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PROGRAMMING GUIDE FOR GUINEA WORM ERADICATION

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In all respects, the guide has been a collaborative effort. Two people were the principal collaborators in planning the Guinea Worm Eradication Program (GWEP) and designing the guide for it: Jaime Henriquez, Water/Sanitation (W/S) Specialist for OTAPS, and Craig Hafner, Deputy Director for WASH. The knowledge and support of Dr. Don Hopkins, Senior Consultant to Global 2000 and an internationally recognized leader in the campaign to eradicate Guinea Worm, was especially helpful. Additional assistance came from Dr. Ernesto Ruiz, CDC; James Sherry, UNICEF; Dr. Dennis Long, A.I.D.'s Science and Technology (S&T) Bureau/Health Office; Dr. Robert Lenox, A.I.D.'s Vector Biology Control (VBC) Project; Margaret McLaughlin and Scott Smith, Peace Corps' Africa Region; and Jim Ekstrom, OTAPS' Programming and Training Officer. Paul Olson, Lynn Utall, and Tom Leonheart were reviewers.

* David died on May 10, 1990, after a long illness prior to the final editing.

ACRONYMS

A.I.D.	United States Agency for International Development
APCD	Associate Peace Corps Director
CD	Community development
CDC	Centers for Disease Control
ESA	External support agency
GWE	Guinea worm eradication
GWEP	Guinea Worm Eradication Program
HCG	Host Country Government
HCN	Host Country National
HE	Health education
ICE	Information Collection and Exchange (Peace Corps)
IPBS	Integrated Program and Budget System
IST	In-service training
MOH	Ministry of Health
NGO	Non-governmental organization
OTAPS	Office of Training and Program Support (Peace Corps)
PASA	Participating Agency Services Agreement
PATS	Programming and Training System (Peace Corps)
PC	Peace Corps
PCV	Peace Corps Volunteer
PHC	Primary health care

PST	Pre-service training
PTO	Programming and Training Officer
PVO	Private voluntary organization
SPA	Small Projects Assistance
S&T/H	Bureau for Science and Technology, Office of Health (A.I.D.)
TA	Task analysis
TOT	Training-of-trainers workshop
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
VAD	Volunteer assignment description
VBC	Vector Biology and Control Project
WASH	Water and Sanitation for Health Project
WHO	World Health Organization
WID	Women in development
W/S	Water/Sanitation Sector (Peace Corps)
WS&S	Water supply and sanitation

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EXECUTIVE SUMMARY

Guinea worm, or *dracunculiasis*, is a parasite that affects 10 million people a year in Africa and Asia. One hundred and twenty million people are at risk of infection in the 19 African countries in which it is endemic. Guinea worm rarely kills, but it cripples its victims so severely that they cannot harvest their crops, take care of their children, or attend school. The World Health Organization (WHO) has set a goal of eradicating Guinea worm by 1995. The life cycle of the disease can be broken through simple behavioral changes and improvements in the community's water supply. All that is needed are the change agents to bring information to rural populations and help them take community action. Peace Corps Volunteers (PCVs), now working in 13 countries in Africa where the disease is endemic, can be among these change agents, along with government workers, international advisors, and community volunteers whose combined efforts can make the difference.

To enable Peace Corps to participate in what has become an international campaign, A.I.D. is providing over half a million dollars for a three-year Guinea Worm Eradication Program (GWEP) through a Participating Agency Services Agreement (PASA). Peace Corps' Office of Training and Program Support (OTAPS) is administering the program.

A primary goal of the GWEP is to provide programming and training assistance to help Peace Corps country staff and counterparts plan and support the assignment of PCVs to Guinea worm eradication activities. This guide is intended to help with the planning of these activities. Designed and produced collaboratively, it describes a variety of possible assignments that would enrich any Volunteer's two-year experience and enable PCVs to make a real difference in the lives of their host communities.

The guide contains background information on the causes and effects of Guinea worm, the assistance available through the GWEP, and the common interventions recommended by WHO, the Centers for Disease Control (CDC), UNICEF, and A.I.D. It provides recommendations for a wide variety of PCV assignments, from full-time jobs, to add-ons to existing jobs, to secondary activities. It also suggests roles and responsibilities for Peace Corps staff to coordinate and promote Volunteer involvement in Guinea worm eradication efforts as part of a national program. A list of reference materials is included in Appendix E, Annotated Bibliography.

In addition to the material in the guide, three training manuals have been developed by the GWEP. One provides orientation for Volunteers working in endemic countries; another is designed for secondary school teachers with specific guidance on interventions they can promote through their jobs. A third manual provides technical guidance on the range of activities in a Guinea worm eradication program. The Guinea worm eradication newsletter also serves as a forum for exchange of experiences, materials, and comments on efforts among Volunteers in countries working on eradication of Guinea worm disease.

The material presented, however, is not intended for Peace Corps alone. Other community workers beside PCVs may want to pursue the types of activities suggested for Volunteers. The interventions reviewed, which form the basis for the suggested PCV assignments, are the accepted interventions that are being built into national action plans throughout Africa. These include *active surveillance*, i.e., a village-to-village national search of the number of Guinea worm cases; measures to improve existing water supplies; more elaborate water supply and sanitation (WS&S) projects; case management; and—at the heart of all these interventions—community education and action. **Guinea worm can be eradicated only through an intensive community effort. The people at risk have the primary responsibility for taking the personal and community actions that have proved effective.** Togo's example described in Appendix A shows how one country is successfully implementing a community education and action program, a model that other countries can use as a guide.

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Chapter 1

INTRODUCTION OF THE GUINEA WORM ERADICATION PROGRAM

1.1 What Is Guinea Worm Disease?

Guinea worm disease has been referred to as *the forgotten disease of a forgotten people*. It has been a scourge for the poorest of the poor for centuries. Evidence of Guinea worm has been found in Egyptian mummies, and it is thought to have been the *fiery serpent* that the Bible said plagued the Israelites on the shores of the Red Sea. Lack of understanding of its preventable causes has shrouded it in myth; poor people have accepted it as God's will or punishment, another horrible fact of life like high infant mortality or the vagaries of the rains.

Guinea worm is endemic to rural areas in 19 African countries and parts of India, Pakistan, and the Middle East. Ten million cases are estimated to occur annually, and approximately 120 million people—largely poor peasants—are at risk.

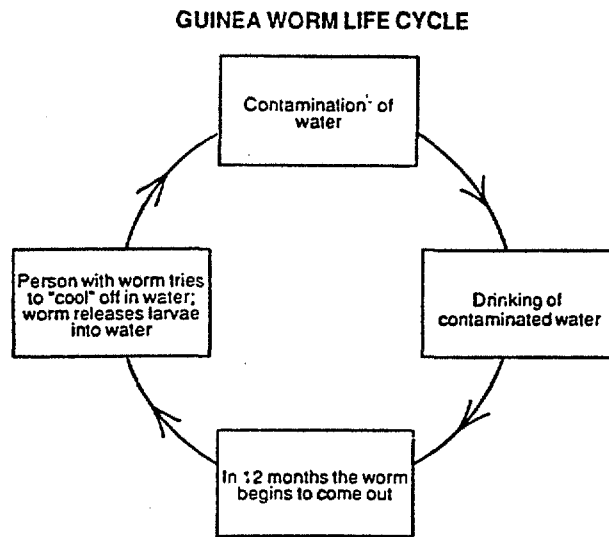
People become infected with the disease by drinking water containing certain fresh-water copepods (water fleas) that carry the infective, third-stage larvae of the nematode parasite, *dracunculus medinensia*. Once ingested, the larvae penetrate the small intestine and develop into male and female worms inside the victim's body. After three months, the worms mate, at which time, the male dies and the female worm continues to grow.

After an incubation period of up to 12 months, the adult female worm moves to a position under the victim's skin. A painful blister appears, usually on the lower leg or foot, but potentially anywhere on the body. The skin over the blister sloughs off, exposing the anterior end of the worm. The worms do not survive in people for more than one year: They either come out through the skin or they die inside the body.

In a short period of time, many worms may begin to emerge from the body of a heavily infested individual. Usually, the worms are very thin, but they may be up to a meter long. The sores where the worms are emerging often become infected or produce painful abscesses, even potentially lethal tetanus. The victim's joints may become frozen or arthritis may develop; the victim could become permanently crippled.

To gain some relief from the pain, the infected individual will put the sore arm or leg into a nearby pond or spring. As the person does so, the blisters break and hundreds of thousands of tiny first-stage larvae are released into the water. If the right type of copepods are present in the water, when people drink it, those individuals can become infected and the cycle starts again. The diagram below illustrates the process. No matter how often

people are infected, they do not develop immunity to the parasite, nor does any drug exist to cure the disease.



1.2 Why the Need for Guinea Worm Eradication?

Guinea worm's crippling effects usually occur during the peak agricultural season, reducing the workforce when it is most needed. The impact on agricultural productivity can be disastrous. World Bank estimates of agricultural losses have reached as high as \$3 billion annually. A WASH study of 100 villages (50,000 people) in Burkina Faso estimated agricultural losses in excess of \$216,000; a UNICEF-funded study in 1987 of a rice-growing area of Nigeria (population, 1.6 million) estimated annual losses in profits from rice production of over \$20 million.

More important than economics is the effect of the disease on people's lives. A WASH study of two areas of Nigeria, for example, found that because of the disease, women were unable to care normally for themselves, their children, or their households or do other work that would add income to the family. The study of one of these two areas indicated that more than half the children who failed to appear for immunizations did so because their mothers were too ill with the disease to leave home and bring them to the clinic.

Children suffering from the disease miss school, and the effects of their repeated absences show up in their performance. A study of absenteeism among school children in Nigeria, for example, found that in areas in the southwest where the disease is endemic, the rate of absenteeism was 25 percent versus 2.5 percent for the country as a whole. Other studies of Nigerian school children attributed 60 percent of their absenteeism to Guinea worm disease.

1.3 An International Effort

The tragedy is not that Guinea worm exists, but that poor people affected by it have not been informed how easily they can break the cycle and free themselves from the disease. Educating them to do so is one of the goals of the Guinea Worm Eradication Program (GWEP).

During the past decade, individual countries and international organizations have taken steps to deal with the Guinea worm problem. A chronology outlining some of these actions is cited below¹:

GWE IN THE '80's: A CHRONOLOGY

1981:

UN targets Guinea worm eradication as a goal of the decade.

India begins a five-year program to eliminate the disease.

1982:

June 16-19—U.S. Academy of Sciences, with the support of A.I.D. and WHO, sponsors the first international conference focusing on the Guinea worm problem.

1983:

Benin, Ivory Coast, and Togo request assistance from WHO's African Regional Office to develop national plans for the control and eradication of Guinea worm.

UNICEF/Nigeria requests assistance from CDC in evaluating the effects of its drinking-water projects on reducing Guinea worm disease.

1984:

U.S. Public Health Service designates CDC as the agency officially responsible for collaborating with WHO on providing information, research, and training for agencies and organizations concerned with Guinea worm eradication.

¹ Compiled from "Guinea Worm Wrap-up," Centers for Disease Control.

Niger's Ministry of Health requests WHO and A.I.D.'s assistance to develop a national plan of action against Guinea worm.

African nations issue the Nairobi Declaration, calling attention to the crippling effects of *dracunculiasis*, a preventable disease, infecting 15 million people in Africa.

1985:

WHO, UNICEF, and Nigeria's Ministry of Health sponsor the First National Conference on *dracunculiasis*, attended by 250 people, including consultants from the United States and Great Britain to strengthen efforts at the federal, state, and local government levels to control the disease.

India reports that the State of Tamil Nadu is now *dracunculiasis*-free, as a result of the government's GWE program.

Peace Corps trains Water and Sanitation and Health Education Volunteers, ten in Benin and ten in Togo, to work on Guinea worm eradication.

WASH issues a bulletin, distributed to Peace Corps countries in Africa, on measures that can be taken against *dracunculiasis*.

Burkina Faso's Ministry of Public Health establishes a National Commission for the Control of *dracunculiasis*, setting forth plans of action.

Following up the National Conference, the Nigerian government sets up zones to facilitate data collection on the incidence of *dracunculiasis*.

Peace Corps/Togo collaborates with Ministries of Public Health and Education to implement an educational program on Guinea worm for school children living in areas where the disease is endemic.

1986:

July 1-3—WHO, A.I.D., the Carnegie Corporation, and USA for Africa sponsor the First African Regional Workshop on *dracunculiasis*, in Niamey, Niger, attended by representatives from 19 African countries, to review the problem, the solutions, and the research required.

A CDC consultant, supported by A.I.D., assists the government of Cameroon prepare a plan of action to deal with the country's Guinea worm problem.

Ivory Coast reports a reduction of Guinea worm cases from 67,123 in 1966 to 592, as a result of the government's program to educate the public and keep water supplies clean.

India reports its GWE program reduced the disease by 25 percent in one year.

Peace Corps and UNICEF collaborate on a health education program to assist the Government of Togo in its efforts to eradicate *dracunculiasis* in areas of the country affected by the disease.

Former President Jimmy Carter visits Pakistan and wins the endorsement of Pakistan's president and vice president for a country-wide GWE program, assisted by the Carter Center's Global 2000.

WHO's Regional Office for Africa adopts a resolution calling for the assistance of donor agencies and voluntary organizations to make it possible for all nations affected to initiate plans of action for eliminating *dracunculiasis* and improving surveillance and reporting of the disease.

1987:

Select Committee on Hunger of the U.S. House of Representatives holds hearings on the problem of *dracunculiasis*.

Global 2000 and the government of Ghana collaborate on a program to eliminate the country's Guinea worm problem.

The British-based NGO, IMPACT, initiates a three-year GWE program in Mali, supported by WHO and UNDP.

The Government of Japan provides a \$5.5 million grant-in-aid to Nigeria to construct borehole wells as part of the country's effort to eradicate Guinea worm.

A.I.D.'s WASH and Vector Biology and Control Projects establish an information center on Guinea worm disease.

Consultants from CDC and the Commonwealth International Institute for Parasitology visit Nigeria to train government staff in the State of Anambara on chemically treating water with temephos to help eradicate Guinea worm disease.

1988:

March 14-18—WHO, A.I.D., and Global 2000 sponsor the Second Regional Workshop on *dracunculiasis* in Africa, in Accra, Ghana, to review progress since the last workshop and mobilize public and international support for GWE projects.

UNDP and WHO announce that each has allocated \$50,000 in its annual budget for GWE activities in Africa.

UNICEF/Ghana announces it is providing \$50,000 to assist the country's GWE program.

Peace Corps, A.I.D., and UNICEF collaborate with national authorities in Ghana on a rural water supply project, which has the elimination of Guinea worm as one of its major objectives.

Peace Corps assigns a Volunteer in Ghana to work full-time on the country's GWE program.

London's Band Aid Foundation announces a three-year grant of \$120,000 to the Government of Burkina Faso to support Guinea worm eradication projects.

Rotary Foundation announces a three-year grant of \$300,000 to the Government of Nigeria for its GWE program, specifically to help the Ministry of Health build water catchment reservoirs in schools and other facilities in the country's Anambara region.

Peace Corps announces a PASA with A.I.D. to concentrate on Guinea worm eradication, making it possible for as many as 10 Volunteers working in countries where the disease is endemic to be assigned to GWE projects.

Sixteen members of the U.S. Congress send a letter to the A.I.D. Administrator, urging the agency's more active support of Guinea worm eradication efforts.

Benin adopts a national plan of action to eliminate *dracunculiasis* at its First National Conference on Guinea Worm, sponsored by WHO, UNICEF, and A.I.D..

1989:

UNDP pledges an additional \$249,000 to funds already earmarked for the fiscal year to help countries affected in their struggle against Guinea worm disease.

