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COUNTRY ASSESSMENT
COMBATING CHILDHOOD COMMUNICABLE DISEASES PROJECT
TOGO

Country Assessment Team
Government of Togo
Ministry of Public Health
USAID
Centers for Disease Control

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Executive Summary

CCCD Togo

A Togolese-American team evaluated the possibility of a cooperative program for the integration of primary health services. This cooperation would be accomplished in accord with the Cooperation for Development in Africa (CDA) which is represented by the Centers for Disease Control (CDC) under the auspices of the U.S. Agency for International Development (AID). The cooperative program is called Combatting Childhood Communicable Diseases (CCCD). This program consists of the following basic activities: the Expanded Program on Immunization (EPI); the Control of Diarrheal Diseases; Malaria Control and Yaws Control. Target populations for these activities are children 0-4 years of age (up to 59 months) and pregnant females.

A review of epidemiologic records of the Togolese Ministry of Health confirms the importance of these diseases, and discussions with the Director General and his staff underscores the priority that the government ascribes to these diseases.

An analysis of disease control already underway attests to the commitment of the government. Though the Togolese Government has not yet developed a plan for primary health care as such, activities of the Expanded Program on Immunization have been underway for 2 years and are on schedule as outlined in the national EPI plan. The government has also developed national plans for the control of diarrheal diseases and malaria, two programs to be implemented in the near future.

Presently, the Ministry of Health has a relatively well developed infrastructure. Even if the number of health workers at the community level is insufficient, there are numerous fixed health centers directed by well-motivated personnel. Emphasis on training of health personnel and supply of supplementary equipment and supplies to the existing health care system could expand primary health care services to the point of being accessible to the majority of Togolese citizens.

The evaluation team agreed on a strategy which would extend the CCCD disease control programs progressively throughout the country. Beginning in the Maritime Region, it is envisaged that the program would progressively increase its coverage in program areas from 30% to 80% of the population during the four years of bilateral cooperation. The activities will begin in one administrative region and expand by one region each year except in 1985, when it will expand to two regions (Kara and Centrale). It is expected that national coverage by CCCD services will approach 65% at the end of the 4 year period of cooperation.

AID's proposed commitment is to provide the supplies necessary for this program (vaccines, medications, vehicles and cold chain equipment) and to provide technical assistance through a Technical Officer, based in Lome within the Ministry of Health. AID would also provide training materials, transport and per diem for participants in national CCCD training programs. In addition, the Togolese Government would participate in regional CCCD activities such as training courses, operational research and improvement of health information systems in addition to similar activities included in the bilateral program.

The Togolese Government would be responsible for the direction of all CCCD activities. This includes coordination of activities of the Ministry, upkeep of health facilities, vehicles, cold chain equipment, and training, supervision and maintenance of health personnel.

The financial assistance of the U.S. Government will decrease by 25% per year, relative to the total requirements of the program. The total USAID contribution, divided over the 4 years of the cooperative program, will be approximately \$1.2 million. The Togolese Government will assure the continuation of all program activities following this initial 4 year cooperative activity.

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1. Introduction

1.1 CCCD in Africa

1.1.1 Scope of Project

The Combatting Childhood Communicable Diseases Project (CCCD) is a major co-operative effort of African nations, WHO and other nations, to reduce childhood mortality, disability and morbidity in Africa through improved prevention and control of childhood infectious diseases. CCCD is a specific response of CDA (Cooperation for Development in Africa) to the World Health Organization's request for increased technical cooperation in support of primary health care programs in Africa.

Assessments of current health status in Africa clearly identify children under the age of five years as being at exceptional risk of morbidity and mortality. Of the four million children born each year in Africa, it is estimated that 25% will die before their fifth birthday. Millions more are debilitated or permanently disabled by disease.

