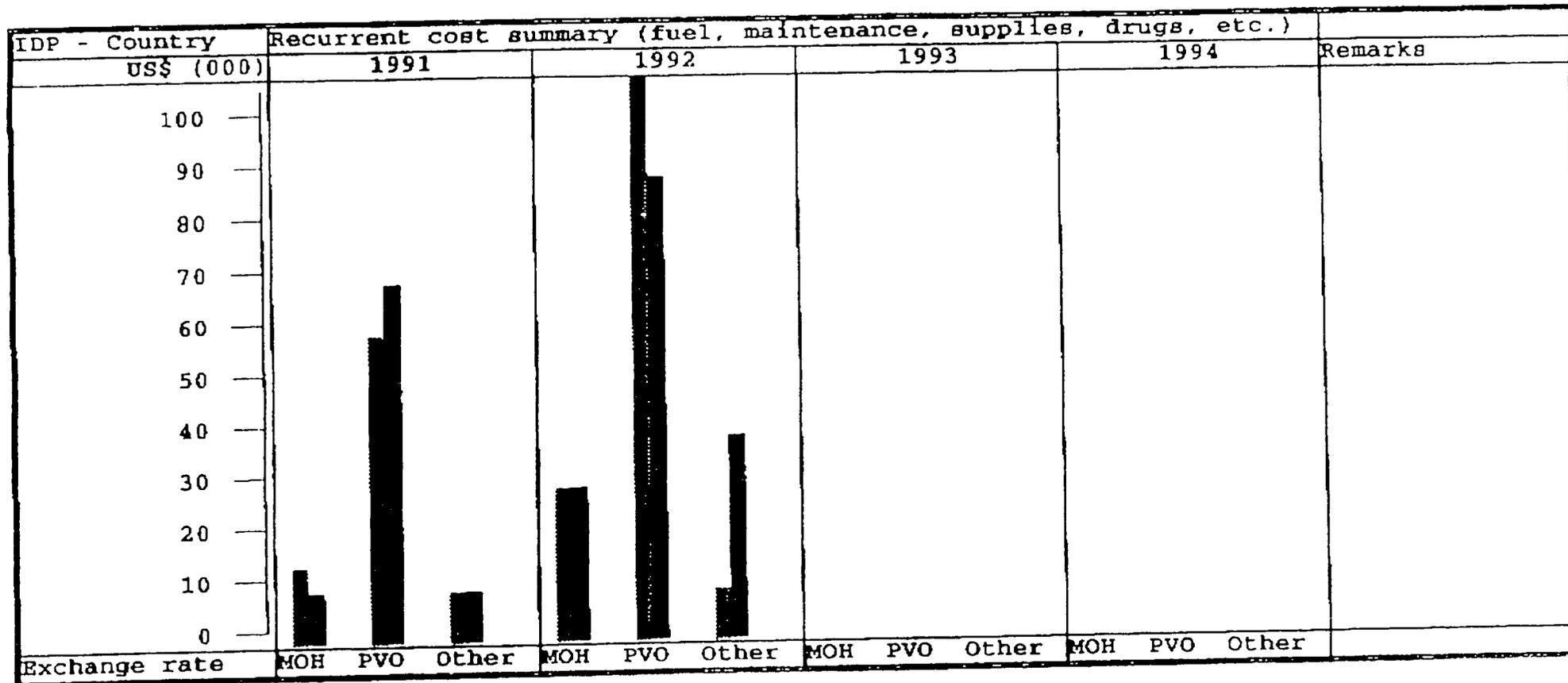
IDP - "country"	Personnel provided by partner organization (salary, indemnities, etc.)																MM total	Remarks	
	1991				1992				1993				1994						
	Position & Name		JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ			JAS
1. Staff	planned																		
	actual costs																		
2. Staff	planned																		
	actual costs																		
3. Staff	planned																		
	actual costs																		
Sum of man months per quarter	planned																		
	actual																		
Percent of target																			
Costs per quarter																			