April 2-4—WHO's First Regional Conference on Guinea Worm Eradication in the Eastern Mediterranean Region, meeting in Pakistan, reports that because of WHO efforts, only two countries in the region—Pakistan and Sudan—remain affected by the disease.

Nigeria's Second National Conference on *dracunculiasis* announces a policy of giving priority to villages plagued by Guinea worm disease in determining sites for water supply projects.

UNICEF allocates \$1.55 million to finance country studies and supporting services for two years.

WHO's 42nd World Health Assembly declares the goal of eliminating *dracunculiasis* as a public health problem from the world during the 1990s and endorses a strategy for realizing this goal.

July 30-31—Global 2000 and the Bank of Credit and Commerce International (BCCI), in association with UNICEF and UNDP, sponsor an International Donors Conference, in Lagos, Nigeria, attended by 250 people, including representatives from African countries, which focuses on "Target 1990: Global Eradication of Guinea Worm," and produces announced support totaling \$9.6 million, including \$1 million from the Government of Nigeria for its own GWE program.

International Christian Chamber of Commerce donates 1,500 cloth filters to Ghana for the government to use in households at risk from Guinea worm.

Peace Corps assigns a second Volunteer in Ghana to work full-time in the country's GWE program.

Uganda initiates a national GWE program, with the assistance of Global 2000 and BCCI.

"Guinea Worm: The Fiery Serpent," a documentary sponsored by UNDP, UNICEF, Global 2000, and CDC, and filmed on location in Nigeria's Anambara State, receives the Silver Screen Award at the Film and Video Festival in Chicago.

A milestone was reached when the World Health Assembly in 1986 and again in 1989 passed resolutions on the "Elimination of *dracunculiasis*," setting global eradication by 1995 as the ultimate goal. It was only the third time in its history that the World Health Organization had slated a disease for eradication.

1.4 Peace Corps' Participation

To enable the Peace Corps to join in this international effort, A.I.D. is providing over half a million dollars for a three-year Guinea Worm Eradication Program through a Participating Agency Services Agreement (PASA). The Office of Training and Program Support (OTAPS) is administering the program. Currently, Peace Corps is working in 13 African countries where Guinea worm is endemic; the GWEP is making it possible for Peace Corps to concentrate on eradicating Guinea worm in ten of them. (For a full description of the program, see Guinea Worm Elimination Program project plan, Peace Corps Africa Region and OTAPS, March 22, 1990.)

GWE activities can be undertaken by any Volunteer who is active in his/her community where Guinea worm disease is found. The key is identification of the problem in the community. Once it is known that Guinea worm disease is a problem, actions should focus on identification of others working on the problem and coordination with them. Activities can then be programmed which are consistent with those already being undertaken by the national GWEP. Finally, documentation and reporting are critical to effective, long-term coordination and follow-through.

All Volunteers can be taught to recognize active Guinea worm cases and to report them through appropriate channels. If an effective surveillance system is already in place, Volunteers in areas of known Guinea worm incidence can be encouraged to get involved in a number of activities to further GWE efforts in their communities. Volunteers can be taught to recognize Guinea worm disease in pre-service training, as well as provided with an overview of the disease, eradication efforts, and who is involved in GWE efforts in-country. (A one-day training design for all PCVs is available from OTAPS.) Volunteers serving in affected areas can then be targeted for in-service training during their first year of service to focus on appropriate interventions in their communities. (A two-day training design for secondary school teachers is available from OTAPS, as well as a five-day training design which focuses on surveillance and control measures.)

All of the countries currently targeted by Peace Corps for GWEP efforts have active health education or water/sanitation projects. It may be appropriate that the programmers responsible for these projects take the lead in coordinating with other organizations such as UNICEF, A.I.D., CDC or Global 2000 which are involved in Guinea worm eradication activities. They can also work with Peace Corps programmers from other sectors to develop appropriate secondary projects for Volunteers in their respective sectors.

The GWEP program is designed to meet five key objectives:

- (1) **Collaboration**—The GWEP is giving Peace Corps an opportunity to work cooperatively with A.I.D., WHO, UN agencies, CDC, Global 2000, and other organizations promoting public health and international development. Together with its collaborators, Peace Corps is helping its staff in countries where Guinea worm is endemic work closely with national agencies to coordinate and integrate its program development with national programs and with other ongoing preventive health efforts.
- (2) **Information Dissemination and Promotion**—OTAPS is organizing regional workshops to bring Peace Corps staff together with the international community to share experiences and initiate, implement, and evaluate activities. The first such workshop took place in January 1990 in Lome, Togo. OTAPS is also making sure that Volunteers and their counterparts have the information they need to work effectively and have whatever materials are available to avoid duplicating the work of

others. Peace Corps staff, Volunteers, and their counterparts recently received the first of what is to be a quarterly newsletter distributed with CDC's *Guinea Worm Wrap-Up*, which will keep them abreast of Guinea worm eradication activities around the world.

- (3) **Programming**—Technical assistance consultancies can be scheduled by OTAPS/Health, Water & Sanitation sector to help Peace Corps staff members and their counterparts design and initiate the variety of Peace Corps program options described in this report—new projects, add-ons to existing projects, programs for PCV teachers to use in schools, a wide range of secondary projects and activities, and specialized assignments for PCVs professionally training in public health. These technical experts can help with a variety of programming tasks, from identifying and analyzing problems to designing projects, developing job descriptions, task analyses, and project papers.
- (4) **Training**—The GWEP is providing consultants to help Peace Corps staff and trainers design and implement pre-service and in-service training programs. A one-day training design is available for orientation of PCVs to the Guinea worm problem during pre-service training; another two-day in-service training design can assist secondary school teachers develop a curriculum and promote Guinea worm education efforts in their communities; and a five-day workshop design can develop community assessment, education, and planning skills to address Volunteer involvement in Guinea worm disease surveillance and control measures. A training-of-trainers (TOT) workshop design for Peace Corps training officers and their counterparts has also been developed.
- (5) **Monitoring and Evaluation**—The GWEP is helping to develop coordinated monitoring and evaluation systems for program activities. It is in the process of determining the baseline information needed, defining the criteria for measuring results, and helping to draft the instruments used. Consultants are assisting Peace Corps staff members and their counterparts adapt the system to fit the needs of specific country programs.

This *Programming Guide* marks another major step the GWEP is taking to advance its objectives. Planned and produced collaboratively, the guide describes a variety of possible assignments that can enrich any Volunteer's two-year experience and enable PCVs to make a real difference in the lives of their host communities. It also outlines some of the actions that Peace Corps staff can take to facilitate the involvement of PCVs in Guinea worm eradication activities.

The material presented, however, is not intended for Peace Corps Volunteers alone. The interventions reviewed, which are the basis for the Guinea worm eradication assignments,

are the accepted interventions that are being built into national action plans throughout Africa. Togo's example, described in Appendix A, shows how one country is applying them, but these interventions are applicable wherever Guinea worm poses a problem. Implementing them in the way the guide suggests will take a concerted effort of Peace Corps staff and Volunteers, their counterparts, host county governments, the various international and private voluntary organizations cooperating, and most importantly, the communities ravaged by the disease.

Chapter 2

A COMMUNITY-BASED APPROACH TO ERADICATION

For purposes of description, the interventions described in this chapter have been classified into five categories: surveillance, community education and action, water supply improvements, water supply and sanitation (WS&S) projects, and case management. They are not necessarily separate and distinct, however, and a countrywide effort to eradicate Guinea worm may include any one or all of them. Surveillance has been described first because determining the extent of the disease is usually the first step that must be taken, but the most important element in any GWEP is community education and action.

Guinea worm can only be eradicated through an intensive community effort. People at risk have the primary responsibility for taking personal and community actions that have proved effective. PCVs and other outsiders can help and promote the community's efforts, but the community must solve its own problems.

Community education is especially critical since the overall objective of the GWEP is to promote WHO's goal of eradicating Guinea worm disease by 1995. Some organizations feel that the five-year goal is unrealistic and demands too heavy a concentration of money and resources; thus some interventions have been aimed at controlling the disease instead of eliminating it. The intention is to reduce the incidence of Guinea worm to a level where public health authorities no longer consider the disease significant. To keep it within accepted limits, these efforts are focused exclusively on those areas that report a high number of cases.

The problem is, however, that rural peasants often move from one place to another, making the disease impossible to contain. Efforts to do so may have to continue indefinitely. In the long run, controlling the disease may be far more costly than conducting a five-year war of annihilation that involves educating the entire population to the causes and effects of Guinea worm. Even if the target date of 1995 is overly optimistic, waging the campaign may win the war by the year 2000.

2.1 Surveillance

The *Guidelines for Surveillance*, published jointly by WHO and CDC in 1989, states that "one of the highest priorities of the global initiative to eradicate *dracunculiasis* is to improve surveillance and reporting of the disease nationally and internationally." The diagram in Appendix B that outlines the steps recommended in planning, implementing, and evaluating the national programs indicates the importance these organizations attach to surveillance.

To assess a country's concern about the problem requires an initial review and assessment of available data. Essentially, this is what is defined as *passive surveillance*, gathering information by studying the number of cases reported by clinics around the country to get an idea of the prevalence of the disease and where it is concentrated. The goal of this step is to gather as much data as possible from existing sources to plan and initiate national action plans.

The information gathered from this routine reporting coupled with periodic monitoring may be considered sufficient if the aim is to control the disease, but to move ahead on eradication and plan accordingly requires as a next step, a *baseline nationwide search* for more accurate information. A *baseline nationwide search* means *active surveillance*, a village-by-village, house-to-house survey. According to CDC, *a village-based case detection system is an essential element of elimination programs, not only for monitoring incidence, but for containment of indigenous or imported cases, especially during the advanced stages of the program.*

Passive surveillance underestimates the number of cases because it counts only those seen at local medical facilities. Infected persons, however, are often immobilized during the acute stages of the disease; health care facilities are usually far from villages where the disease is endemic; and infected people who know that medical treatment does not cure the disease are unlikely to seek medical help.

The importance of the baseline nationwide search is not only essential to define the incidence of the disease, but also to begin the first step in educating the population as to the effects of the disease. **Not only does passive surveillance underestimate the number of cases, but it minimizes the importance of the cases that are known. In many areas with Guinea worm disease, local authorities are virtually ignorant of its presence and impact until a search and educational campaign are begun.** This is a tragedy for a disease that is so debilitating, yet controllable with very simple interventions.

In conducting a national search, the decision has to be made whether to cover the entire country or to conduct a sample survey. While the former is preferred, it is also costly and requires extensive human and organizational resources. Sample surveys can be helpful if the percentage of affected villages is above 40 percent.

Surveillance should start in the geographic regions with the highest incidence. Once the program planners have decided on the data they want to collect, they should develop the search questionnaire and field test the interview form. They then have to arrange for the money and equipment needed to conduct the search; identify, recruit, organize, and train the search personnel; and finally conduct the search.

CDC and WHO recommend that the following three categories of data be collected:

- **Basic epidemiologic indicators** (in order of priority)
 - number and location of affected villages
 - number of cases per village
 - number of people at risk
 - number of villages at risk

- **Information on drinking water sources**
 - location and type of sources
 - availability of protected sources

- **Useful additional data** (optional)
 - month of case occurrence
 - presence of seasonal migrants
 - gender and age of those affected
 - occupations of the infected
 - use of filters for drinking water
 - health beliefs, knowledge, and practices concerning Guinea worm
 - number of worms per case that emerge during the year

After the national search has been completed and eradication activities have started, surveillance moves into monitoring and evaluating their effectiveness. Regular reporting from the village up to the national level is needed to keep track of program activities and monitor the course of eradication. Once a reporting system has been established, it has to be put into operation, checked for accuracy, and periodically validated as well as evaluated.

All these surveillance activities should be coordinated by a regional officer of the national program. As communities start eradicating Guinea worm, they have to be closely monitored to make sure that no new cases develop. Periodic annual and even semi-annual mini-searches should be conducted for verification purposes.

The last step in surveillance is confirming the elimination of Guinea worm. Certification of Guinea-worm-free villages is vital so that scarce resources can be allocated where they are needed. Active surveillance should be maintained for at least three years after certification to assure that Guinea worm has, in fact, been eradicated.

2.2 Community Education and Action

A case study of the village of Kati, Togo, illustrates how a community can be helped to take action and what can be accomplished as a result. Field staff for World Neighbors, a voluntary organization based in Oklahoma, worked for two years with the community to bring it to the point of being willing to invest time and effort in improving its substandard water supply system. During that time, the staff trained seven men and seven women from the village to be volunteer promoters. As a result of their educational and promotional campaign, Guinea worm cases dropped from a yearly count of 928 to 263. Three years later, with the water supply improved and the community sustaining its efforts, no cases were reported. Kati had eliminated the problem.

Drawing on examples such as this, the WASH Project has defined the basic characteristics of the educational process that have proved effective throughout Africa:

- **It should be active rather than passive.** The target population should not merely serve as passive recipients of information, but participate, take responsibility, guide, direct, evaluate, and generally contribute to the educational process.
- **It should be legitimate in the eyes of the community.** Outside educators used in the program should be trusted and respected. The concepts, beliefs, and perceptions used should be ones the community finds believable and acceptable. The process should result in the establishment of a community action plan that can be carried out with available resources.
- **It should bring about sustainable change.** Training and education should always aim at changing behavior as a result of changes in attitudes and beliefs. A change in passive knowledge is not enough. Community action is usually needed to encourage and support personal behavior change.
- **It should weave a net of messages into which nearly everyone is caught.** Everyone in the community and any outsiders likely to lead community opinion must be convinced that the proposed strategies are legitimate and desirable. Specific messages, methods, and techniques should be directed at different community groups.
- **It should emphasize problem solving, focusing on what can be done rather than on prohibitions.** "DO" something should be the focus of discussions rather than "DON'T."

- **It should be flexible, constantly evaluated, and readapted to reflect the needs and interests of the community.** As needs and conditions change, the educational activities should change also. The process must assure regular opportunities for feedback and review to keep a check on the *pulse* of the community. It must also stay aware of other community needs and commitments that may keep people from staying involved.
- **It should provide tangible, visible rewards for community efforts, both short and long term.** Initial activities should lead quickly to specific progress, while at the same time building momentum for a more long-term effort.

Experience has also shown that educational efforts should be coordinated through the Guinea worm eradication National Action Plan. While a variety of techniques may be appropriate to present information to the community, the messages being presented must be consistent. Whether they are received through radio or TV, meetings called by administrative authorities or case workers, or through skits and plays organized by local groups, the information needs to be clear, consistent, and politically and culturally appropriate. Based on these characteristics, WASH has outlined a three-phase approach to educating and helping communities take action against Guinea worm.

2.2.1 Phase I: Recognition and Acceptance

Once a community has been contacted and evidence of the disease exists, the first step is to educate the community to recognize that Guinea worm is an important problem that requires community action. The community must be convinced that a) the people who suffer from Guinea worm are important and necessary members of the community; b) the consequences of Guinea worm disease have a serious effect on the community's welfare; and c) in comparison to the other problems the community faces, its consequences are as serious or more so.

Convincing the community can be done in several ways, depending on what the leadership feels is appropriate. Health education presentations and discussions can be integrated into initial meetings about the Guinea worm problem. A study of the prevalence of the disease, organized and conducted by the community, can help people discuss the issue intelligently. If possible, the study should include every household, be simple and short, and specify who and how many people have suffered from Guinea worm in the last year. If the community agrees, the study could provide data for the national surveillance.

Data gathering should be followed by a variety of general meetings and smaller discussion groups to allow everyone to share as much information as possible about the disease, its

causes and effects. These discussions can be stimulated through different techniques, including question-and-answer sessions, role playing and drama, open-ended story telling, and audio-visual presentations. Sufferers should be encouraged to recount the impact of the disease on their own lives so that the group can better understand its impact on community welfare as a whole.