This high risk of death and disability is 20-25 times higher than that in children born in developed countries and represents an unacceptable level of human suffering. The basic causes reflect the complex interaction of undernutrition, infectious diseases, and economic underdevelopment. The priority and importance of economic development to the long-term improvement in health cannot be overlooked. A firm government commitment to integrated primary health care, with encouragement of community-based initiatives to prevent and control infectious diseases, can significantly improve child health during the next ten years. Integrated primary health care with

preventive and curative services and community-based initiatives is the basic philosophy of the CCCD project.

1.1.2 Purposes of Project

CCCD seeks to provide a regional mechanism for strengthening the ability of African health institutions, whether national or regional to identify priority childhood infectious diseases. It seeks to improve their ability to design, implement and evaluate appropriate integrated strategies for prevention and control of these diseases.

Three categories of childhood disease for which effective control technology exists have been assigned priority in the CCCD project. These are the vaccine preventable diseases, acute diarrheal disease and malaria. These priorities are based on estimates of under-five mortality from the major infectious diseases in Africa. The project is not limited to these elements. It may be expanded to include other diseases which may prove to be important causes of childhood morbidity and mortality in certain nations, such as meningitis, yellow fever or yaws.

The CCCD project makes available two types of technical cooperation; these are regional and bilateral (country-specific). Any African nation choosing to participate in CCCD can request one or more of the following regional activities:

- training
- training development/adaptation
- health education/promotion
- operational research
- CCCD health information system

In addition, certain countries will receive bilateral (country-specific) assistance. The U.S. currently plans to provide bilateral assistance to 12 countries during the first seven years of the project. It is expected that other CDA countries will provide bilateral assistance during the same time period to other countries in the African region. U.S. bilateral assistance is projected for 48 months in each of the 12 countries, to begin with two countries in 1982. Any country receiving bilateral assistance must comply with the USAID 25% host country contribution rule.

The regional activities are totally donor funded, have no recurrent implications and are not subject to the 25% host country contribution rules. An African country may receive assistance from the regional component, the bilateral component, or both.

1.1.3 Project Design

Under the CCCD project, a regionally funded Participating Agency Service Agreement (PASA) was executed in 1981 between AID and CDC. The PASA provides funds for CDC teams to participate in country assessments in selected African countries.

The objective of the assessments is to determine the current health situation in candidate countries, to assess their current plans and strategies, to identify available and required resources, and to specify, as appropriate, specific external assistance needs. The final country assessment report should contain the information necessary to enable development of a project grant agreement if a country is selected for U.S. bilateral assistance through CCCD.

2. Country Assessment for Togo

2.1 Method of Assessment

In July 1982, an assessment of current and projected primary health care activities was conducted by two medical epidemiologists and a technical officer from the Centers for Disease Control. These were joined by a USAID contractor, other USAID officials and representatives of the Ministry of Public Health of the Republic of Togo. Meetings were held with other government representatives and bilateral and international donor agencies. The team reviewed existing geographic and demographic data, the epidemiology of potential target diseases, and Ministry plans for controlling these diseases (vaccine-preventable diseases of childhood, diarrheal illness, malaria and yaws). Based on this review, the feasibility of implementing these plans was assessed and proposals for CCCD cooperation were developed.

2.2 Geographic and Demographic Data

2.2.1 Geographic Data

The Republic of Togo occupies 56,781 km² of the southern part of West Africa (see map). It is bordered on the south by the Bight of Benin, on the west by Ghana, on the north by Upper Volta and on the east by the People's Republic of Benin. The climate is sub-tropical, with temperature extremes of 20° - 35°C. Maximum annual rainfall ranges from 800 - 1,700 mm. The season of maximum rainfall is March-October. Togo is divided into five geographical regions which correspond to administrative planning units: from north to south, these are Savanes, La Kara, Centre, Plateaux and Maritime (including the capital city, Lome).

2.2.2 Demographic Data

National censuses were conducted in March-April 1970 and in November 1981.

Table 1 compares regional populations for these years.