3.2 Financial input

3.2.1 Major investment by PVO (vehicles, equipment, construction, etc.)

IDP - "country"	Major investment by PVO (vehicles, equipment, construction, etc.): Quantity and Costs																Cost in 000 US\$	Remarks
Description	1991				1992				1993				1994				total	
	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		
1.	planned																	
	actual																	
	% actual																	
	costs																	
2.	planned																	
	actual																	
	% actual																	
	costs																	
3.	planned																	
	actual																	
	% actual																	
	costs																	
4.	planned																	
	actual																	
	% actual																	
	costs																	
Sum of costs per quarter	planned																	
	actual																	

3.2.3 Recurrent cost summary
 (fuel, maintenance, supplies, drugs, etc. by IDP objective)



■ Budgeted Expenditure

**3.2.4 Recurrent costs by PVO
(fuel, maintenance, supplies, drugs, etc. by IDP objective)**

Summary table from accounting

**3.2.5 Recurrent costs by partner organization
(fuel, maintenance, supplies, drugs, etc. by IDP objective)**

Summary table from accounting

**3.2.6 Personnel costs by PVO
(travel allowances, etc.)**

Summary by IDP objective only

**3.2.7 Personnel costs by partner organization
(travel allowances, etc.)**

Summary by IDP objective only

3.3 Training of IDP personnel

IDP - "country"	Training of IDP personnel																MM total	Remarks
	1991				1992				1993				1994					
Course description	1991				1992				1993				1994					
Target group (# participants)	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND	JFM	AMJ	JAS	OND		
1.	planned																	
	actual																	
	costs																	
2.	planned																	
	actual																	
	costs																	
3.	planned																	
	actual																	
	costs																	
Sum per quarter	planned																	
	actual																	
Percent of target																		
Costs per quarter																		

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3.4 Planned partner input financed by PVO instead

3.5 Inputs from third parties not included so far

3.6 Conformity of PVO input with approved project proposal and detailed implementation plan;

Conformity of input from partner organization with project agreement

4 Description of problems and discussion of solutions

Summary description of outputs during the report period

(following the logical framework above, but more detailed)

Description and appraisal of detailed outputs during the report period

Output 1: SURVEYS

1.1 Hyper- and/or mesoendemic communities are identified through appropriate surveys (primary screening, skin snip or rapid appraisal).

4.1 Main activities and indicators per result: (by major region as applicable)

Region A

Indicators Reference in ()	1994 IDP target		Last period Jan-Mar/199_		Report period Apr-Jun/199_		Remarks (referring to report period or a change of target)
	No [^]	%	No [*]	% ^{**}	No [*]	% ^{**}	
IDP Capacity:							
1.1 Partner designed, implemented and evaluated surveys (1)	10	100	0	0	1	100	
1.2 Affordability of surveys, costs as % of total (5)		25		50		50	Transportation was more expensive than planned
<u>Recurrent costs:</u> (in 000 US\$)	200	100					
2.1 Travel costs and allowances (25, 26)	123	100	12	100	15	125	Rented a vehicle
<u>Capital costs:</u> (in 000 US\$)	50	100					
3.1 1 Vehicle (37)	40	100	0	0	0	0	Import license not provided by partner
<u>Personnel/Population</u>							
4.1 # surveyed in 000 (46)	200	100	4	12	10	60	See below
4.2 # surveyors (47)	8	100	2	50	2	50	Personnel not provided by partner
<u>Activities:</u>							
5.1 # primary screening (63)	10	100	1	50	2	50	1 canceled due to bad weather, 1 canceled due to staff illness
5.2 # skin snip (64)	12	100	0	N/A	2	100	
5.3 # rapid assessment (65)	30	100	2	33	4	100	
<u>Performance, QA:</u>							
6.1 Pre test evaluated (98)	3	100	1	100	1	50	
6.2 Protocol followed (99)	52	100	1	100	6	75	Problems w/ 2 rapid assessments
6.3 KAP % awareness (100)		80		60		68	

^{*}) Output realized during period ^{**}) Output realized in percent of output targeted

[^] Total output targeted for IDP project duration

Same table for regions B, C etc.