Once the community has accepted that Guinea worm is an important problem worthy of its attention, it can move on to the next phase—recognizing that it can solve the problem. In most isolated rural communities in Africa, Guinea worm disease is enshrouded in myth and religious belief. Many people see it as God's will or even punishment—a condition over which they have no control. They have to be convinced that their behavior can make a difference. Their willingness to act will also be influenced by the extent to which the community has successfully tackled similar types of problems in the past and perceives that it can use its own resources to do something now about the causes of Guinea worm.

The key issue is making the community aware of the relationship between Guinea worm and contaminated water. Traditional beliefs do not need to be overturned at the start; in fact, some may be used to advantage to demonstrate the connection between the disease and infected water. **Strategically, it is necessary to understand local beliefs and work through them, rather than antagonize people by rejecting their beliefs as unscientific or foolish.** What is necessary is that people be helped to understand that Guinea worm disease is caused by drinking contaminated water and that people with the disease should avoid contact with sources of drinking water.

The link between water and Guinea worm can be established by

- Reinforcing any belief about the role of water in causing Guinea worm disease
- Demonstrating through visits to guinea-worm-free villages or through discussions with leaders from such villages that the use of improved water sources has reduced or eliminated the disease
- Showing people through a magnifying glass or microscope the copepods in their contaminated water
- Asking a person with an active lesion to put his or her foot in a bucket of water to demonstrate how the worm releases its eggs in water
- Ask locally respected health workers to lead a discussion on the subject

The process of discovery is likely to be long and slow. It involves an exchange of information, observation, and testing. The community must learn at its own pace to understand fully the knowledge gained and integrate it into a new view of the disease. It is important to remember that the disease does not manifest itself until a year after infection; therefore, even after eradication efforts are started, some people will continue to get the disease from prior infections or through an unprotected source.

2.2.2 Phase II: Possible Solutions and Community Responsibilities

The second phase of the WASH approach moves into helping the community develop possible solutions to the Guinea worm problem and accept responsibility for implementing them.

Guinea worm can only be eradicated by people at risk learning how to avoid drinking contaminated water. At this point, discussion should focus on the alternative approaches to dealing effectively with contaminated water. A number of approaches are available to communities. Many can be taken in unison, or phased in one after another. If the community is given information it can understand and analyze, it will be able to make the best decision possible. Its say in these decisions is crucial for accepting responsibility and implementing them in the next step. Even traditional, nonscientific actions proposed by the community can be integrated into the overall approach. They may instill confidence in new solutions and help keep everyone involved in the process.

Simply knowing that effective alternative solutions exist, however, may not always be enough to convince a community that it can successfully solve the problem. A community may not have confidence in its own organizational capacity because it may never have attempted to resolve a similar problem or may have had a negative experience in trying to do so. The community may have difficulty understanding what really needs to be done to get available resources or use them effectively.

Resolving this difficulty can take time and may entail several discussions. Background information is needed to answer such questions as the following:

- What previous experiences has the community had in resolving other problems? What was the outcome? What worked well? What were the difficulties? What was learned in the process?
- What does the community actually have to do to eradicate Guinea worm? Who will be responsible for what actions? What information needs to be gathered? What combination of activities will be most likely to convince people to change their personal behavior? How

can local and outside resources be marshaled? How can finances and materials be effectively mobilized and managed?

- How are these tasks to be accomplished? Who will do them? How much time will it take? How much will it cost?

Once the community is aware of what taking action implies, the focus must then be getting the community to accept the responsibility. It will do so if it feels it has access to sufficient resources to respond adequately to the problem. The community should be informed of how it can draw on outside help, as well as how to use its own resources to the best advantage. In order to implement Guinea worm elimination activities, a community will have to accept the following responsibilities:

- **Designate an organization and individuals to supervise and carry out the needed tasks.** Some community organization, with responsible members and leaders, is crucial for managing day-to-day activities and managing local funds.
- **Set up a logistics system for storing and distributing the various materials used in the program.** Materials are needed to maintain the effort over time, not just to get the program started.
- **Set aside times and organize the agendas for regular community meetings, informal gatherings, and health education activities.** Community members should be planning and running these vital activities.
- **Agree on ways to raise money to implement and maintain the activities and their outcomes over the long haul.** Responsibility must be taken for the ongoing operation and maintenance of any new water supplies, and the continued surveillance and control of community behavior to make sure that Guinea worm disease does not return.

2.2.3 Phase III: Responsibility for Action and Sustainability

The final phase of the community education and action process is helping the community assume these responsibilities. Active outside promotion is important during this step. Community organizations often need support and advice on how to work effectively to undertake any community action, let alone actions as complex as some Guinea worm eradication activities. A partnership between outsiders and the community can help the community prepare to take charge of these diverse activities and carry them out effectively.

The energies and skills of everyone working in the community need to be utilized. School teachers are an especially important resource. They can become lay health workers and provide a link between traditional leaders and government health workers. They can also be involved in classroom programs that will educate students to protect their own health and thus reduce their absenteeism, while at the same time transform them into volunteers promoting the community's health and welfare. Many communities recruit cadres of village health volunteers to work on eradication activities. These volunteers should not be overburdened—working a half a day per week should be maximum—and their contribution should be formally recognized by the community.

Communities must be prepared for a long-term effort to eradicate Guinea worm. Sustaining that effort requires the following:

- A sound conviction that Guinea worm is a preventable problem (through continued health education) and requires a strong community commitment (ongoing monitoring and an investment in money and time)
- An approach that focuses on community involvement to develop the community's capacity to undertake the necessary action
- An awareness that mechanical or water system breakdowns need not bring a return of Guinea worm disease, and that other control measures are within the capacity of the community
- Recognition that reintroduction of the problem can occur from contacts beyond the community itself, and that continued surveillance is required, along with care of those infected to prevent the spread of the disease within a community.

2.3 Improvement of Existing Water Supplies

Communities can take a variety of measures that make it possible for them to use their existing water supplies without becoming infected by Guinea worm disease.² The WASH Project has listed the sequence of activities required of any Guinea worm eradication initiative, whether introduced into an existing WS&S project or designed as part of one from

² For more detailed information on maintenance and protection of water sources, see *A Workshop Design for Well Improvement: Protecting Open Wells*, WASH Technical Report No. 34; and *Small Community Water Supplies: Technology of Small Water Systems in Developing Countries*, Technical Paper Series 18, IRC, pp. 59-121.

the outset. This list shows how the surveillance and community education activities lead into actions decided upon and implemented by the communities affected.

1. Identify target zones or villages
 - presence of Guinea worm accepted as a criteria for priority targets
 - host country government starts initial surveillance to determine distribution of disease
 - host country government approves national action plan
2. Decide on project interventions
 - plan developed on how to handle existing contaminated sources
 - collaborating agencies identified
3. Gather baseline data
 - Guinea worm data gathered
4. Train extension agents
 - Guinea worm eradication included in training curriculum
5. Initiate community contracts
 - community conducts health problem assessment, including questions on Guinea worm
 - discussions held on how clean water can solve Guinea worm problem, to motivate community to participate
6. Establish community organization
 - Guinea worm elimination activities responsible for system maintenance included in organizations' responsibilities, and members trained to assure them

- | | | |
|----|-------------------------------------|--|
| 7. | Improve water supply | • strategy for installing new water sources implemented at the same time, if necessary |
| 8. | Carry out health and user education | • Guinea worm eradication included in health education program on how to use improved source effectively |
| 9. | Monitor and evaluate | • Guinea worm eradication included in monitoring and evaluation |

2.3.1 Protection of Water from Contamination

One approach to interrupting the Guinea worm cycle is to make sure that individuals suffering from emergence of worms do not come into contact with the water source itself. Villagers can establish restrictions to make sure that no one with an open wound is allowed to draw water from the common water supply. Someone else can draw water for the person as long as the wounds continue.

As an additional protection, villagers can build platforms over their springs and ponds so that people can lower their buckets and draw water without setting foot in the water. Around shallow wells, they can place simple aprons and walls to prevent water from spilling against people's feet, becoming contaminated, and washing back into the well.

In Benin, with the assistance of UNICEF, the government is helping villagers dig infiltration galleries next to existing ponds. A sand dam allows the water to infiltrate from the pond into the gallery, which is protected to keep it free of the disease-carrying copepod or water flea.

2.3.2 Filtration of Contaminated Water

Filtering water to remove the disease-bearing flea is the most common method national programs in Africa are employing to deal with the Guinea worm problem. The method is easy and economical. Monofilaments of fine mesh gauze are being distributed to individuals and families so that they can filter the water in their homes. Ordinary cloth, folded over twice, is also being used for this purpose. Whenever possible, boiling the water is recommended as an added safeguard.

2.3.3 Chemical Treatment

Some national programs have sent government health workers to local communities to treat the water supply with the chemical *temephos*, also known by the brand name, *Abate*. The World Health Organization has endorsed the use of temephos as a safe means of vector control. It only takes a small amount (1 mg. per litre) or 1 part per million of temephos to kill copepods; when applied in this amount, it will not harm humans, domestic animals, or fish.

The correct calculation of the volume of the water source and the amount of temephos to be added is of highest priority since any miscalculation may cause serious problems. If too much temephos is added, it can harm or kill other animals which live in or drink the water; if too little is added, it will not kill the copepods. (See instructions in the *WHO/CDC Guidelines for Chemical Control of Copepods Populations in Dracunculiasis Eradication Programs*, Atlanta, CDC, 1989, pp. 14-22, for calculating the volume of water in a pond or cistern.)

It is not appropriate to use vector control in every affected village. If a village's source of drinking water is a large pond or lake, it may be too expensive to treat that much water. The suggested maximum size is 500 cubic meters of water.

The chemical is added according to the amount of water the source contains. The application is easy: The chemical is mixed in a bucket with some water and sprayed or poured uniformly over the surface of the water. It will start to kill the copepods immediately.

Temephos treatment should be scheduled in advance according to the peak Guinea worm season in that village or area. The community must be willing to cooperate, and health workers must first obtain permission from the village leaders to apply the temephos.

2.4 Water Supply and Sanitation Projects

Once a community has decided to tackle its Guinea worm problem, the solution proposed may be to find a different source of water. This may entail protecting springs, collecting rainwater, or digging a well.

In their simplest form, none of these options are beyond the capacity of most poor, rural communities. It is harder, however, to dig a deep well needing concrete or ferrocement lining, construct a permanent springbox or reservoir to a large spring, or build a community rainwater catchment system with a large cistern off a big building. These solutions require extensive external support, even more so if drilled wells with handpumps or piped water supply systems are being considered. These improvements are major undertakings and have to be carefully planned and coordinated with outside authorities.

Solutions such as these are essentially water supply and sanitation projects. They provide the best long-term solution for eradicating Guinea worm disease. They also have the advantage of resolving other water-related health problems and improving the community's quality of life.

2.4.1 Project Guidelines

From its experience with WS&S projects, Peace Corps has developed programming guidelines that should be considered in designing these projects. These are the most essential:

- **The Linkage of Water Supply, Sanitation and Hygiene Education**—An adequate quantity of potable water is essential for health, but it is not sufficient by itself. Protecting adults and children from fecal contamination requires a combination of enough clean water, sanitary improvements to dispose of fecal waste, and hygiene education. When all three activities are provided in a coordinated manner, the impact on water-borne disease is greatest.
- **Maximizing Project Sustainability and Replicability**—While all development projects should be designed to maximize their sustainability and replicability, that is especially true of WS&S improvements, where the history of broken and abandoned systems is a major problem. The sustainability of WS&S improvements requires choosing appropriate technologies, improving community capacities to manage and maintain finished systems, and strengthening the host country government (HCG) and private institutions involved in supporting the communities after the project close-up.
- **The Role of the Community**—The role that the community plays is crucial to project success. Active community participation in all stages of project development is needed to create the willingness and capacity to manage and maintain WS&S improvements over time. The promotion of participation entails organizing community committees, training their members, and facilitating their work.
- **The Role of Community Women**—Most rural women have special traditional roles for protecting family health, managing water sources, and preparing food. WS&S projects must target their services as the primary beneficiaries responsible for the proper use and maintenance

of these improvements. Their active participation in community decisions must be promoted and assured for projects' success.

- **Technology Choices—Who Makes What Decisions?**—The choice of technology depends on technical, environmental, fiscal, societal, and cultural factors. It is essential for the community to make decisions affecting the choice and siting of technologies and the level of service, and not allow them to be made by planners and engineers without community input.
- **WS&S Activities and Community Development**—WS&S projects that promote community participation have a great deal in common with community development projects. They have similar capacity-building and empowerment objectives and use similar promotional techniques. The two can and should complement each other.
- **Operation and Maintenance of Completed Systems**—A major sectoral concern is improving village-level operation and maintenance of completed systems. HCGs cannot afford to maintain systems for rural communities, and the people want reliable WS&S systems that are not out of service for extended times. Host country governments, external support agencies, and communities working together can create new ways to help villagers better operate and maintain their completed systems.
- **Watershed Management and Protection**—Groundwater sources are strongly affected by the condition of their watershed. Watershed degradation through indiscriminate tree cutting is a serious problem. Reforestation and improved watershed management and protection are important to water supply improvements.

2.4.2 Introduction of Guinea Worm Eradication into WS&S Projects

If a WS&S project has developed out of a community's effort to eradicate Guinea worm, then the community will have to seek the extensive financial and technical support required. A WS&S project, however, may already be underway, in which case it can be redesigned to include a Guinea worm focus. In doing so, proposed Guinea worm eradication activities must be coordinated with the GWE National Action Plan. Care should be taken to ensure that project staff, especially field workers, and the community are not overburdened by the new requirements and that the new responsibilities are clearly defined and agreed upon in advance. Additional training may be required, as well as new staff and consultants whose

roles will need to be integrated into the project. Additional logistical and material resources that may also be required should be identified before taking on a new focus in an existing project.

As noted in section 2.3, the WASH Project has listed the sequence of activities required of any Guinea worm eradication initiative, whether introduced into an existing WS&S project or part of one at the outset. The essential ingredients are community education, understanding, and action. Even if people have a good source of potable water in their own community, they will still contract Guinea worm disease if they drink contaminated water from unprotected sources when they are away from home. They must be educated to do the right thing.

2.5 Case Management

Case management, or the medical treatment of people infected with Guinea worm, is generally included in any national Guinea worm eradication program. Although there is no known cure for the disease, no drugs to destroy the developing larvae or mature worm in people's bodies, several helpful treatments do exist that can alleviate pain and suffering, prevent serious complications from developing, and hasten the patient's return to normal life.

Guinea worm sufferers can be helped most by counseling them to keep their wounds clean and dry. They should be discouraged from covering them with cow dung or remedies made from roots, as these traditional remedies increase the risk of tetanus. Basic first aid is the first line of defense. A solution of *dettol* or other antiseptic can be used to clean the ulcer once a day. Dressing the wound is helpful to keep out dirt and germs, though it may be uncomfortable while the worm is emerging. Covering the ulcer will not delay the natural exit of the worm. Aspirin can be taken to reduce inflammation and pain.

In many societies, people traditionally wrap the worm gently around a small stick as it emerges. Care must be taken in these cases not to pull on the worm too much. If it is pulled too hard, the worm can break off inside the body and a serious infection will develop. It is preferable to let the worm emerge on its own, or wind it very gently on a clean stick. If the ulcer becomes infected, treatment with antibiotics is needed. If tetanus vaccination is available, immunization of active cases is recommended.