Table 1
Regional and National Populations and Inter-censal Annual Growth Rates
Togo, 1970 and 1981

<u>REGION</u>	<u>1970 POPULATION</u>	<u>1981 POPULATION</u>	<u>ANNUAL GROWTH RATE</u>
Savanes	239,854	328,864	2.7%
Kara	359,822	423,874	1.4%
Centre	167,988	273,127	4.3%
Plateaux	471,548	647,992	2.8%
Maritime	708,083	1,029,088	3.3%
Total Togo	1,947,295	2,702,945	2.8%

Twenty-one urban centers range in population from 3,777 to 369,926 and comprise 25.1% of the national total.

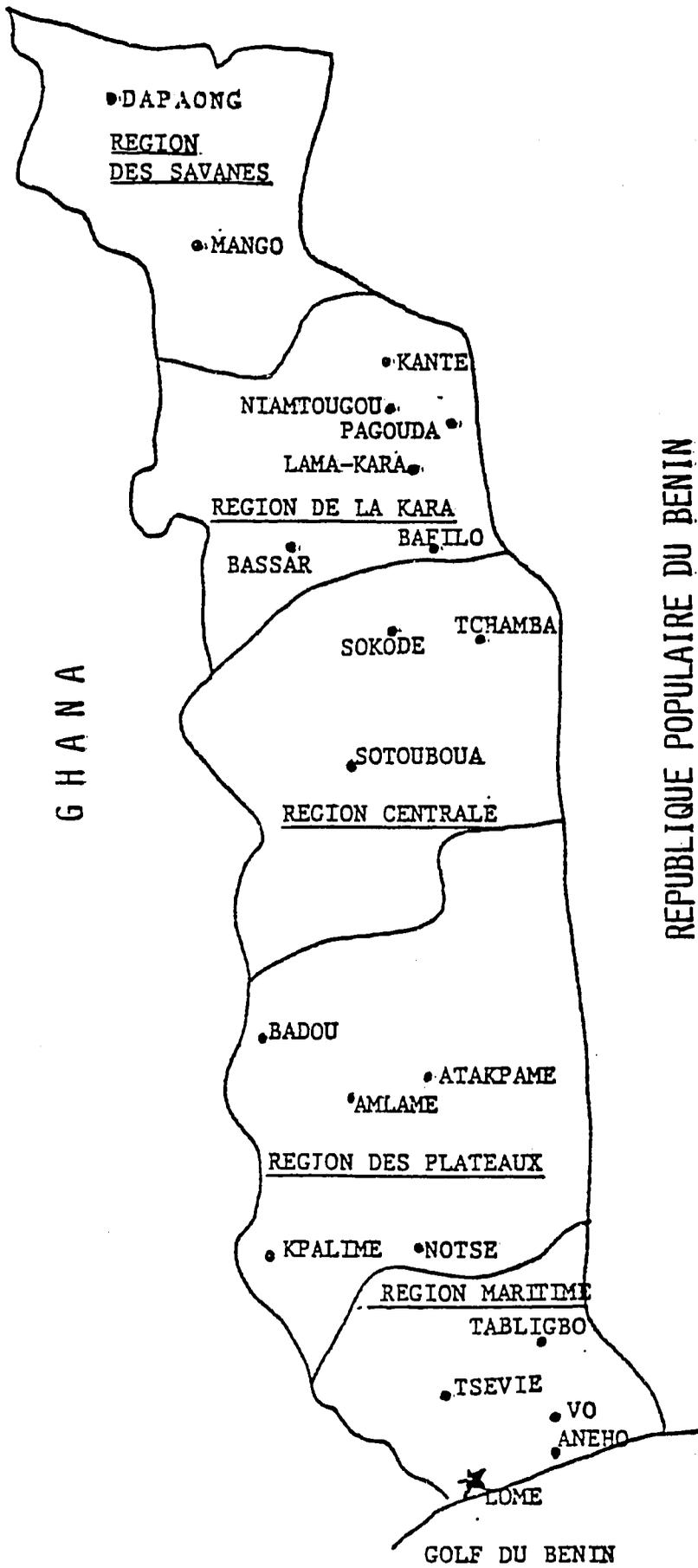
The age distribution is as follows, based on the 1970 census:

< 1 year	-	4.1%	
1-4 years	-	16.9%	21.0%
5-9 years	-	19.0%	28.8%
10-14 years	-	9.8%	49.8%
<hr/>			
15-14 years	-	21.0%	
45 + years	-	29.2%	

TOGO



HAUTE VOLTA



GHANA

REPUBLIQUE POPULAIRE DU BENIN

GOLF DU BENIN

The following estimates are obtained from the statistical divisions of Ministry of Plan and the Ministry of Health:

Crude Birth Rate	45.3/1,000
Crude Death Rate	18.8/1,000
Infant Mortality Rate	90.2/1,000
Under-five Mortality Rate	unavailable
Life expectancy at birth	46 years
School inscriptions	71%
Literacy	16%
Per capita GNP	\$290.00

2.3 Organizaton of Health Services

2.3.1 Central

The Ministry of Public Health is centrally organized into one administrative and seven operational divisions under the supervision of the Director General. Its structure is presented in Appendix 1. The Epidemiology Division is responsible for the health information system, infectious disease programs (including EPI), and diseases transmitted by insect vectors (including malaria). Health education activities are planned and implemented by the Division of Public Hygiene and Health Promotion. Diarrheal disease programs are directed by the Division of Maternal and Child Health Care.

2.3.2 Peripheral

There is little supervisory activity in health services at the regional level. Instead, responsibility for the implementation of health programs lies with the health services in the twenty-one sub-divisions.

2.3.3 Facilities

- 5 regional hospitals (including the Centre Hospitalier Universitaire)
- 21 sub-divisional hospitals
- 34 primary health centers (limited hospital facilities)
- 324 secondary health centers (dispensaries and MCH services under the direction of a state nurse)

In addition, there are two private hospitals and three leprosy clinics and rehabilitation centers.

The following indices can be calculated:

Number of hospital beds:	3400
Hospital beds:population:	1:712
Health Centers/Dispensaries:population:	1:8992
Physicians:population:	1:19, 416

2.3.4 Personnel

There are seven categories of health personnel.

1. chief medical officers - these are physicians (mostly Togolese nationals) with public health and hospital responsibilities. Most have training from outside Togo (France and Eastern Europe). They are assigned to their posts by the Ministry of Health and are frequently transferred. The nature of their duties includes administrative, supervisory, and practical tasks.
2. medical assistants - qualified nurses with three years additional training. They assume the responsibilities of the chief medical officer when necessary.

3. state nurses - these are divided into categories according to their level of training, and are responsible for the peripheral dispensaries.
4. hygiene assistant - also categorized by their level of training, they are responsible for environmental sanitation and other public health activities such as vaccination.
5. midwives - after three years of training, these are assigned to peripheral MCH clinics.
6. birth attendants (accoucheuses) - trained primarily by apprenticeships, they assist the midwives.
7. itinerant health workers (agents itinerants) - trained on-site by the chief medical officers, each is responsible for several villages and performs mostly educational and promotional duties. They are nurse's-aids and work out of the health units, to which they return daily. They are too few in number to allow the villages for which they are responsible to be visited more than once or twice per month. They usually have no physical services to offer, since medications are not available to them due to insufficient supplies. They serve more than 10,000 people and would need more training and material support to become more efficient.