60

Provide a narrative summary of outputs obtained and difficulties encountered using the following outline (should be really brief, 1-2 pages)

4.2 Description of main activities for this output

4.3 Description of important deviations from target during report period and reasons, major external influences relevant to this result

4.4 Appraisal of the importance of the achieved output related to (only if applicable):

- Overall project purpose
- Institutional capacity, integration, sustainability
- Specific objective (target output)
- Economic development
- Social and cultural integration and acceptance
- Ecological impact
- Women issues

Repeat these steps (4.1 to 4.4) for all other main outputs

5 Realization of project purpose

IDP PURPOSE:

Strengthen the ability of indigenous health institutions to design, implement and manage a cost-effective and sustainable IDP.

- 5.1 Appraisal of the actual project status compared to its purpose

- 5.2 Appraisal whether the project purpose continues to be valid and whether the purpose will be achieved

- 5.3 Appraisal whether the planned PVO/USAID input will allow the IDP to achieve its purpose

- 5.4 Description of necessary changes in project objectives, plan of operations, or detailed project implementation plan to achieve the project purpose

6 Actualized plan of operations for the following report period:

(refer to master plan, highlight changes and main activities and outputs)

- Updated Gantt chart

- Updated resource planning (personnel, finances, equipment, drugs, constructions)

- Changes of activities

- Expected main results

7 Appendix

Attach survey and quality assurance reports or any other detailed description of a major IDP activity, such as training documents or educational material (most of it should be normal activity output and require no additional writing)

HOUSEHOLD IVERMECTIN TREATMENT (Version A)

- Serial Number _____
- 2 Name of CBW _____
- 3 Community Name _____
- 4 Household Number (PHC - ONC) _____
- 5 Name of household head: Enter as the first name in the table on the bottom of this page
- _____ 1990 1991 1992 1993 1994 1995
- 6 Total living in household _____
- 7 Total number absent _____
- 8 How many are pregnant _____
- 9 How many women delivered the past week _____
- 10 How many children are below 5 years _____
- 11 How many people are very sick and weak _____
- 12 How many persons should take the drug _____

No	Name	Sex	Age	1990			1991			1992			1993			1994			1995			Remarks and Reactions
				Dt	Wt	Tx																
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
Total number of doses																						
Multiply doses by																						
Total number of tablets																						

Dt = Date, Wt = Weight, Tx = Dose of ivermectin

Note: Kindly provide any additional information on the back of this form.

Advantage: Simple, entire household listed on a single form, treatment history up to 10 years.
 Requires: Up to date maintenance of an IDP-ID card.
 Provides little information about quality of care.

11

MEETING RECORD

This form can be used to summarize the discussion and main resolutions of: Health Committees, meetings of the local or state onchocerciasis control teams, of the personnel of health facilities, etc. The last section allows a follow up during later meetings to monitor achievements of previous decisions.

- 1 Date of meeting _____
- 2 Meeting of... _____
- 3 Location _____
- 4 Name of chairman _____
- 5 Name of secretary _____
- 6 Name of rapporteur _____
- 7 Number attending the meeting _____

Main topics

Main resolutions and decisions

Signatures

Chairman	Secretary	Rapporteur
----------	-----------	------------

Follow up of resolutions and decisions

Date:

4

SUPERVISORY CHECKLIST (Standard)
(Used by Local Oncho-Control Team)

- 1 Serial Number _____
- 2 Date _____
- 3 Name of supervisor _____
- 4 Name of health worker _____
- 5 Name of community _____
- 6 Ivermectin distribution period covered (dates: from - to) _____

Page 1 similar to Kwara State:

- Collect weighing scale
- Collect remaining Ivermectin tablets and enter the number: _____
- Collect Household Ivermectin Treatment Records
Count the total number of records: _____
- Total the number of Ivermectin tablets on each household record: _____
- Collect the Reaction Forms.
Count the total number of reaction forms: _____
Count the number of persons with **SERIOUS** reactions: _____

Evaluate a random sample of 10 people with a mild reaction --> complete Form 15:
Follow up each case of serious reaction --> complete Form 15:

Remember: Discuss shortcomings with the CBW help her/him to improve, be supportive not punitive.