Treatments such as these, which involve practicing medicine and dispensing drugs, are the responsibility of doctors and nurses, but anyone working with the community, including village volunteers, can play an active role in counseling people about basic first aid. Counseling sessions can be included among health education activities, or counseling can be informal, occurring whenever the disease is discussed. Moreover, when people know they have access to professional care that can help them, they are more likely to seek treatment, thus making the task of diagnosis and surveillance easier.

Chapter 3

POTENTIAL PCV ASSIGNMENTS

3.1 Community-based Assignments

One of the key objectives of the GWEP is to support the development of programs that rely primarily on community-based assignments for Peace Corps Volunteers. These assignments may be new primary jobs or new activities added on to existing jobs.

Living in towns and commuting to rural communities cannot replace the relationship of trust and respect that develops when Volunteers are housed in rural communities and work there full time. That relationship is what makes the community willing to accept change and follow through even after the Volunteer has gone. This is the reason that community-based PCVs can play a significant role in Guinea worm eradication efforts through secondary projects, as well as through full-time, primary assignments.

3.2 Goals, Objectives, and Tasks

By the end of their tours, Volunteers can feel they have been successful if (1) their communities are now more capable of tackling and resolving their problems than they were before and (2) incidence of Guinea worm disease has been reduced. These goals are more likely to be achieved when Volunteers act as helpers or promoters who facilitate other people's actions, resource people who help to organize and train others to make and execute decisions, not *outsiders* who come into a community to make decisions for it and take prime responsibility for getting things done.

WASH has outlined the various steps a community must take that would apply to any community development project. These steps must be taken in coordination with the organization responsible for implementation of the national Guinea worm eradication program:

- Activating community interest
- Gathering and analyzing information on community conditions
- Identifying community problems
- Analyzing community problems
- Choosing a plan of action

- Making a commitment to work together
- Developing a work plan
- Carrying out the project
- Monitoring and sustaining project progress
- Evaluating process and product successes

The PCV's task would be able to help the community proceed along every one of these steps. A typical job description for a PCV involved in a national Guinea worm program would be the following (see Appendix A for a description of a Peace Corps Guinea worm eradication project in Togo):

- Promote community self-development and independence by helping community members to establish appropriate organizational structures and identify community volunteers to become involved with Guinea worm and other health issues; run this organization effectively; involve the community at large in health promotion through general meetings and project activities
- Motivate the new or existing village committees, health volunteers, and other village leaders
- Train the community in gathering information about its current health situation; identifying, making priorities and selecting a problem such as Guinea worm to address; and analyzing the problem and choosing a plan of action to solve or reduce the effects of the problem
- Assist the community in planning the health actions it decides to take, through a combination of training, facilitating, and providing technical assistance and project support
- Assist the community with establishing and running a long-term health education program that emphasizes behavior, controls, and technology to eradicate Guinea worm disease
- Train government extension staff and health professionals in health education techniques for the campaign against Guinea worm

- Train and assist community workers in collecting monthly surveillance data and help them forward it to district coordinators of the national Guinea worm eradication program
- Meet with the district level coordinator from the national program once a month in order to present a monthly activity report and to receive information for dissemination in the community
- Make an evaluation and open the path for the choice of new target communities for the following years

To assume these responsibilities, PCVs will have to set several tasks for themselves, some at the outset when they first make contact with the community, others on a continuing basis. These are a sample:

- Prepare for entry into the community
- Enter into the community
- Continue to learn about the community
- Organize community groups and committees
- Train community members, using adult learning techniques
- Involve the children of the community
- Facilitate the project work of the community
- Constantly analyze successes and difficulties
- Solve problems
- Assist communication between people, groups, and agencies
- Promote self-sustaining participation

In a sense, these are operational objectives, which when met, lead to the attainment of the overall goals of the PCV's assignment. It is important that staff and Volunteers alike be able to measure these *soft* objectives and value them as much as the more concrete products of the PCV's work. Otherwise, to demonstrate results, Volunteers may become overly focused

on doing things for the community, instead of building the community's capacity to do things for itself.

The following example of a PCV's schedule will indicate the variety of activities a Volunteer performs in meeting these objectives:

- Prepare report for district and national GWEP offices with counterpart on activities accomplished and plans for next reporting period
- Hold three informal weekly meetings with key people in community
- Once a month check with committee treasurer to see how books are being kept
- Design health education sessions with government health agent
- Twice a week visit the pond with community volunteer to check on compliance

PCVs should recognize these as important activities that deserve as much if not more attention than reporting the number of Guinea worm cases or getting a well built.

3.3 Primary Jobs

Several countries where Peace Corps operates have well-organized national programs to eradicate Guinea worm. These programs are usually under the direction of ministries of health, with other ministries providing ancillary support.

More countries are in the process of developing such programs. UNICEF has allocated \$1.5 million to help African countries start surveillance, while WHO is providing technical assistance and certifying when countries have eradicated the disease.

PCVs can be assigned to these programs. They can also be assigned to programs that emphasize Guinea worm eradication within the larger context of primary health care, health education, water supply improvements, or community development. The choice of sponsoring program and collaborating ministry may vary in each country depending on the responsibilities and capacities of the different agencies and Peace Corps' relationship to them. According to the nature of the assignment, PCVs may qualify who fit the recruitment codes for working in construction, health education, or community development. The initial emphasis in all primary assignments should be on surveillance and community education and action.

PCVs should be assigned on a priority basis to villages where Guinea worm is known to be endemic. They should be working with only a few villages to allow sufficient time to establish a trusting relationship. The process of helping communities develop their own solutions to their Guinea worm problem cannot be accomplished by spending half a day per week in a community and rushing off to cover nine other communities in the same week. Spreading promoters thin for the sake of coverage is counterproductive.

Recruits with a master's degree in public health or other advanced medical degrees, or extensive job experience in public health, health education, health statistics, or related nursing fields can make important contributions to national Guinea worm eradication programs. Opportunities for such Volunteers will vary from country to country, but might include assignments in the national secretariat developing health education and staff training materials, managing and analyzing surveillance data, and monitoring and evaluating national programs.

These Volunteers could also be assigned to work as counterparts to the program's regional coordinators. In any direct line positions such as these, however, it is important that any staff supervisory responsibilities be clarified to make sure that the PCV is in an appropriate role vis-a-vis government personnel and other PCVs. While these specially skilled Volunteers may not be required for successful Peace Corps Guinea worm eradication programs, they can make a valuable contribution if their skills are matched up with the right job.

3.4 Add-ons to Primary Jobs

Volunteers can also be involved in Guinea worm eradication activities without being assigned full-time to the effort. PCVs with community-based assignments, working in rural development projects, may have these activities added on to their primary jobs in health education, water supply and sanitation, social affairs, income generation, or any of the other Peace Corps sectors.

This approach has the advantage of allowing staff to get Volunteers out into the field working on Guinea worm eradication more quickly than if the jobs and the Volunteers were totally new. In a matter of a few months, through in-service training, existing PCVs can be ready to return to their villages and include Guinea worm eradication amongst their activities. New Volunteers can then be recruited, trained, and added to the ranks, without the delay of developing a new project. If the current project is a successful one, the positive impact of the Volunteers' present work will encourage the community to get involved in Guinea worm eradication.

Everyone involved—the communities, PCVs, counterparts, government officials, and any outside financial backers—must agree that expanding the roles of the Volunteers will be in the interests of the people benefiting from the project. Everyone must understand and

accept the idea that some of the project's original objectives may not be accomplished because of the additional resources needed to deal with the Guinea worm problem.

Two programming efforts have to occur concurrently. The Guinea worm eradication activities have to be developed as in any program, and the existing project must be assessed and decisions made on how best to adapt it to include a new component. This latter effort can take as much time as developing the new activities. The assessment of the existing project should focus on its strengths and weaknesses, the primary assignments of the PCVs and the tasks they perform, a needs assessment of the project beneficiaries, and an inventory of all the resources used to attain project objectives. Plans should be developed to resolve any outstanding problems the assessment has identified.

After the Guinea worm eradication component has been designed, a plan must be developed for integrating the new component into the existing project. This plan should include the following:

- Restatement of basic project paper elements (i.e., project purpose, goal, objectives, PCV job description, collaborating agencies, resources, etc.)
- Justification for dropping any prior project objectives, or plans for rescheduling attainment of project objectives
- New PCV job description, task analysis, and training needs assessment
- Schedule of project activities, showing interrelationship between Guinea worm eradication activities and existing project activities
- Description of other government agencies, financiers, PVOs, etc. to be involved in the new, expanded project
- Analysis of new project resources, support, management, monitoring and evaluation systems, etc.
- Work plan for integrating the new component into the project

The steps outlined in the previous chapter on integrating Guinea worm eradication activities into a WS&S project can be used as a helpful guide in the planning process. **If for any reason, the basic approach to Guinea worm eradication recommended in these guidelines cannot be implemented in the existing project, the project is clearly not appropriate and another alternative should be found.** Some changes in emphasis, however, may be required. While a PCV in a WS&S project will be better prepared to help

improve a community's water supply than to help educate the community about health issues, the reverse will be true of a PCV working in health education.

The integration plan should be developed collaboratively with everyone involved in the project. Initially, exploratory discussions with community members to assure community support should precede any formal planning. The views of the Volunteers and their counterparts are equally important, since they will be expected to take on the extra responsibilities. Government officials and representatives from any other organizations involved in the project should contribute to the plan and its implementation, especially if it requires adding new institutions. Lines of responsibility and coordination have to be carefully worked out between ministries and even departments in the same ministry. Project planners must be sensitive to the concerns of existing staff members and be careful to see that new counterparts, supervisors, or project support personnel are integrated slowly into the project.

As the plan is implemented, it should be carefully monitored and evaluated. A few PCVs can test it first in a few villages to see how suitable it is as a project.

3.5 Secondary Projects

No matter what their primary assignments may be, Volunteers living in Guinea-worm-infected areas can provide invaluable assistance to the national programs and to their communities which may be fighting the disease. They can accomplish this through a variety of secondary activities that need not take time away from their primary jobs. PCV teachers, construction workers, extension agents, or small business advisors can be engaged in such projects full-time during their off-season, vacation periods, or periods of free time they may have throughout the year.

The key is having PCVs in community-based assignments and the ability to mobilize them to help with any or all of the interventions described in this guide. If all PCVs living in an area where Guinea worm is endemic were to take part in the national search, the quality and scope of the surveillance could be markedly improved. Since these PCVs are already in contact with rural villagers, their assistance would help address one of the serious constraints facing governments undertaking active surveillance—the lack of skilled human resources.

Because of their simplicity, many Guinea worm eradication interventions lend themselves to secondary projects. It does not require a great deal of training to recognize an active Guinea worm case. Reporting surveillance data is within the competence of any PCV. Basic health education principles and techniques and Guinea worm prevention messages can be taught in a couple of days during pre-service or in-service training. How to distribute and demonstrate the use of filters can be taught to PCVs in an hour. Many PCVs working in rural areas where Guinea worm is endemic already have good project promotion skills and

know how to work with communities. With limited training, they would be able to participate in many community education and action interventions.

The GWEP has developed training guides to train PCVs in the skills needed to undertake Guinea worm eradication activities. Skill development should not be a constraint; what is needed is motivation and support to identify, coordinate, and initiate secondary projects. The initiation and implementation of secondary projects are usually considered to be the responsibility of individual Volunteers. Peace Corps staff often become involved only if external funding is required, or if the PCV needs technical advice or governmental clearance to take on a project.

Such an approach by staff, however, is not appropriate when the objective is to encourage large numbers of PCVs to become involved in a concerted effort to eradicate a disease. **Peace Corps staff will have to approach helping PCVs develop secondary projects as if they were developing regular projects.** The same programming and training needed to establish a Guinea worm eradication project should go into setting up the structures to train, monitor, and support the scores of PCVs involved in Guinea worm activities as secondary projects. However, since interventions cut across technical programming sectors, many of the same conditions that apply to in-country efforts to promote Women in Development (WID) activities will apply. The existence of such support will be the key factor in motivating PCVs to become involved, helping them to be effective, and enabling them to recognize the importance of the work they are doing in the context of overall eradication efforts in the country.

Peace Corps staff can encourage PCVs to get involved in Guinea worm secondary projects by doing the following:

- * Make Guinea worm eradication a programming priority. This should be coordinated with the Integrated Program and Budget System (IPBS) to ensure that GWE-related goals are included in the post's programmatic and administrative plans, that necessary resources (staff, budgetary, logistical) are allocated to the efforts, and that a sufficiently long-term commitment is envisioned to ensure follow-through on activities. (See *Community-Based Initiatives to Eradicate Guinea Worm: A Manual for Peace Corps Volunteers*, T0062.)
- * Designate a staff member to take primary responsibility for Guinea worm programming. All secondary projects should be cleared through this programmer, who will collect and develop materials relevant to GWE efforts in-country and ensure coordination with other organizations such as UNICEF, CDC, A.I.D. and Global 2000 who are involved in GWE activities in-country.

- * Disseminate information to all in-country PCVs on local, national, and international efforts to eradicate the disease.
- * Orient all new and current PCVs to the causes and effects of Guinea worm disease and how it can be prevented. Presentation of basic vocabulary in both national and local languages to discuss Guinea worm is an important part of enabling PCVs to recognize and discuss Guinea-worm-related issues in their communities. (A one-day training program design, *Orientation to Guinea Worm Disease: A Guide for Use in Pre-Service and In-Service Training*, T0059, is available from GWEP.)
- * Develop materials to promote secondary projects that can be undertaken by PCVs that are appropriate in the context of national GWE program efforts. (An in-service training design for secondary school teachers, *Teaching Guinea Worm Prevention in Secondary Schools: A Guide for Training Peace Corps Volunteer Teachers*, T0060, is available from GWEP.)
- * Provide skill development training during the first year of service to all PCVs wishing to become involved in GWE secondary projects. (A five-day skill training design, *Helping Communities to Eradicate Guinea Worm: A Training Guide*, T0061, is available from GWEP.)
- * Provide active program support to PCVs involved in secondary GWE projects, including site visits, regular communications, technical backstopping and appropriate administrative, logistical, and institutional support.
- * Promote communication among PCVs involved in GWE efforts in-country, OTAPS, and PCVs involved in GWE activities in other countries. (The Guinea worm eradication newsletter is a quarterly publication that can serve as a forum for this kind of exchange.)

3.5.1 School Teachers' Role

Education Volunteers make up the largest group of Volunteers in the Africa Region. Given their number, role in their communities, the multiplier effect they can have through their students and fellow teachers, and vacation schedules, Peace Corps teachers can be an enormously valuable resource in eradication efforts.

GWEP has developed a special training program specifically for secondary school teachers to provide them with the skills and information to accomplish this task. Content of the GWEP training for secondary school teachers needs to be placed in the context of national GWE activities by the Peace Corps staff member responsible for coordinating Guinea worm

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programming activities. This staff member should also ensure that any necessary clearances for inclusion of Guinea worm sessions in the secondary school curriculum are obtained by the Peace Corps programmer responsible for secondary education. As part of these preparatory activities, potential trainers should be identified to participate in a Guinea worm training-of-trainers workshop organized by OTAPS.