The deployment of personnel (keyed to the above 7 categories) is as follows:

Category

	1 ¹	2	3	4	5	6	7
<u>Central</u>	73	40	295	89	137	10	1
<u>Regional</u>							
Maritime	14	7	169	17	35	94	38
Plateaux	17	10	145	43	41	94	40
Centre	9	6	104	24	22	46	41
La Kara	12	10	195	38	47	89	33
Savanes	5	4	90	17	18	39	31
Regional							
sub-total	57	37	719		139	163	362
Total	130	77	1014		228	300	372

¹ 47 foreign physicians (mostly hospital based) are not included.

2.3.5 Pharmaceuticals

All pharmaceutical products, including vaccines, anti-malarials and oral rehydration salts, are controlled and distributed by the state-operated monopoly, Togopharma. The company is responsible for importing, packaging, and distributing pharmaceuticals in both private and public health sectors (there are eighteen private pharmacies in Togo).

State agencies (Centre Hospitalier Universitaire, veterinary medical activities, etc.) purchase required supplies from Togopharma at wholesale prices. The Ministry of Health operates its own pharmaceutical division, Farmapro, which is responsible for purchasing pharmaceuticals from Togopharma in order to stock MOH facilities. Chief Medical Officers in each sub-division submit orders to Farmapro three months in advance, in accordance with budgeted

DESIGNATION	UNITE	QUANTITE			PRIX GROS	PRIX DETAIL
		1979	1980	1981		
NIVAQUINE SIROP	FL	31736	19737	30207	375	500
NIVAQUINE COMP. 100 mg	PL/1000	30250	25813	35487	3200	3805
NIVAQUINE COMP. 100 mg	B/1000	3032	2962	8741	4250	6000
FLAVOQUINE COMP. 200 mg	B/300	788	375	1865	4000	5700
FLAVOQUINE COMP. 200 mg	B/500	1478	2008	1985	4675	6675
FANSIDAR COMP.	B/300	387	436	574	16000	22500
FANSIDAR INJ.	B/60	1013	1327	2311	10350	14700
QUINIMAX COMP.	B/30	4425	4539	10121	620	885
QUINIMAX 0,20 INJ.	B/50		4948	5928	2040	2900
QUINIMAX 0,40 INJ.	B/50	6282	7257	9952	3665	5210
QUINOFORME 0,25 INJ.	3/100	2137	2782	2404	5750	8250
QUINOFORME 0,50 INJ.	B/100	2800	1793	4407	9300	13330
SERUM GLUCOSE 500 ml.	FL		205624	239958	235	320
SERUM SALE 9700 500 ml.	FL		74097	73426	280	400
VACCIN ANTIROUGEOLEUX (ROUVAX)	B/1			307	1115	1240
VACCIN. ANTIPOLIO	B/1			45	655	730
VACCIN D.T.C.						
VACCIN. TETRACOQ	B/1	12	30552	17000	530	590
VACCIN. B.C.G.	Commande speciale					
VACCIN V.A.T.	B/1			10584	120	130

PL - in country packaged

(fr. CFA) 330= \$1

purchase credits and their estimated needs. These requirements are tabulated by Farmapro, which is also responsible for distribution, although, in fact, distribution is frequently done by Togopharma, through its six regional depots. In addition, pharmaceuticals can be obtained by the consumer at any of Togopharma's 73 retail outlets. In general, medicines are supplied free to a patient at the time of his/her initial visit for the day of the treatment, and the patient is responsible for the purchase of any additional prescribed medication. Togopharma outlets are frequently located in close proximity to fixed health centers. The assessment team was unable to determine the amount of private funds spent by Togolese for the purchase of medications. Table 2 shows Togopharma consumption of selected products, and wholesale and retail prices.

2.3.6 Public Health Budget

Funds made available to the Ministry of Public Health for the years 1975-81 are presented below. The per capita expenditures do not include health-related funds made available to the Centre Hospitalier Universitaire or to the nationally subsidized pharmaceutical company, Togopharma.