- Pick at random 10 Household Treatment Records. Ask the CBW to help you find the household that correspond to each of these 10 records. Visit the 10 households and use Form Number 16 AND 17 to interview the residents --> complete Form 16 AND 17:

Remember: Discuss shortcomings with the CBW help her/him to improve, be supportive not punitive.

- According to the evaluation above, is the CBW's performance satisfactory and should s/he receive an incentive? Yes No
If YES, how much allowance should the CBW be paid: _____
Tell the CBW how to collect the allowance.

15

FOLLOW UP OF MILD AND SERIOUS REACTIONS (Select a Sample from Form 8)
(Part of standard supervisory checklist)

Name of Reviewer
Date of Review
Name and Function of Health Worker

When to judge the handling of a reaction as **INAPPROPRIATE**:

- a) When the reaction is **SERIOUS** and a nurse is **NOT CALLED** immediately
- b) When the reaction is **MILD** or **SERIOUS** and treatment was **NOT STARTED**
- c) When the response to **ASK** questions or **TREATMENT** or **DOSE** or **NUMBER OF TABLETS** is **NO**
- d) When the response to **POLYPHARMACY** or **MALARIA** or **CHILDREN** is **YES**

1 Date and Serial Number or Name of patient

Was the reaction mild or serious?	<input type="checkbox"/> Serious	<input checked="" type="checkbox"/> Mild
Was a nurse CALLED immediately?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did a nurse COME immediately?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the health worker ASK the three questions and mark Yes or No ?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the CBW START treatment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the TREATMENT appropriate (see protocol)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the DOSE appropriate?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the total NUMBER OF TABLETS given correct?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the health worker use POLYPHARMACY ?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Was MALARIA under-treated?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Were doses for CHILDREN too high?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<u>COUNT</u> total in each column	_____	_____

2 Date and Serial Number or Name of patient

Was the reaction mild or serious?	<input type="checkbox"/> Serious	<input checked="" type="checkbox"/> Mild
Was a nurse CALLED immediately?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did a nurse COME immediately?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the health worker ASK the three questions and mark Yes or No ?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the CBW START treatment?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the TREATMENT appropriate (see protocol)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the DOSE appropriate?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Was the total NUMBER OF TABLETS given correct?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Did the health worker use POLYPHARMACY ?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Was MALARIA under-treated?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
Were doses for CHILDREN too high?	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes
<u>COUNT</u> total in each column	_____	_____

ount the total number of reactions evaluated:
ount the reactions NOT dealt with appropriately:

1/2

HOUSEHOLD SAMPLE TREATMENT CHECKLIST (Select a Sample from Form 3)

(Part of standard supervisory checklist)

Name of Reviewer
Date of Review
Name and Function of Health Worker

1 Date and Serial Number of household
READ all names on the Household Ivermectin Treatment Record:
Do all people listed on the household record **live here**? Yes No
Is the **AGE** for everybody about the same as on the form? Yes No
Was everybody **excluded** from treatment rightfully so? Yes No
Did everybody **treated** fulfill the conditions for treatment? Yes No
Did everybody treated receive the **correct amount** of tablets? Yes No
Were all **ID cards** updated correctly? Yes No
Was everybody registered as a **NEW** case truly so? Yes No
Was everybody registered as an **OLD** case truly so? Yes No
Were **previous treatments** recorded correctly for everybody? Yes No
COUNT total "Yes" and total "No"

2 Date and Serial Number of household
READ all names on the Household Ivermectin Treatment Record:
Do all people listed on the household record **live here**? Yes No
Is the **AGE** for everybody about the same as on the form? Yes No
Was everybody **excluded** from treatment rightfully so? Yes No
Did everybody **treated** fulfill the conditions for treatment? Yes No
Did everybody treated receive the **correct amount** of tablets? Yes No
Were all **ID cards** updated correctly? Yes No
Was everybody registered as a **NEW** case truly so? Yes No
Was everybody registered as an **OLD** case truly so? Yes No
Were **previous treatments** recorded correctly for everybody? Yes No
COUNT total "Yes" and total "No"