Once these preparatory activities have been accomplished, the two-day training program will prepare Peace Corps teachers to do the following:

- * Explain the symptoms and transmission cycle of Guinea worm disease
- * Explain the proper care for individual cases of Guinea worm
- * Examine different ways Guinea worm can be prevented
- * Describe international and host-country Guinea worm eradication programs and Peace Corps' collaboration with them
- * Identify ways that students can become Guinea worm activists in their communities and families
- * Discuss the elements of a Guinea worm curriculum, including session content and teaching methods
- * Identify strategies for involving other teachers in the use of the Guinea worm curriculum

As the content of the training program suggests, the GWEP addresses three primary tasks for PCV teacher involvement in Guinea worm eradication programs in their schools.

a. Gain Administrative Support. The first task is obtaining the support and active involvement of the school administration and other teachers. A school program will only be effective if all, or at least most, of the teachers are introducing the new curriculum to their students and encouraging them to become Guinea worm activists in the community. It is useful to involve the teachers themselves in community efforts so that they can become role models for their students and help supervise them. Gaining the support of the head of the school and other community leaders can be helpful in winning the cooperation of the other teachers. Inviting school administrators or senior teachers to the In-service Training sessions along with PCVs can be a useful strategy.

b. Develop Curriculum. The second task for PCV teachers is to develop the Guinea worm curriculum for their schools. Involving other teachers and the head of the school in this task is one way to win their cooperation and commitment. PCV teachers will have

this task is one way to win their cooperation and commitment. PCV teachers will have sufficient resources and materials to draw upon to help them do this task without repeating work already done by others. One of the expected outcomes of a training program is for them to go back to school with at least the beginning of a usable Guinea worm curriculum. It is important that such a curriculum be practical and active because of what it seeks to accomplish. It is not designed merely to inform students about Guinea worm, but to help them develop the motivation, attitudes, and skills to become community activists. Standard secondary school teaching methods aimed at imparting information may not be appropriate for implementing an effective Guinea worm curriculum.

The teachers should develop the content of each school's curriculum to reflect the learning needs of the students, based on an assessment of what the students will be able to do as Guinea worm activists. It may be best to encourage them to become involved in activities that are:

- * Inexpensive or free
- * Not highly technical
- * Acceptable in the eyes of community leaders and health center staff
- * Promotional and instructional
- * Initially aimed at families and neighbors rather than the entire community
- * Supportive of national efforts

Such activities can include participating in community surveys or other ongoing surveillance, counseling Guinea worm sufferers on the proper care of their lesions, and motivating the community to adopt such practices as filtering water and keeping infected people away from the community water supply. All of these activities require information, attitudes, and skills that must be built into the curriculum. While each curriculum may be different, at a minimum it should contain information on the following:

- * Guinea worm life cycle and transmission
- * Effects of the disease
- * Prevention of Guinea worm disease
- * The nature and purpose of a community Guinea worm survey and national surveillance

- * Purpose and technique of filtering drinking water
- * Other simple community Guinea worm interventions
- * Care of Guinea worm sufferers

The importance of involvement of most of the teachers in the school can be seen from these topics. Some of the topics can best be dealt with in the context of a natural science (Guinea worm life cycle) lesson, others in civics classes (nature and purpose of surveys), while still others can provide bases for pertinent topical discussions on community attitudes or possible interventions (English or French classes, theater presentations).

c. Support Student Activities. The teachers' third task is to support their student activists. Training without follow-up supervision and support is no more effective with secondary school students than it is with PCVs, and teachers need to be committed to following up their students on a long-term basis. Students should report back to their teachers about their efforts and receive feedback from them. If at all possible, the teachers should travel to the students' communities to observe their work, lend support, and recommend ways students can be more effective. Time should be scheduled in the curriculum for review and discussion sessions to allow the students to share their successes and problems with their peers and teachers and come up with some answers.

An important part of providing support to student activists is ensuring coordination with and support by other organizations involved in Guinea worm eradication efforts in the community. Student organizations can provide an important forum for coordination of activities with personnel from the health and other administrative services to ensure their active support of student activities.

3.5.2 Roles for Other Community-based Volunteers

Other community-based Volunteers can also play a key role in eradication efforts in the areas in which they serve. Forestry, agriculture extension, community development, small business and construction Volunteers often are located in areas that are severely underserved by government services and, consequently, are poorly represented in surveillance activities or other efforts. Particularly in areas where, through long-term, formal agreements, Peace Corps has committed to development activities, the opportunity exists to integrate GWE efforts into community resource management plans. These plans document community needs and priorities and provide a framework for development of technical assistance interventions involving Peace Corps and other technical services. Senegal, The Gambia, Mali, Niger, and the Central African Republic are all currently promoting projects in this manner.

Central to developing GWE activities in these areas is a thorough documentation of the magnitude of Guinea worm problems (see Appendix D) and identification of current efforts to address the problems. In areas where surveillance is lacking, all Volunteers can be taught to recognize the disease. If the disease is identified, the next step is determining the community's response. Since PCVs are already promoting village development committee capabilities in these areas, it should be a relatively straight forward process to help the committees focus on potential activities such as those shown in Appendix C.

3.5.3 Guidelines for Development of Secondary Projects

In addition to the technical guidelines for development of appropriate Guinea worm eradication activities as secondary project for community-based volunteers, Peace Corps' experience with Small Projects Assistance (SPA), Self-Help, and various other mechanisms that promote Volunteer involvement with secondary projects has shown the importance of clearly defining administrative responsibilities in promoting project activities and outlining clear procedures for project development, review, monitoring, and evaluation.

It is essential that the Country Director assign responsibility for GWE coordination to a programmer who will ensure that all activities are planned and coordinated with the committee responsible for the national Guinea worm action plan. He should also identify appropriate sources of financial support for GWE secondary projects and ensure that the Administrative Officer sets up appropriate accounts to administer and track project funds.

The programmer assigned to coordinate GWE activities should discuss proposed activities with Volunteers, community members and members of the national committee, if feasible, prior to commencement of any activity. This gives the APCD an opportunity to discuss the problem and proposed solutions in order to determine whether all in-country resources have been explored, that the activity is not in conflict with host country policy or other GWE activities, that the proposed activity is feasible within the time frame being proposed, and that the level of community participation is reasonable. The programmer should also assist the community and Volunteer by providing sources of information, such as GWEP and WASH publications, and requesting support through OTAPS GWEP workshops. The GWE programmer should:³

- * Identify local resources for technical support to develop GWE secondary projects

³ *The Small Projects Assistance (SPA) Program Handbook*, Peace Corps Office of Training and Program Support, April, 1989 (draft).

- * Counsel PCVs concerning project design, appropriate funding sources and proposal writing
- * Set up files and activity logs for projects
- * Ensure that Volunteers close out projects before completing their service
- * Track project funds
- * Request necessary technical assistance, including OTAPS GWEP workshops
- * Monitor projects and assure that all documentation is collected and submitted to appropriate persons
- * Identify a Volunteer or Volunteer committee that can provide project support to other PCVs and facilitate communication with OTAPS and PCVs in other countries
- * Prepare reports, as needed, on in-country Peace Corps GWE efforts and coordinate activities with the National Action Committee

APPENDIX A

PEACE CORPS PROJECT PAPER:

**COMMUNITY EDUCATION PROJECT TO
ERADICATE DRACONCULIASIS IN TOGO**

APPENDIX A

SUMMARY OF THE COMMUNITY EDUCATION PROJECT IN TOGO

Past Efforts to Control Guinea Worm

Mustering help from all quarters, the Government of Togo is working to involve entire communities in its effort to eradicate Guinea worm. Plagued with the problem in 16 prefectures in 5 regions of the country—more than half the population, or close to two million people exposed to the disease—Togo has been grappling with ways to control dracunculiasis for the past ten years.

Various international organizations, including Peace Corps, have come to Togo's assistance. World Neighbors' successful intervention on behalf of the village of Kati is described in chapter 2, where a five-year educational and promotional campaign aroused the villagers to take the necessary action to eliminate the disease.

Water and sanitation projects, supported by UNICEF, USAID, WASH, Peace Corps, the Japanese government, and the Canadian University Service Organization (CUSO), have flourished in different parts of the country, spearheaded by the Ministry of Public Health and other government agencies. These, however, have only contained the disease locally, not eliminated it nationwide. As Guinea worm disappears in one village, it emerges in another, as people uninformed about its causes move from place to place, failing to observe the proper hygiene that would prevent it.

Togo's experience typifies that of other African countries where the disease is endemic: While health workers in Togo ascribe its epidemic proportions mainly to villagers' lack of pure water and lack of knowledge about the disease, most villagers endow Guinea worm with mythical powers, unaware that anything they might do, such as soaking their sores in water people use for drinking or filtering water before drinking it, would make a difference.

A National Plan

This state of affairs has prompted the Togolese government to mount a national campaign stressing education and community action to eliminate Guinea worm nationwide. Last year, at the behest of the Ministry and with WHO's support, Global 2000 drafted a document outlining a national plan of action to eradicate Guinea worm disease in Togo by 1996.

The government approved the plan this year and, in November, will be carrying out the first phase—an active nationwide search, financed by UNICEF, to determine the precise number and location of Guinea worm cases. CDC is advising on the survey. In February, Peace Corps/Togo organized a seminar to familiarize Volunteers and their counterparts participating in this survey with the data needed and the means for collecting and recording it.

A national committee of public officials, headed by the chief physician of the Ministry of Public Health's Major Endemic Service, is coordinating the national effort. Representatives from international and national organizations concerned with the problem will join together to form a technical committee that will work with the official group. The national committee will be responsible for refining, implementing, and evaluating the national plan; promoting allied research; and developing the necessary training programs.

As the committee describes it the plan calls for a full range of interventions (see Annex 1 of the project paper). These include keeping an accurate surveillance of all Guinea worm cases, chemically treating the water supply to decontaminate it, installing wells or other mechanisms for providing potable water, making provisions for maintaining them, and educating the villagers to take action.

The various government and nongovernment agencies and organizations that have already been working on Guinea worm and other health problems in Togo will be involved in one or several of these activities. Peace Corps Volunteers, besides helping with surveillance and applying chemicals to the water supply, will be principal partners in the campaign to mobilize community action.

Peace Corps' Contribution

Peace Corps/Togo has presented a project paper to initiate a program, in collaboration with the Ministry of Public Health's National Health Education Service, that will phase in about 50 Volunteers by 1993 to educate villagers about their health problems, specifically Guinea worm disease, and encourage them to take appropriate action. The project will be pursuing a strategy already being followed by the Ministry and Peace Corps. Under this strategy, health education coordinators and Volunteers will work through village development committees and the people in charge of developing water sources to educate and mobilize the villagers.

Most of the Volunteers will be generalists, prepared for their assignment as health educators through pre-service and in-service training sessions, and will live in the villages where they will work. A few will have advanced degrees in public health or possibly in social work and will be assigned to help coordinate the program.

Working in their respective communities, Volunteers will be expected to perform this sequence of assignments:

- Contact health workers, teachers, and village leaders to orient them to the project, and survey the community to collect baseline data;
- Identify and train local volunteers who will conduct the epidemiological surveys, administer their work, and analyze and record the data.
- Prepare teaching materials and organize and conduct training sessions for the people involved in the education and social mobilization activities;
- Prepare educational materials and organize meetings to involve the entire community in the project;
- Assess local water sources and, if necessary, plan a small project to improve the water supply, securing the financing and mobilizing the community to carry it out;
- Coordinate and monitor the various activities and periodically prepare evaluative reports and discuss findings with villagers and project administrators.

The goal these Volunteers will be trying to achieve by the end of the project is to mobilize close to 10,000 Togolese citizens in the national effort so that they can eliminate Guinea worm disease from their communities. To that end, Volunteers will be involved in training at least 100 government health workers and 7,500 village activists in social mobilization techniques, 750 teachers in health-related curriculum development, and 750 village workers in masonry and other construction skills; building at least 7,500 latrines; and educating 130,000 villagers to understand and practice proper hygiene to prevent the spread of the disease.

In every phase of their activities, Volunteers will work closely with their cohorts in other projects, particularly those assigned to the UNICEF-sponsored Education for Child Survival project and agricultural development. Volunteers also will have the assistance, financial and technical, of such other organizations as WHO, CDC, USAID, Global 2000, and World Neighbors, in collaboration with the various Togolese government agencies.

The government's surveillance will trace the success of this combined effort, while Peace Corps' evaluation will suggest changes to be made as the project moves along. In the end, it is hoped that Togo's experience will provide a model for other countries to follow that share the goal of eliminating dracunculiasis in the decade of the '90s.

The full text of the Project Paper outlining Peace Corps' planned "Community Education Project to Eradicate Dracunculiasis in Togo" follows.

SAMPLE PROJECT PAPER

1. PROJECT TITLE: COMMUNITY EDUCATION PROJECT TO ERADICATE DRACUNCULIASIS IN TOGO*
2. NUMBER/CODE: _____
3. SECTORS: WATER/SANITATION AND COMMUNITY HEALTH
4. DURATION: 1990-1996 (SIX YEARS)
5. MAIN PURPOSE: TO CONSOLIDATE THE CAPABILITIES OF LOCAL STRUCTURES
6. GOVERNMENT IMPLEMENTATION AGENCY: MINISTRY OF PUBLIC HEALTH (SNES, SGE)
7. GEOGRAPHIC COVERAGE: 9 OF 16 GUINEA-WORM ENDEMIC PREFECTURES OF THE PLATEAU, CENTER, LA KARA, AND SAVANNA REGIONS.

* This is an edited, translated version of a project document originally written in French by Mr. Tchao Bamaze, Associate Director in charge of health programs, with the collaboration of Ms. Ayélé Foly, Public Health Consultant.

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Part I

BASIC ASPECTS OF THE PROJECT AND COUNTRY CONTEXT

Table 1

General Data on Togo
(some useful indicators)

SOURCE: MINISTRY OF PLANNING - 1988

• TOTAL POPULATION (1987 ESTIMATE BASED ON 1981 GENERAL CENSUS)	3,294,035
• AREA	56,785 KM ²
• AVERAGE POPULATION DENSITY	58/KM ²
• AVERAGE ANNUAL GROWTH	2.9%
• BIRTH RATE	44.6/1,000
• LIFE EXPECTANCY AT BIRTH	
MEN	49.2 YEARS
WOMEN	51.3 YEARS
• DEATH RATE	14.9/1,000
• INFANT MORTALITY IN 1981	90/1,000
• MATERNAL MORTALITY (PER 100,000 BIRTHS)	420
• FERTILITY	194/1,000
• SYNTHETIC FERTILITY INDEX	6
• NET REPRODUCTION RATE	2.1
• WOMEN AS PERCENTAGE OF TOTAL POPULATION	51.3%
• NUMBER OF WOMEN OF CHILDBEARING AGE	823,503
• ESTIMATED BIRTHS IN 1987 (20% OF WOMEN OF CHILD-BEARING AGE)	164,701
• PERCENTAGE OF CHILDREN UNDER 5 YEARS	20%
• PERCENTAGE OF THE POPULATION AGES 0 TO 14 YEARS	49.9%
• RURAL POPULATION AS A PERCENTAGE OF TOTAL	75%

Source: Ministry of Planning, 1988

A. Historical Perspective of the Problem

When the Assembly of the World Health Organization (WHO), meeting in Geneva in May 1981, passed a resolution declaring the elimination of dracunculiasis to be one of its objectives for the coming decade, the Government of Togo embraced this objective as its own.

Since 1980, with the assistance of USAID, the Japanese and Canadian governments, and voluntary organizations, various ministries of the Togolese government have been collaborating on water and sanitation projects to control the spread of Guinea worm disease. Peace Corps joined this effort in 1984.

In that same year, a survey showed the disease to be endemic in 16 prefectures in five different regions of the country (see map on the following page). Later independent surveys confirmed that 55.5% of the population, or 1,831,000 persons, were being exposed to the disease. Despite efforts to control it, the incidence of dracunculiasis was not declining.

Thus, with the assistance of Global 2000 and in collaboration with WHO/Togo, the Ministry of Public Health developed a national plan of action for the eradication of Guinea worm. This national plan was approved in 1990 for a five-year period, with UNICEF helping to develop and finance the initial nationwide search.

B. Analysis of the Problem

Its Scope

Dracunculiasis is prevalent in 16 of the 21 prefectures and in 5 regions of the country, with the extent of the disease varying from one zone to another (see Table 2). It is estimated that 1,831,000 people live in this area. Theoretically, 30%, or 549,300 persons will be affected by the disease each year.