Table 3. Public Health Expenditures - Togo, 1975-81

Year	Population	Overall Budget	Public Health Budget		% of Overall Budget	Per Capita ¹ Expenditure
			Operating	Investment		
1975	2,254,600	30,514,684	1,441,328	191,902	5.4	\$2.20
1976	2,312,100	50,018,859	1,846,367	65,000	3.8	2.51
1977	2,341,600	55,200,829	2,044,863	159,822	4.0	2.85
1978	2,436,500	60,598,000	2,911,087	56,000	4.9	3.69
1979	2,493,900	64,816,451	2,496,025	116,000	4.0	3.17
1980	2,507,157	67,274,711	2,837,944	141,000	4.4	3.60
1981	2,700,982	70,658,081	2,724,053	212,500	4.2	3.29

- All figures in thousands of CFA -

330 / 2937000
 2620100
 2970

¹ at \$1 equal to 330 CFA

330 / 2724053
 2640
 320
 420
 114053
 1053
 1533

271 / 8255000
 81
 15

2.3.7 Health Information System

Every public health care facility maintains a daily register of consultations and records the name, age, sex and diagnosis of each individual treated. Each week the Chief Medical Officer of each subdivision sends a telegram to the Division of Epidemiology reporting the number of cases of "quarantinable diseases" detected: these include cholera, yellow fever, cerebro-spinal meningitis, etc.

On a monthly basis, each facility sends a summary of its consultations to the

subdivisional Chief Medical Officer who, in turn, sends copies to the Division of Epidemiology and to the Service of Health Statistics. No tabulations are done at the regional level and there is no feedback to the subdivisions. Approximately 60% of the health facilities report with less than a four month delay. At the central level, diagnostic categories are encoded according to WHO guidelines and, since 1980, are tabulated and summarized by computer. The latest annual summary of health statistics is that for 1979 which was published in April 1982.

Hospitals report separately and irregularly to the Office of Health Statistics. Hospital statistics have been summarized only since the initiation of the computerized system, and no tabulated data are yet available.

As of July 1982, no age or cause-specific mortality data are available in Togo, and overall mortality can be determined only from national censuses or review of individual hospital records.

2.3.8 Major Health Problems

The publication, Health Statistics, 1979, represents a tabulation of 1,167,499 out-patient consultations seen in MOH facilities (23.8% fewer than in 1978, a situation officially attributed to information lost through the institution of new reporting system which is less rigorous and less demanding of peripherally situated reporters than the previous one). Infectious and parasitic diseases account for 35.7% of the total. As has always been the case, malaria accounts for the lion's share - 60% of reports of infectious diseases and 19% of all consultations. The chart below shows the proportional contribution of some major conditions to the 1979 experience in Togo:

Ten Leading Out-Patient Facility Diagnoses, Togo, 1979

1.	Malaria	19.5%	
2.	Diarrheal illnesses		10.7%
3.	Acute bronchitis		7.3%
4.	Skin diseases		4.6%
5.	Fever of undetermined origin		4.5%
6.	Gastric and duodenal ulcer		3.8%
7.	Soft-tissue trauma		3.0%
8.	Conjunctivitis		2.7%
9.	Head trauma	2.6%	
10.	Headache	2.5%	

3.0 Descriptive Epidemiology of Selected CCD Target Diseases

3.1 Mortality

As mentioned above, mortality data are not available through the health information system of the Ministry of Public Health. Hospital records may not be representative of the Togolese experience, but are all that is available. The records of the Dapaong Children's Hospital, in the Savane Region, which serves a population of ages 0-10 years, show the following for a two year period.

	<u>1980</u>	<u>1981</u>
Total Admissions	1858	1431
Admissions for diarrhea	441 (23.7%)	366 (25.6%)
Admissions for measles	163 (8.8%)	44 (3.1%)
Total deaths	238 (12.8%)	218 (15.2%)
Deaths from diarrhea	40 (16.9%)	31 (14.2%)
Deaths from measles	17 (7.1%)	9 (4.1%)

At the Pediatric Service of Centre Hospitalier Universitaire in 1979, 304/3234 (9.4%) of all admissions were diarrhea with dehydration, and the case fatality rate (CFR) was 25/304 (8.2%).