3 Date and Serial Number of household
READ all names on the Household Ivermectin Treatment Record:
Do all people listed on the household record **live here**? Yes No
Is the **AGE** for everybody about the same as on the form? Yes No
Was everybody **excluded** from treatment rightfully so? Yes No
Did everybody **treated** fulfill the conditions for treatment? Yes No
Did everybody treated receive the **correct amount** of tablets? Yes No
Were all **ID cards** updated correctly? Yes No
Was everybody registered as a **NEW** case truly so? Yes No
Was everybody registered as an **OLD** case truly so? Yes No
Were **previous treatments** recorded correctly for everybody? Yes No
COUNT total "Yes" and total "No"

Count the total number of households evaluated:
Count the number of households where not all points were marked with "YES":

HOUSEHOLD SAMPLE KAP-ASSESSMENT (Select a Sample from Form 3)

(Part of standard supervisory checklist)

Name of Reviewer
Date of Review
Name and Function of Health Worker

1 Date and Serial Number of household

ASK in each household the following questions and indicate whether the answers are RIGHT or WRONG:

- "Which DISEASE will this new medicine treat?" Wrong Right
 - "Who SHOULD TAKE the drug, who should not take it?" Wrong Right
 - "When should you TAKE the drug AGAIN?" Wrong Right
 - "What should be done if somebody becomes ILL after taking the drug?" Wrong Right
 - "What CAUSES river blindness?" Wrong Right
 - "When did you take (swallow) the drug, AFTER the health worker left?" Yes No
 - "How much did you PAY for the new drug?" Were people asked to pay: Yes No
 - "Is there anyone who is NOT SATISFIED by the work of the HHD?" Yes No
 - "Is there anyone here who will NOT take the drug the NEXT TIME?" Yes No
- COUNT total "Wrong" & "Yes" and total "Right" & "No"

2 Date and Serial Number of household

ASK in each household the following questions and indicate whether the answers are RIGHT or WRONG:

- "Which DISEASE will this new medicine treat?" Wrong Right
 - "Who SHOULD TAKE the drug, who should not take it?" Wrong Right
 - "When should you TAKE the drug AGAIN?" Wrong Right
 - "What should be done if somebody becomes ILL after taking the drug?" Wrong Right
 - "What CAUSES river blindness?" Wrong Right
 - "When did you take (swallow) the drug, AFTER the health worker left?" Yes No
 - "How much did you PAY for the new drug?" Were people asked to pay: Yes No
 - "Is there anyone who is NOT SATISFIED by the work of the HHD?" Yes No
 - "Is there anyone here who will NOT take the drug the NEXT TIME?" Yes No
- COUNT total "Wrong" & "Yes" and total "Right" & "No"

3 Date and Serial Number of household

ASK in each household the following questions and indicate whether the answers are RIGHT or WRONG:

- "Which DISEASE will this new medicine treat?" Wrong Right
 - "Who SHOULD TAKE the drug, who should not take it?" Wrong Right
 - "When should you TAKE the drug AGAIN?" Wrong Right
 - "What should be done if somebody becomes ILL after taking the drug?" Wrong Right
 - "What CAUSES river blindness?" Wrong Right
 - "When did you take (swallow) the drug, AFTER the health worker left?" Yes No
 - "How much did you PAY for the new drug?" Were people asked to pay: Yes No
 - "Is there anyone who is NOT SATISFIED by the work of the HHD?" Yes No
 - "Is there anyone here who will NOT take the drug the NEXT TIME?" Yes No
- COUNT total "Wrong" & "Yes" and total "Right" & "No"

Count the total number of households evaluated:
Count the number where not all points were marked "NO" or "RIGHT":

HEALTH WORKER KAP-ASSESSMENT

(Part of standard supervisory checklist)