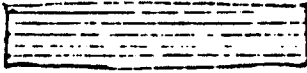
Its Consequences

In April 1990, Jaime Henriquez, Water/Sanitation Specialist in Peace Corps' Office of Training and Program Support (OTAPS), and Dennis Long, from USAID, visited the village of Vakpo in southern Kloto. Their report of villagers' testimonies tells what kind of an impact dracunculiasis can have:

- With the exception of some breastfeeding infants, every one of the 120 inhabitants of Vakpo has been sick with the disease. From December to February, every one of them was bedridden; few students went to school; field work was abandoned, and as a result, crop yields were low. Without a surplus to market, the villagers lacked the 50,000 francs needed to improve their water supply.

DRACUNCULIASIS IN TOGO

Guinea Worm
Endemic
Prefectures



Nonendemic
Prefectures



GHANA

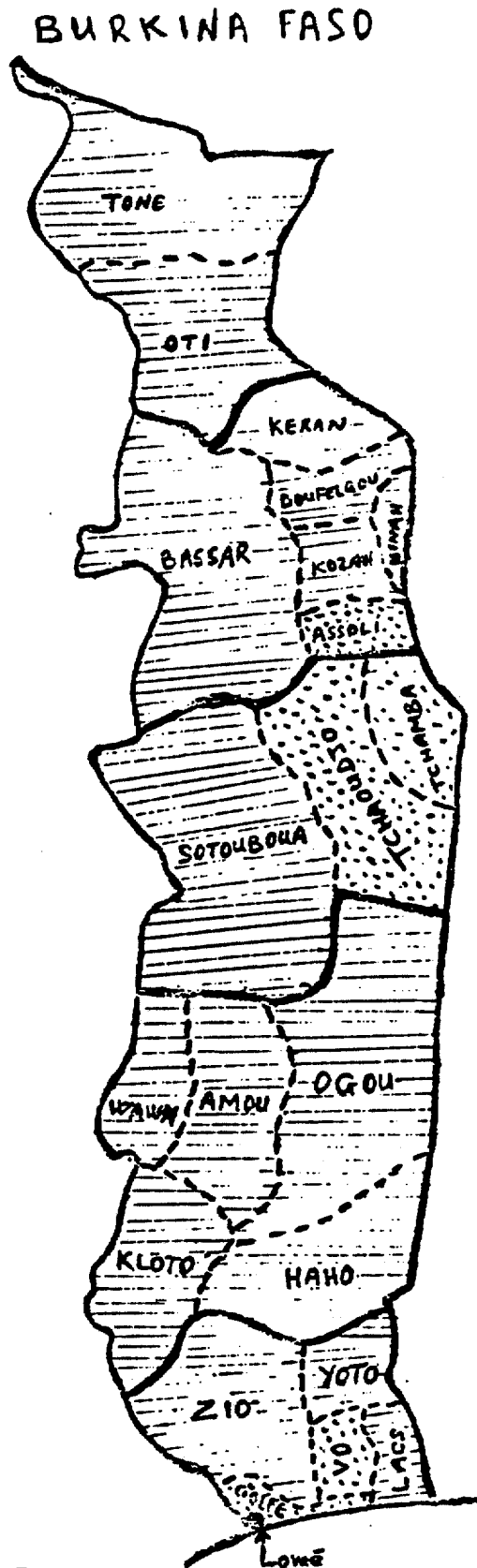


Table 2

Number of Dracunculiasis Cases Indicated
by the SNSS in 1986/87/88 and MENRS Oct/Nov 1988

	SNSS 1986	SNSS 1987	SNSS 1988	SNSS 86/88	MENRS 88/89
1. GOLFE	0	0	5	5	2
2. LACS**	0	0	1	1	1
3. VOLL	0	0	1	0	
4. UOTO*	23	2	0	26	0
5. ZIO**	34	71	6	111	1046
6. HAHO*	87	18	2	107	
7. KLOTO*	5	3	14	22	0
8. AMOU**	3	3	0	6	4
9. WAWA**	0	0	0	0	136
10. OGOU***	164	57	110	331	633
11. SOTOBOUA***	6	0	13	19	67
12. TCHAMBA	0	0	0	0	0
13. TCHAODJO	0	0	2	2	0
14. ASSOLI**	0	0	0	0	3
15. KOZAH*	0	0	24	24	0
16. BINAH**	0	0	1	1	53
17. DOUFELGOU**	0	1	0	1	34
18. KERAN***	5	21	4	30	17
19. BASSAR***	670	26	20	716	529
20. OTI***	110	2	0	112	147
21. TONE***	8	2	0	10	63
TOTAL	1117	206	202	1525	2747
* PREFECTURES GUINEA WORM ENDEMIC ACCORDING TO DATA FROM SNSS = 11/21 ** PREFECTURES GUINEA WORM ENDEMIC ACCORDING TO DATA FROM MENRS = *** PREFECTURES GUINEA WORM ENDEMIC ACCORDING TO DATA FROM SNSS AND MENRS = 16/21					

In general, villages with at least 75% of their population affected by the disease suffer these consequences:

- Farmers must stop working in the fields at precisely the most crucial time, when either planting or harvesting is taking place in the region. Even when working, farmers who are ill are not so productive as they would be otherwise.
- Students cannot go to school the full school year, and in some regions, the outbreak of the disease occurs when students are in the

critical third quarter, preparatory to taking their final exams. Absenteeism causes some schools to close their doors.

- Housewives and mothers cannot dedicate themselves to such daily tasks as supplying water for the family, cooking, maintaining the home, and most important, caring for their children, who may also become ill as a result.

Causes of Dracunculiasis

Dracunculiasis primarily affects poor rural families engaged in subsistence agriculture who have no access to pure drinking water sources. In the villages where the disease is endemic, the population depends most often on contaminated water sources for consumption—ponds, backwater, shallow pools fed by rainwater. The use of these sources drives the vicious cycle of the disease.

According to statistics recorded by USAID/Togo, while coverage of water supply services was 53% in 1980 in urban areas, it was only 26% in the rural areas. In 1988, coverage was 79% in urban areas and 49% in rural areas.

Water and Sanitation Services Coverage in Togo in 1980 and 1988,
Extrapolated for the Year 2000 in Togo
(in percent)

YEAR	WATER		SANITATION	
	URBAN	RURAL	URBAN	RURAL
1980	53	26	20	9
1988	79	49	20	10
2000*	100	99	90	80

SOURCE: UNPUBLISHED USAID/TOGO DATA.
* DECADE TARGETS FOR 1990 ASSUMED FOR 2000.

According to community health workers, the main cause, and practically the only cause, of dracunculiasis is the consumption of contaminated water.

The table below describes the perceptions of health workers regarding the causes of dracunculiasis according to a survey done by Ms. Ayélé Foly for the Peace Corps.

<u>CAUSES</u>	<u>FREQUENCY</u>	<u>PERCENT</u>
1. LACK OF PURE WATER	15	75%
2. LACK OF HEALTH EDUCATION	13	65%
3. INFLUENCE OF TRADITION	10	50%
4. MIGRATORY FLOWS	3	15%
5. INACCESSIBILITY OF CONTAMINATED ZONES	2	10%
NUMBER OF HEALTH WORKERS INTERVIEWED: 20		

As for the villagers themselves, their views of the causes of the disease are quite diverse, as indicated in the following table:

<u>CAUSES</u>	<u>NUMBER</u>	<u>PERCENTAGE</u>
1. SPELLS	9	45%
2. ILLNESS FOLLOWING FAILURE TO RESPECT TRADITIONS	7	35%
3. BAD LUCK	7	35%
4. DIRTY WATER	5	25%
5. SORCERY	5	25%
6. IMPURE BLOOD	2	10%
7. RAIN	2	10%
8. ADULTERY	2	10%
NUMBER OF VILLAGERS INTERVIEWED: 20		

Most of the causes mentioned are mythical or supernatural. Nonetheless, one-fourth of the people interviewed cited polluted water as the cause of dracunculiasis and villagers' lack of knowledge causing the disease to spread.

According to villagers' perceptions, treatment methods are varied. The methods used are grouped by order of decreasing frequency in the table below.

<u>TREATMENT</u>	<u>FREQUENCY</u>
1. EXTRACTION USING A SMALL STICK	95%
2. MIXTURE OF LEAVES OR ROOTS OF CRUSHED PLANTS	70%
3. APPLICATION OF RED OIL OR KARITE	35%
4. INCISION WITH KNIFE	25%
5. MASSAGE WITH HOT WATER	25%

C. Statement of the Problem

In Togo, as in all developing countries, the population, especially the rural population, is unaware of the relationship between unsanitary conditions and disease. People's lack of understanding of this relationship is at the heart of all their health problems, but especially dracunculiasis, which prevails in the rural regions where drinking water comes primarily from ponds or other shallow water sources. The prevalence of the disease in specific areas of the country can be attributed mainly to

- lack of drinking water sources,
- insufficient health education for the populations concerned,
- influence of traditional beliefs,
- migration of the rural population.

Although the disease is known to be endemic in 16 prefectures and 5 regions of the country, it is difficult to assess precisely the scope of the dracunculiasis problem in Togo. Available data have resulted from several surveys carried out by different organizations independently; they are also dated. The figures available in the Health Subdivisions are not reliable, for there are a great many patients who fail to turn to the health services, knowing that there is no effective treatment for Guinea worm disease. Furthermore, hospital and health dispensary staff in the areas where the disease is endemic do not have adequate means for carrying out epidemiological surveys and tracking of patients, which are required if the disease is to be effectively controlled.

The control actions carried out in the field over several years by many organizations have been inefficient and poorly coordinated. As a result, dracunculiasis continues to constitute a serious socioeconomic handicap for the country, with the following repercussions:

- absenteeism from work among farmers, and thus a decline in agricultural production in the affected regions, where the lands are fertile,
- rural exodus to the towns and to other regions,
- absenteeism in the schools, which sometimes forces schools to close their doors,
- a high rate of failing students at the end of the school year,
- malnutrition, especially pronounced in young children.

D. Efforts Already Undertaken to Solve the Problem

Togo's attempts to solve its Guinea worm problem go back at least as far as 1980. At that time, various ministries, most notably Public Health, and Social Affairs and Women's Status, were collaborating with USAID, the Japanese government, and various nongovernmental organizations to introduce Guinea worm control into ongoing projects to improve water and sanitation services.

One of the most successful of these projects was undertaken by World Neighbors, a voluntary organization headquartered in Oklahoma. From 1981 to 1986, a team from World Neighbors, working in cooperation with the staff of the Bethesda d'Agou Nyogbo hospital and health workers from the local clinic, concentrated on eliminating Guinea worm from the village of Kati. They helped the community become aware of its problem, analyze it, and determine the appropriate solutions. After two years of this health education program, the incidence of the disease declined from 928 to 263 cases. Three years later, with the community having organized to raise money, drill holes, and sink wells to improve its water supply, the disease disappeared completely!

In 1984, Peace Corps/Togo enlisted in the effort to control Guinea worm, by assigning Volunteers to the Village Hydraulics and Socio-Sanitary Development AID/FED/FAC project, which had elimination of the disease as one of its objectives. Operating in the savanna and plateau regions and, with UNICEF support, in the prefecture of Haho, the project lasted until 1987. Individual Volunteers, however, continued to be assigned to work with staff from the ministries of Public Health and Social Affairs to educate communities on matters of health

and help them improve their water supplies and sanitation. Through Peace Corps' Small Project Assistance (SPA) program, Volunteers helped villagers build small wells, dams, and cisterns and install latrines.

In 1986, the Canadian University Service Overseas (CUSO) began an intensive water supply and sanitation program. Still in operation, it has been concentrating on eliminating Guinea worm in the maritime regions of Togo, especially in the prefectures of Zio and Yato.

Despite these various efforts to control the disease and different villages' individual success stories, surveys still indicated no perceivable decline in Guinea worm for the country as a whole. With the disease still endemic in 16 prefectures, the government decided to initiate a national plan of action to eliminate the country's dracunculiasis problem, calling on the Global 2000 mission in Togo, with support from WHO, to help draft the document. The plan was approved this year and now forms the basis for integrating current efforts over the next five years.

E. Current Efforts to Solve the Problem

Most of the organizations that have been working to solve the Guinea worm problem in Togo over the past ten years are continuing their efforts in some form or another. Although no longer needed in Kati, health workers from World Neighbors, for example, are now concentrating on the prefecture of Bassar. A Peace Corps Volunteer from the Community Health Education for Child Survival program and a PCV from the Appropriate Technology program are working with them on this project to control dracunculiasis.

Under the national plan, current strategy is to coordinate all activities through a National Committee for the Eradication of Dracunculiasis. Chairing the committee is the Chief-physician of the Ministry of Public Health's Major Endemic Service (MSP), which had participated in Peace Corps/Washington's regional start-up workshop for its Guinea Worm Eradication Program, held in Lomé, Togo, the end of January 1990. Other members of the committee include representatives of government agencies involved in public works and community development.

The national committee has been assigned these tasks:

- analyzing the problems related to Guinea worm and its impact on the country's socioeconomic development,
- designing and preparing a plan of action for eradication of the disease,

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- collaborating with national and international agencies and countries that are pursuing the same objective,
- coordinating, monitoring, and evaluating the eradication plan,
- promoting research that contributes to the committee's objective,
- organizing and participating in the training of personnel involved in the struggle against dracunculiasis.

A Technical Committee will be established to bring together members of the national committee with representatives from other services and organizations interested in the program, such as UNICEF, CUSO, and Peace Corps.

UNICEF/Togo is in the process of helping to establish a system to determine the precise number of Guinea worm cases in Togo. With the Ministry of Public Health's approval, an active nationwide search, financed by UNICEF, is expected to begin in November 1990.

As in other aspects of the national program, Peace Corps Volunteers will be involved in this nationwide search. In February, Peace Corps/Togo organized a seminar to train Volunteers and their Togolese counterparts who will be working in the national Guinea worm eradication program. This training prepared them to participate in the survey and collect data, including a list of the villages affected, the number of patients per village, and the villagers' sources of water.

Part II

PARTICIPATION OF THE PEACE CORPS

A. Programming Criteria of the Peace Corps and Its Strategy for Participation in this Program

Since 1985, Peace Corps/Togo has been working with the Ministry of Public Health's National Health Education Service to educate and encourage villagers to act effectively on their major health problems. The two organizations have been successfully pursuing a policy of social mobilization and health education that relies primarily on the government's health education coordinators, the villagers who are either members of village development committees or in charge of developing water sources, and Peace Corps Volunteers who assist them. The current project will follow the same strategy in focusing on the Guinea worm problem.

In pursuit of this strategy and in line with Peace Corps' programming criteria, these are some of the specific actions that will be taken:

- Workshops and seminars will be held to train Volunteers and their counterparts.
- Volunteers will be assigned to live and work in villages where Guinea worm is endemic. Priority will be given to those villages where health workers are needed.
- A prior campaign will be conducted to acquaint villagers with the Guinea worm eradication program and prepare them for the PCVs' arrival.
- The organizational structure for village participation will be reinforced by training members of the village development committees and those in charge of developing water sources to be the leaders of the Guinea worm eradication program in their respective villages.
- All villagers will be expected to participate in the program, providing labor and resources.

This project fits in with Togo's national plan to eradicate dracunculiasis and will tie in with other government efforts by government and nongovernment agencies, as well as Peace Corps, that bear on the Guinea worm problem (see Section G). In carrying out the project, Peace Corps will be relying heavily on the central, regional, and peripheral technical services of the ministries of Public Health, and Social Affairs and Women's Status, the Department of Rural Equipment (Village Hydraulics), and other government departments. It also will integrate the work of the Volunteers, most of whom will be generalists, with the Peace Corps' own efforts to improve agricultural development, water supply and sanitation, and education for child survival.