At the same hospital in 1980, 208 of 3200 (4.8%) of all admissions were for measles, of which 75% were in the age group 6-12 months. There were 36 deaths (CFR = 17.3%). The number of total deaths for these years was unavailable. (at the time of this assessment)

Reported Incidence Rates of Measles and Diarrheal Illness
by Region, Togo, 1979

Region	<u>Measles</u>			<u>Diarrhea</u>	
	<u>0-4 pop.</u>	<u>cases in</u> 0-4 pop	<u>incidence/100</u>	<u>cases in</u> 0-4 pop	<u>incidence/100</u>
Savane	69,061	3,233	4.7	18,171	26.3
La Kava	89,014	1,949	2.2	11,698	13.1
Centre	57,357	1,691	2.9	12,912	22.5
Plateaux	136,078	1,979	1.5	10,974	8.1
Maritime	216,108	4,616	2.1	21,542	10.0
National	567,618	13,468	2.4	75,297	13.3

21% of total population, from 1981 census

Interviews with sub-divisional medical officers, nurses, and village health workers in the Maritime Region also suggest that these two diseases (frequently together with malnutrition) and malaria, are the most frequent causes of death in children.

3.2 Morbidity

The following table shows the average number of case reports for selected CCCC target diseases for the years 1977-80 and the proportion of cases occurring in the target age groups in 1979.

	<u>Malaria</u>	<u>Diarrhea</u>	<u>Measles</u>	<u>Polio</u>	<u>Tetanus</u>	<u>Pertussis</u>
Average #						
Reported Cases						
1977-80	280,839	126,673	25,302	24	398	4687
% Cases in						
Target Age						
Group	47% ¹	45% ²	67% ²	52% ²	48% ²	73% ²

¹ children 0-4 years + women 15-44 years

² children 0-4 years

The surveillance system in Togo operates only in fixed health facilities and is very insensitive to disease incidence. Based on WHO methods of evaluating disease occurrence and surveillance sensitivity, MOH officials and the assessment team estimate that the following proportions of disease incidence are reported:

Pertussis	6%
Polio	7
Diphtheria	1%
Measles	20%
Diarrheal illness	10%
Malaria	5%
Yaws	1%

The epidemiology of CCCD target diseases cannot be adequately described unless the health information system is improved (or until special surveys are performed). Adequate baseline data will be necessary in order to document the progress of any health program and for evaluation of desired outcomes to be meaningful. The most pressing needs are for accurate mortality data and for increased coverage of the population so that a greater proportion of disease occurrence comes to the attention of the health officials.

A two-year follow-up study of 2000 live births in Lome is currently being performed by the National Statistics Office in order to determine mortality in the first two years of life. The results of the survey will help in the assessment of the accuracy of currently reported mortality statistics. It is suggested that a national 0-4 year old mortality survey be performed in the near future (perhaps as part of CCCD activities) in order to document age-and cause-specific mortality in this age group, to which future evaluations of the CCCD program could be compared.

4. National Health Policy Regarding Childhood Diseases

4.1 Health Plans and Strategies

A. National plans for EPI, Diarrhea Control and Malaria Control have been prepared in Togo but no comprehensive national health plan exists. Similarly, Togo has not yet prepared a national Primary Health Care (PHC) plan.

Nevertheless, national policy is generally consistent with the PHC approach. The National Economic and Social Development Plan (1981-1985) states that "health policy must be viewed in the framework of a general effort to improve the health status of the entire population. It must assure as complete coverage as possible by making health services more easily accessible to the people.

"In this context, Primary Health Care, as a basic and integral part of our health system, will be improved and reorganized so that it will provide the necessary measures to communities to solve their health problems.