- 0.1 Serial Number _____
- 0.2 Date _____
- 0.3 Name of supervisor _____
- 0.4 Name of health worker _____
- 0.5 Qualification: CBW, technician, nurse, etc. _____

- 1 "What **CAUSES** river blindness?" Wrong Right
- 2 "What is the **MAIN CONSEQUENCE** of an infection with oncho?" Wrong Right
- 3 "What are other **SYMPTOMS** of onchocerciasis?" Wrong Right
- 4 "Which **DRUGS** are used to treat onchocerciasis?" Wrong Right
- 5 "Who **SHOULD TAKE** Ivermectin, who should not take it?" Wrong Right
- 6 "How **OFTEN** should people take Ivermectin?" Wrong Right
- 7 "How much should people **PAY** for Ivermectin treatment?" Wrong Right
- 8 "Can **IVERMECTIN** cure onchocerciasis?" Wrong Right
- 9 "What is the dose of Ivermectin for a **CHILD**, for an **ADULT**?" Wrong Right
- 10 "What are possible **SIDE EFFECTS** of Ivermectin?" Wrong Right
- 11 "Are **reactions** after Ivermectin common?" Wrong Right
- 12 "What are the **THREE criteria** for a serious reaction?" Wrong Right
- 13 "What should you do in case of a **MILD reaction**?" Wrong Right
- 14 "What should you do in case of a **SERIOUS reaction**?" Wrong Right
- 15 "When should a person take (**SWALLOW**) the drug?" Wrong Right
- 16 "**WHERE** do people get the drug?" (only at home, any time) Wrong Right
- 17 "What should you do at the **END of each WORK DAY**?" Wrong Right
- 18 "Which **RECORDS and FORMS** do you maintain?" Wrong Right
- 19 "Which **INDICATORS** measure the success of your work?" Wrong Right

- 20 **Count the number of questions marked "NO" or "RIGHT":** _____
- 21 The total number of questions is: _____ **? 19**
- 22 Percent of correct answers (Divide line 20 by line 21, * 100) _____

- 23 "Was your **EXPERIENCE** considered during your training?" Yes No
- 24 "Was **YOUR OPINION** welcomed when planning the distribution?" Yes No
- 25 "Did you contribute when **STANDARDS** for good work were set?" Yes No
- 26 "Are you **SATISFIED** with the support by OCT?" (specify team) Yes No

STAFF SCHEDULE

1 Serial Number _____
 2 Period covered: Dates From - To _____
 3 Office _____

Name	Dates: From - To	Total days	Destination	Purpose	Driver	Vehicle
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

PERSONNEL REPORT
(Up-date annually)

1 Serial Number

2 Date

3 Period covered by this report (Month/Year: from - to)

4 Name of health worker

5 Qualification: CBW, technician, nurse, etc.

6 Place of work

7 Employer (Government, PVO, other)

8 Name of supervisor

9 Started work for the program

10 Stopped work for the program

YEAR

11 Training by the program (Dates: from - to)

12 Scores in pre-test

13 Scores in post-test

14 Work performance during the year
(compare to job description: not satisfactory, good, excellent)

15 Average monthly net salary including benefits

YEAR

16 Training by the program (Dates: from - to)

17 Scores in pre-test

18 Scores in post-test

19 Work performance during the year
(compare to job description: not satisfactory, good, excellent)

20 Average monthly net salary including benefits

YEAR

21 Training by the program (Dates: from - to)

22 Scores in pre-test

23 Scores in post-test

24 Work performance during the year
(compare to job description: not satisfactory, good, excellent)

25 Average monthly net salary including benefits

YEAR

26 Training by the program (Dates: from - to)

27 Scores in pre-test

28 Scores in post-test

29 Work performance during the year
(compare to job description: not satisfactory, good, excellent)

30 Average monthly net salary including benefits

YEAR

31 Training by the program (Dates: from - to)

32 Scores in pre-test

33 Scores in post-test

34 Work performance during the year
(compare to job description: not satisfactory, good, excellent)

35 Average monthly net salary including benefits