Sections F through L outline the Volunteers' major tasks, the activities of collaborating agencies, the resources needed, the staging and location of Volunteers, plans for monitoring and evaluation, and pre-service and in-service training needs. The national action plan calls for an evaluation of the project, but Peace Corps also intends to do an annual assessment of the work of its Volunteers and their counterparts. In addition, over the five-year period, Peace Corps/Togo proposes to have two interim and a final outside evaluation, the latter to take place in December 1996, just prior to the departure of the project's last group of Volunteers.

B. Project Purpose

It is clear from the prevalence of Guinea worm that villagers are uninformed about how the disease is contracted and spread and are not taking the necessary steps to either change their hygiene practices or develop good sources of water, which would eliminate the disease. The need to educate them is obvious.

C. Project Goals

The goals of the 50 volunteers who will be working on the project, to be achieved by December 1996, are these:

1. To assist in training and mobilizing at least 9,100 nationals (health workers, teachers, members of village development committees) operating in villages where Guinea worm is endemic to participate actively in the national effort to eliminate the disease;
2. To reduce to zero percent (0%) the incidence of Guinea worm in the villages where the PCVs have been working.

D. Project Objectives

To achieve the first goal will involve training the following:

- 100 government health workers in strategies for eliminating Guinea worm by 1996;
- 7,500 members of village development committees and other key villagers in health education and methods for mobilizing community action;
- 750 teachers in the development of a school curriculum in health education that emphasizes strategies to eradicate Guinea worm.

Additionally, to arrive at the second and primary goal will require the PCVs and their counterparts to assist in achieving the following by 1996:

- 750 workers trained as masons, well-diggers, etc. and new water sources developed in 750 villages;
- 7,500 latrines built, 10 per village;
- 130,000 villagers educated and putting into practice what they have learned about Guinea worm—e.g., no one with open sores soaking his or her feet in water the community uses for drinking purposes, villagers who use backwater (80% of the target population) filtering it first before drinking it.

E. Milestones in Achieving These Objectives

By the end of 1992, at least 38 community health workers from the ministries of Public Health, and Social Affairs and Women's Status will have participated in six training seminars on eradicating Guinea worm and will have demonstrated their knowledge in the field.

By the end of 1992, Volunteers and their counterparts will have organized a training seminar for representatives of 165 village development committees on the committees' role in eradicating Guinea worm, and another seminar for 165 teachers on their role and that of their pupils in the effort to eliminate the disease.

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By the end of 1992, at least 165 persons will have participated in a seminar, organized by Volunteers and their counterparts, to train them in developing sources of water and will have demonstrated their knowledge in the field.

After one year of working with the villagers, educating them about the causes and effects of dracunculiasis, the Volunteers and their counterparts will expect to see at least half the target population convinced of the relationship between contaminated water and Guinea worm disease and act accordingly—i.e., filter backwater before drinking it, prevent people from soaking their infected feet in the community's water supply, and be motivated to develop uncontaminated sources of water. At least five of the villages also will have mobilized all their resources to develop new sources of water.

F. Main Tasks

ACTIVITIES/MAIN TASKS	AA	1st Q. J F M	2nd Q. A M J	3rd Q. J A S	4th Q. O N D	5th Q. J F M	6th Q. A M J	7th Q. J A S	8th Q. O N D
1. STUDY OF SETTING									
• Contact Chief-physician and Counterparts	154/155	—							
• Contact political + traditional leaders, and administrative and technical officials interested	154 155 162	—							
• Prepare local plan of action	"	—							
• Identify and train local collaborators	"	—							
• Take surveys to collect baseline data: villages affected, number of Guinea worm cases, water sources, period manifested, situation at school, etc.	154/155	—							
• Map the prefectures for the zone affected	154/155		—						
• Prepare a brief project description	154/155								
2. <u>KAP SURVEYS</u>									
• Identify and train local volunteer workers	154/155		—						
• Implement/supervise/coordinate KAP surveys	154/155			—					
• Process and analyze data	154/155	—	—						
• Record and report results	154/155		—						

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ACTIVITIES/MAIN TASKS	AA	1st Q. J F M	2nd Q. A M J	3rd Q. J A S	4th Q. O N D	5th Q. J F M	6th Q. A M J	7th Q. J A S	8th Q. O N D
3. ORGANIZATION AND TRAINING OF PRINCIPAL PROJECT WORKERS									
• Select workers to train: health workers, social affairs promoters, from the DRDR, teachers, etc.	154/155								
• Organize/revive the CVD and HFR	162/155								
• Prepare the teaching material	154/155								
• Conduct the training sessions	154/155								
• Train tailors/seamstresses to manufacture cloth filters									
4. EDUCATIONAL CAMPAIGNS									
• Prepare educational materials	154/155								
• Organize meetings for fostering awareness	154/155/ 162								
• Organize health education talks and meetings	154/155								
• Organize demonstration sessions	154/155								

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ACTIVITIES/MAIN TASKS	AA	1st Q. J F M	2nd Q. A M J	3rd Q. J A S	4th Q. O N D	5th Q. J F M	6th Q. A M J	7th Q. J A S	8th Q. O N D
5. DEVELOPMENT OF DRINKING WATER SOURCES/SANITATION									
• Inventory existing water sources		_____							
• Assess needs/water sources		_____							
• Plan micro-projects for developing water sources		_____	_____						
• Mobilize local resources					_____				
• Request complementary resources needed					_____				
• Implement micro-projects					_____	_____			
6. MONITORING/EVALUATION									
• Prepare monitoring and evaluation cards	155/154 162			_____					
• Together with project's principal workers, make supervisory rounds to coordinate activities	154/155 162				_____	_____	_____	_____	_____
• Organize periodic meetings with the different groups involved in the project	154/155 162				_____	_____	_____	_____	_____
• Do surveillance surveys	154/155				_____	_____	_____	_____	_____

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ACTIVITIES/MAIN TASKS	AA	1st Q. J F M	2nd Q. A M J	3rd Q. J A S	4th Q. O N D	5th Q. J F M	6th Q. A M J	7th Q. J A S	8th Q. O N D
• Evaluate surveys periodically	154/155								
• Prepare monitoring/evaluation reports	154/155 162								
• Discuss results of evaluation reports with villagers, Chief-physician, and other persons interested	154/155 162								
• Participate in project meetings and seminars	154/155 162								

G. Collaborating Services and Agencies

NAME OF SERVICES AND AGENCIES	NATURE OF COOPERATION	DURATION OF COOPERATION	COMMENTS ON THE QUALITY OF COOPERATION
MINISTRY OF PUBLIC HEALTH			
SNES	<ul style="list-style-type: none"> • Development, implementation, and evaluation of the health education and social mobilization strategy: production of education materials 	1991-1996	Good cooperation in the context of Education for Child Survival project (since 1985). This cooperation could well continue in this project.
SGE	<ul style="list-style-type: none"> • Program coordination 	1990-1996	
UNICEF	<ul style="list-style-type: none"> • Financial support for the first epidemiological surveys for collecting baseline data on Guinea worm • Financial support for epidemiological surveillance • Financial support for production of education materials 	<p>November 1990 to March 1991</p> <p>Once yearly</p> <p>1991 and annual review</p>	A major source of financial support for the Education for Child Survival Project. This support could well continue in this project.
WORLD NEIGHBORS	<ul style="list-style-type: none"> • Logistical assistance for activities in the prefecture of Bassar 	1990-1996	Good cooperation between Peace Corps and World Neighbors in Bassar (since 1989). This cooperation should be reinforced during this project.
USAID	<ul style="list-style-type: none"> • Financial assistance for undertaking micro-projects in the area of water and sanitation • Provision of means of transportation for some counterparts 	<p>1991-1996</p> <p>1990-1991</p>	<p>SPA funds available for micro-projects in health</p> <p>USAID and PC/Togo could study the possibility of increasing total funding during the course of this project.</p>

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NAME OF SERVICES AND AGENCIES

NATURE OF COOPERATION

DURATION OF COOPERATION

COMMENTS ON THE QUALITY OF COOPERATION

GLOBAL 2000

- Financial support for baseline surveys in the prefecture of Bassar.

November 1990

-

WHO

- Financial support for training of health workers and Volunteers for the baseline surveys.

July 1990

-

MINISTRY OF NATIONAL EDUCATION AND SCIENTIFIC RESEARCH

- Teacher training

1991-1196

Good cooperation with the Office of Primary Education

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H. Evaluation of Resources Needed

NATURE OF RESOURCES	QUANTITY/COST	POTENTIAL SOURCES	PERIOD
<u>Human Resources</u>			
• Peace Corps Volunteers	50 5	PC/W PC/W + PC/T	1990, 1991, 1992, 1993, 1994 1992, 1995
• Trainers (for training grass-roots Volunteers)	2	PC/W	1992, 1995
• Consultants for evaluation	50 (at least)	MSP/MASCF	1990, 1991, 1992, 1993, 1994
• Counterparts for Volunteers	7,500	Beneficiary communities	1990, 1991, 1992, 1993, 1994
• Members CVD/HFR	750	MENRS/DEPDIEPD	1990, 1991, 1992, 1993, 1994
• Teachers			
<u>Material Resources</u>			
• Training documents and modules (PST, IST)	- to be determined	OTAPS/CP/W	1990
• Educational material (picture boxes, slides, film, banderoles)	30	OTAPS/CP/W/ UNICEF	1990-1991 1995
• Bicycles for Volunteers	50 (at least)	PC/W, PC/T	1990 1994
• Motorcycles for counterparts	to be determined	to be sought	1990 1994
• Office furniture	to be determined	PC/T, MSP, Others	1990 1994
• Local materials	to be determined	Beneficiary communities	1991 1995
• Housing for Volunteers	30	G.O.T.	1990 1996

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Financial Resources

• Training/refresher courses for 100 health workers (150 sessions)	27,000,000 CFA	PC/W (OTAPS), UNICEF, others	1991 1996
• Training/refresher courses for 750 teachers (100 sessions)	18,000,000 CFA	PC/W (OTAPS), UNICEF, others	
• Training 750 members of the CVD/HFR (150 sessions)	27,000,000 CFA	PC/W (OTAPS), UNICEF, others	
• Cement (to develop 750 water sources)	112,500,000 CFA	SPA/AID and others to be sought	1991 1996
• Cement and iron (to install 750 family latrines)	1,150,000,000 CFA	SPA/AID and others to be sought	1991 1996

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I. Need for Volunteers and Volunteer/Trainees

1. FY 1990; on job as of September 30, 1990: 0 Volunteers; 07 Volunteer/trainees

2. Demand for Volunteer/trainees:

PRESENT PROJECTION				
FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
7	12	13	10	8

J. Assignment Plan in the Health Subdivisions Concerned

HEALTH SUBDIVISIONS	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994	TOTAL
TONE		1	2	1	1	5
OTI		3	1	2	1	7
KERAN			1			1
KOZAH			1			1
BASSAR	4	1	3	1	3	12
SOTOUBOUA		1	1	1		3
OGOUE		3	1	2	1	7
HAHO	3	1	2	1	1	8
KLOTO		2	1	2	1	6
TOTAL	7	12	13	10	8	50

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K. Monitoring and Evaluation Plan

SOME INDICATORS	METHODS FOR COLLECTING DATA	REPORTING METHODS	PERSONS IN CHARGE
- Comments of Volunteers and counterparts	Project report	Annual reports and collaborators of the MSP and MASCF	Associate Director
- Number of health workers trained	Activities report	Monthly and quarterly reports	Volunteers and counterparts
- Number of villages covered	" "	" "	" "
- Number of members CVD/HFR trained	" "	" "	" "
- Number of teachers trained	" "	" "	" "
- Number of workers involved	" "	" "	" "
- Number of water sources developed	Observations and reports of financing sources	" "	" "
- Change in KAP regarding dracunculiasis	Group interview, KAP surveys	Annual reports	" "
- Incidence of dracunculiasis	Epidemiological surveys/surveillance	Annual reports	" "
- Number of training sessions	Activities report	Quarterly reports	" "
- Number of consciousness-raising sessions	" "	" "	" "
- Number of talks organized	" "	" "	" "
- Materials developed	Project report	Annual report	Associate Director and collaborators of the MSP and MASCF
- Community satisfaction (incl. school population)	Group and individual interviews	Annual report	Volunteers, counterparts, Associate Director & collaborators of the MSP and MASCF
- Availability of needed resources	Contract with different donors	Semester report	" "

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L. Pre-Service and In-Service Training Needs

Qualifications for New Recruits

- AA 155/Health educators; they should be generalists,
- AA 154/Health educators with degrees in public health,
- AA 162/Community development workers with degrees in social service or community development will also be helpful to foster active community participation.

Pre-Service Training

A total of five pre-service training sessions will take place between the months of September to December, from 1990 to 1994.

These sessions will require the following:

- 5 Technical Coordinators (one each year) in education for eradication of dracunculiasis (3-month contract each);
- 5 Specialists in community development (short-term contracts—2 to 4 weeks at most);
- 5 Specialists in development of water sources in a rural setting; (short-term contract—no more than 2 weeks).

These materials will be needed:

- Training modules on eradication of dracunculiasis
- Specific modules on techniques for supplying drinking water and sanitation in a rural setting
- Various videocassettes and films on dracunculiasis eradication strategies, etc.

In-Service Training

At least three technical seminars and meetings will take place yearly. These will require the following:

- Facilitators (local or otherwise);
- Training modules;
- Various videocassettes and films;
- Building materials (cement, iron, etc.);
- Funds for financing different seminar costs.

M. Project Approval by the Director of the Peace Corps/Togo

READ AND APPROVED BY:

Mr. Robert NICOLAS, _____
Signature Date

DIRECTOR OF THE PEACE CORPS, TOGO

ANNEX 1

POSSIBLE INTERVENTIONS IN THE VILLAGES
(Table prepared by the National Committee for the Eradication
of the Guinea Worm in Togo)

VILLAGE SITUATION	INTERVENTIONS				
	SOCIAL MOBILIZATION ¹	CREATION OF WATER SOURCE ²	MAIN-TENANCE ³	CHEMICAL TREATMENT ⁴	EPIDEMIO-LOGICAL SURVEILLANCE ⁵
1. VILLAGES WITH WATER, WITHOUT GUINEA WORM					■
2. VILLAGES WITH DRINKING WATER, AND WITH GUINEA WORM	*				*
3. VILLAGES WITH DRINKING WATER OUT OF SERVICE AND WITHOUT GUINEA WORM	■		*		■
4. VILLAGE WITH DRINKING WATER OUT OF SERVICE AND WITH GUINEA WORM	*		*		*
5. VILLAGES WITHOUT DRINKING WATER AND WITHOUT GUINEA WORM	■	*	*	■	■
6. VILLAGES WITHOUT DRINKING WATER AND WITH GUINEA WORM	*	*	*	*	*

■ = desirable/advisable intervention

* = necessary interventions

¹ INVOLVES MINISTRIES OF SOCIAL AFFAIRS, HEALTH, EDUCATION, UNFT/RPT; UNICEF; AND PEACE CORPS.

² INVOLVES HYDRAULIC OFFICE, KfW, FAC/FED, UNICEF, JAPAN, ACDI/CUSO, FENU, AND NGOS.

³ INVOLVES HYDRAULIC OFFICE, FED, UNICEF, FENU, AND KfW.

⁴ INVOLVES MINISTRY OF HEALTH, WHO, GLOBAL 2000, PEACE CORPS, AND THE CARTER FOUNDATION.

⁵ INVOLVES MINISTRIES OF HEALTH, RURAL DEVELOPMENT, EDUCATION, AND SOCIAL AFFAIRS; AND CDC; AND THE PEACE CORPS.

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ANNEX 2

ACRONYMS

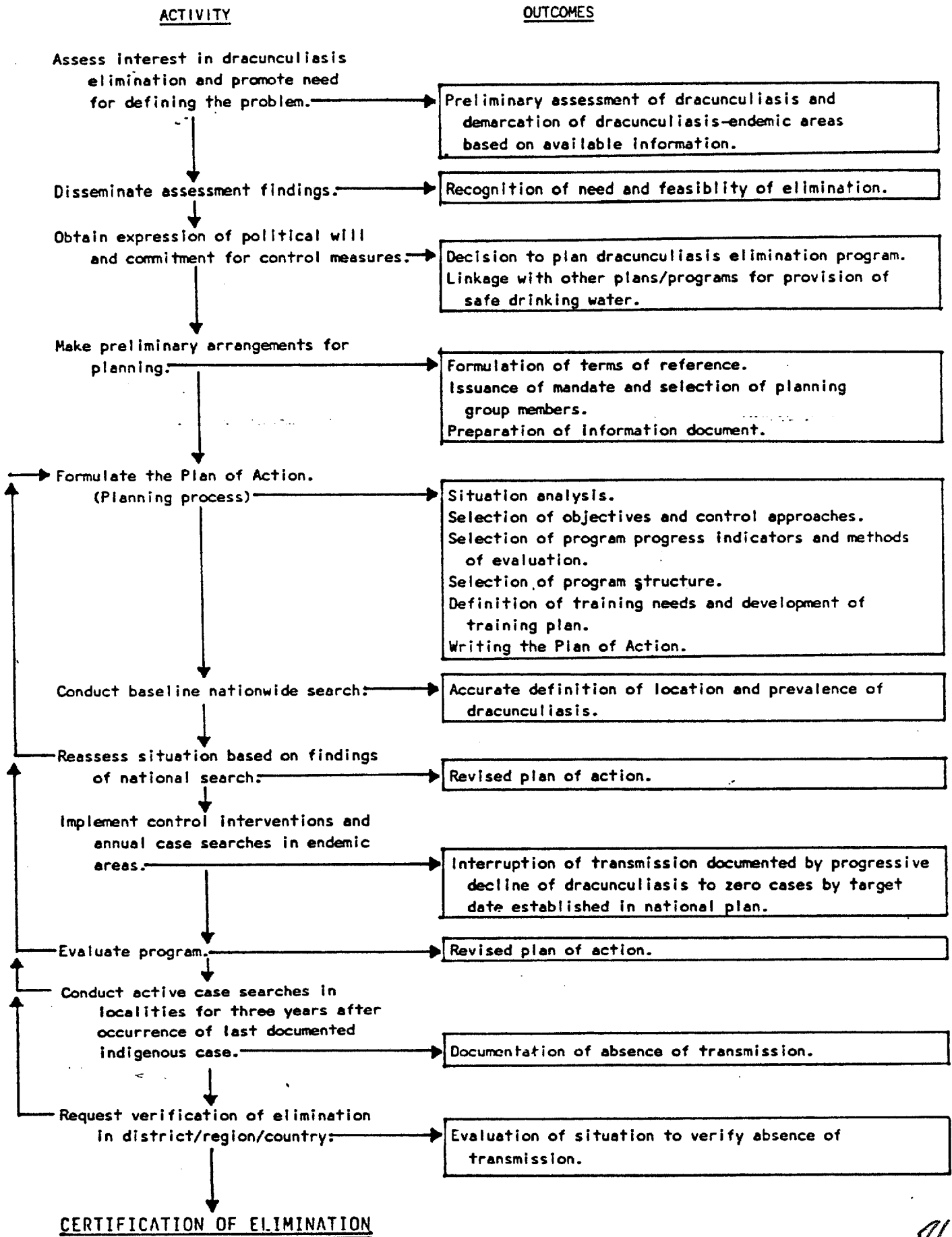
APCD	Associate Peace Corps Director
APS	<i>Agent de Promotion Sociale</i> (Social Promotion Worker)
CEPS	<i>Coordonnateur d'Education pour la Santé</i> (Health Education Coordinator)
CUSO	Canadian University Overseas Service
CVD	<i>Comité Villageois de Développement</i> (Village Development Committee)
DEPD	<i>Direction de l'Enseignement du Premier Degré</i> (Office of Primary Education)
EPS	<i>Education pour la Santé</i> (Health Education)
EVG	<i>Eradication du Ver de Guinée</i> (Eradication of the Guinea Worm)
FVEP	<i>Forage Villageois pour l'Eau Potable</i> (Village Drilling for Drinking Water [Evangelical Church of Togo])
FY	Fiscal year
GOT	Government of Togo
GTZ	German Technical Cooperation Agency
HFR	<i>Hommes et Femmes Responsables</i> (Men and Women in Charge)
IEPD	<i>Inspection de l'Enseignement du Premier Degré</i> (Office of the Inspector for Primary Education)
IST	In-service training
LcPALU	<i>Lutte contre le Paludisme</i> (Campaign to Control Malaria)
LMD	<i>Lutte contre les Maladies Diarrhéiques</i> (Campaign to Control Diarrheal Diseases)
MASCF	<i>Ministère des Affaires Sociales et de la Condition Féminine</i> (Ministry of Social Affairs and Women's Status)
MCSS	<i>Médecin-Chef de Subdivision Sanitaire</i> (Chief-physician of the Sanitary Subdivision)

MDR	<i>Ministère du Développement Rural</i> (Ministry of Rural Development)
MENRS	<i>Ministère de l'Éducation Nationale et de la Recherche Scientifique</i> (Ministry of National Education and Scientific Research)
MSP	<i>Ministère de la Santé Publique</i> (Ministry of Public Health)
NGO	Nongovernmental organization
OTAPS	Office of Training and Program Support (U.S. Peace Corps)
PC/W	U.S. Peace Corps/Washington
PC	U.S. Peace Corps
PCV	Peace Corps Volunteers
PEV	<i>Programme Elargi de Vaccination</i> (Expanded Program on Immunization)
PST	Pre-service training
SNES	<i>Service National d'Éducation pour la Santé</i> (National Health Education Service)
SNSS	<i>Service National de Statistiques Sanitaires</i> (National Health Statistics Service)
TSGS	<i>Technicien Supérieur de Génie Sanitaire</i> (Senior Sanitary Engineer)
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
VM	<i>Voisins Mondiaux</i> (World Neighbors)
WHA	World Health Assembly
WHO	World Health Organization

APPENDIX B

**STEPS IN THE PLANNING, IMPLEMENTATION AND EVALUATION OF
PROGRAMS TO ELIMINATE DRACUNCULIASIS**

**STEPS IN THE PLANNING, IMPLEMENTATION AND EVALUATION OF PROGRAMS
TO ELIMINATE DRACUNCULIASIS**



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APPENDIX C

PCV SECONDARY PROJECTS

APPENDIX C

PCV SECONDARY PROJECTS

1. Involvement of PCVs in Elimination Activities as Secondary Projects⁴

The key to successful programming of GWE activities is coordination of activities within the structure established by the National Action Plan (NAP) for Guinea worm eradication. This ensures that there is a chain of command with which Volunteers can establish linkages at the local and district levels.

Once the NAP is established, survey forms and methodology are designed for the initial surveillance activities. Community-based Volunteers in all sectors can be involved in the initial survey without a great deal of training or effort. The results of this survey are apt to be surprising; in endemic areas Volunteers have found the incidence of Guinea worm disease and its resultant effects much greater than they had previously expected. Even in areas where Volunteers have been involved for a number of years in agriculture extension, community development, or education projects, they are usually unaware of the frequency of the disease or the degree of suffering and economic loss it causes in their communities until they become actively involved in identification of the disease. Equally surprising has been the lack of recognition of the scope of the problem by community leaders and local, regional, and national officials. This has extended to a lack of understanding of the nature and causes of the disease, even among trained health workers, teachers, and other relatively well-educated members of the community.

Interest among Volunteer teachers in the early stages of GWE efforts has been primarily in conducting hands-on activities within the communities where the Volunteers serve—surveys, educational activities, etc. This is exactly the kind of contact within the community that is often lacking in education assignments, and thus the experience with the GWE activities has been extremely positive for the Volunteers. Involvement of Volunteer teachers in curriculum development and working through their students and fellow teachers begins to take place later in the community education effort, once the problem is already well recognized and program implementation structures coordinated through the National Action Plan are functioning.

GWE activities can best be promoted among all Volunteers by beginning in Pre-service Training with appropriate follow-up in In-service Training. Key to coordination is nomination of an APCD to work with programmers from the other technical sectors, providing direction

⁴Peace Corps programmers in Benin, Cameroon, and Ghana were contacted to share their experiences with involvement of PCVs in GWE activities as secondary projects. Their comments are summarized in this section.

and keeping activities in step with National Action Plan activities, political strategies, and training events.

2. Examples of Guinea Worm Eradication Activities Undertaken by PCV's as Secondary Projects

<u>Activities</u>	<u>Coordination Required</u>
Initial Surveys and Community Assessments <ul style="list-style-type: none">- disease surveys- KAP studies- water resource surveys	Standardized survey forms and methodology available from National Action Committee
Community Education <ul style="list-style-type: none">- skits/plays on Guinea worm transmission- water filter distribution and demonstrations- handbook and educational material development	Training strategies cleared through National Action Committee
Water Supply Improvement <ul style="list-style-type: none">- improvement of existing wells- chemical treatment of water sources with Abate- water catchment system construction for homes, schools, clinics- new well construction	Coordination of funding sources and need for protected sources of drinking water

APPENDIX D

MEASUREMENT OF THE PROBLEM

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MEASUREMENT OF THE PROBLEM⁵

Sample KAP study questions and a case search from *Community-Based Initiatives to Eradicate Guinea Worm: A Manual for Peace Corps Volunteers* are included here as examples of the kinds of activities that Volunteers can conduct as part of a community-based eradication effort. Additional activities and details can be found in the manual.

I. The Informal Interview

The informal interview is particularly valuable for gathering information from a few key informants on the different ways people think about an issue. Such information makes it easier to develop a more culturally appropriate and specific set of questions to conduct **formal interviewing** later if necessary.

Here are some important questions concerning community knowledge, attitudes, and practices (KAP) related to GWD that might be asked during individual interviews or during group discussion of the topics:

1. People's beliefs about cause

What is Guinea worm and where does it come from?
Why do some people get it, while others don't?
Who is most susceptible and when?
Does diet affect Guinea worm?; does time of year?; etc.

2. Recognition

What are the early signs of Guinea worm? What is the sequence of signs?
How do you know that you actually have Guinea worm?
How do you tell Guinea worm from other diseases?
How do you know when it is time to get help/treatment?

3. Prevention

Do you think Guinea worm is preventable?
What has the health worker told you?
Have you seen any successful preventive measures?

⁵ *Community-Based Initiatives to Eradicate Guinea Worm: A Manual for Peace Corps Volunteers*, prepared by Peace Corps/Vector Biology and Control Project (draft).

What preventive measures do you prefer and why?

If people believe that GWD can be prevented, they may be motivated to take action to eliminate it.

4. Treatment

What are the traditional remedies for Guinea worm?

How well do these remedies work?

How do most people in this village treat Guinea worm?

Do you believe that Guinea worm can be cured?

Do you think modern medicine can cure Guinea worm?

5. Seriousness

Is Guinea worm a problem in this village? Is it a serious problem?

Is it more or less serious than other common diseases?

How much Guinea worm is in the village?

How does it affect the village, families, individuals?

The answers to these questions will indicate how important GWD elimination is to a community. In order for GWD activities to be successful, its elimination must be important to the community members. If there are other problems they consider to be of higher priority, community member may not be ready or willing to address the problem in their village. Information on how it affects the lifestyle and productivity of the community may be used later to motivate them to continue their efforts.

Additional social and cultural issues that can affect GWD control activities include:

- the attitude of community members to health education, preferences for water supplies, beliefs and taboos on sanitation, drinking water, and water sources;
- community perceptions of benefits of improved water supply systems;
- past development project "histories" involving community participation projects and self-help projects;
- community willingness to pay or contribute in kind for improvements.

II.

Sample Case Search Form

Instructions: Complete PART A for all Villages. Date: _____
Complete PARTS B and C for Villages with cases now or in past year.

PART A

1. Region _____

2. District _____

3. Village _____

4. Source of village information (Name) _____

4a. Number of drinking water sources during transmission season _____

4b. Check sources of drinking water used in transmission season

Pond [] Dam [] Lake [] Stream [] Pool [] Spring []

Bore Hole [] Well [] Other _____

(pump) (hand dug) Describe

4c. What is the estimated village population? _____ Unknown []

The above estimate is based on Census [] Year _____

Tax Role [] Year _____

Other Estimate (Specify) _____

4d. Ask: Is there GWD in this village or has there been GWD in this village during the past year?

Yes [] No []

If no, go to next village.

If Yes, get an estimate of the total number of cases, or do a house-to-house survey and complete PARTS B and C.

PART B

5. Household Number _____

6. Head of Household (Name) _____

7. Length of Residence in Village _____

8. Do you migrate out of this village seasonally? Yes [] No []

9. Do you filter your drinking water?

Always [] Sometimes [] Never []

APPENDIX E

ANNOTATED BIBLIOGRAPHY

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ANNOTATED BIBLIOGRAPHY

Brieger, W. and F. Rosensweig. Workshop on Guinea Worm Control at the Community Level: A Training Guide. WASH Technical Report No. 50. Arlington, VA: WASH Project, 1988.

Contains guidance for setting up and conducting a two-and-a-half-day training program to help combat Guinea worm disease. The guide includes detailed trainer instructions and handouts.

Brieger, W., S. Watts, and M. Yacoob. Maternal Morbidity from Guinea Worm in Nigeria and Its Impact on Child Survival. WASH Field Report No. 232. Arlington, VA: WASH Project, 1988.

This study of two endemic areas in Nigeria established the direct link between Guinea worm disease and decline in children's well-being due to the disabilities of the mothers.

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This valuable paper argues effectively that the people served by WS&S programs, not the people helping them, should be in charge of project decisions and the management of the systems completed for them to be sustained and their impacts realized.

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This large training guide provides skill development sessions in all the suggested interventions and excellent training, health education, and background materials to accompany them.

———. Guidelines for Chemical Control of Copepod Populations in Dracunculiasis Eradication Program. Atlanta, GA: CDC, 1989.

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Strategic plan for the eradication of Guinea worm disease by 1995; provides the goal, strategy, and plan of action proposed by Global 2000. Also provides valuable data on funding needs, interventions, and profiles of endemic countries.

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A handbook of various water supply technologies found in small communities - designed for individuals with some technical knowledge of civil engineering, public health, or irrigation but with little formal training in water supply specifically. Provides many drawings and step-by-step explanation of design and maintenance of various types of systems.

Isely, R., and D. Yohalem. A Workshop Design for Community Participation. Vol. I: Starting Work with Communities, and Vol. II: Planning and Implementing Sustainable Projects. Arlington, VA: WASH Project, 1988.

Provides detailed guidance on how to plan and deliver two two-week training programs to improve the skills of field workers responsible for promoting the active participation of communities in all aspects of project development and implementation. The two workshops should be delivered six months apart.

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———. The Small Projects Assistance Program Handbook (draft).

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Project paper to describe the Guinea worm elimination program and outline financial assistance from UNICEF for transportation (motorcycles) and project-related materials for interventions by Peace Corps Volunteers.

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Yacoob, M., and D. Yohalem. Second Regional Conference on Guinea Worm in Africa: Accra, Ghana, March 14-18, 1988. WASH Field Report No. 240. Arlington, VA: WASH Project, 1988.

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