"To this end, the entire population will be informed and organized to actively participate in the improvement and promotion of its own health.

"A greater number of physicians and para-medical personnel will be trained and the health facilities will be properly equipped and supplied at every level."

B. Objectives and Targets

Specific objectives for the achievement of the health related goals in this plan are included in four general categories: health facilities, disease prevention, pharmaceuticals and training.

In addition to construction of and additions to hospitals, the plan calls for building 25 dispensaries and 6 health centres and renovating another 50

dispensaries. For disease prevention, provision is made for a vaccination program for children and women (tetanus), a program addressing communicable and endemic diseases, a sanitation program and health education activities. In the area of pharmaceuticals, the emphasis is on pharmacy construction. The training objectives are stated in terms of the annual number of graduates, by category, to be added to the staff of the MOH. These include:

16 physicians
70 nurses
35 midwives
28 health assistants
28 laboratory technicians
30 health aids
100 itinerant health agents

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Refresher training is proposed for health workers of every category on a regular basis to improve their knowledge and performance.

The individual plans for EPI, CDD and malaria control contain specific objectives and targets which are presented in detail in this report under separate sub-chapters devoted to those activities. A summary of those objectives and targets is presented in the following table:

Disease Control Program Objectives and Targets

<u>PROGRAM</u>	<u>OBJECTIVES</u>	<u>TARGETS</u>
EPI	Reduction of morbidity and mortality due to the six childhood diseases preventable by immunization.	Coverage of 85-90% of target population by 1984, adding one re-5 years.
CDD	Reduction of morbidity and mortality due to diarrhea by integrating CDD	10% reduction in mortality per year.
Malaria	Reduction of morbidity and mortality due to malaria, initially concentrating on children 0-5 and pregnant women.	Progressive expansion of chemoprophylaxis, treatment and services with vector control a longer range goal.

C. Feasibility

1. General

The absence of a comprehensive health plan makes difficult an assessment of the feasibility of a primary health care system in Togo. In lengthy discussions and working sessions with MOH officials, however, several things have become clear with regard to priorities, plans and financial requirements (serious questions were raised regarding the feasibility of implementing primary health care in Togo.) As for priorities, there is a good match between what Togo has identified as problems needing to be addressed and what CCCD has to offer. That the MOH has developed plans for dealing with these priority problems and indeed, in the case of EPI, has already launched a national program, provides evidence of the government's interest and commitment.

The plans which have been developed for EPI, CDD and malaria control take into account the recommendations of WHO. Nevertheless, these plans do not consistently follow WHO's recommended procedures. The EPI target age group for example, differs considerably. In Togo, EPI has targeted children 0-47 months and all women 15-44 years (for tetanus toxoid) whereas WHO counsels emphasis on children less than one year of age and pregnant women. The cost differential between these two strategies, as well as the difference in potential epidemiological

impact and ease of access to and responsiveness of the targeted age groups, raise questions as to the potential for success at an affordable cost.

With regard to financial implications, the question of the absorptive capacity of the MOH of Togo is critical. Several issues have evolved from our discussions which call attention to the need for very careful planning in developing an integrated program for the control of childhood diseases in Togo.

The basic proposal presented by the MOH to the AID/CDC team calls for phased expansion of integrated services throughout Togo over a 5 year period (1983-1987). In the context of West Africa, Togo has a relatively well developed health infrastructure, with one fixed facility potentially capable of providing primary care for every 8-10 thousand population. Moreover, the government health budget (see 2.3.6.) is relatively high compared with neighboring countries. In short, there seem to be the elements in place which would augur well for a solid PHC program with good coverage and relatively easy access, and the plan for country-wide expansion in 5 years would appear reasonable. The question of increases in recurrent costs which will necessarily accompany the planned increase in services, however, require attention now if progress is to be unimpeded and at the planned pace.

2. Government Commitment

As mentioned above, the government's implementation of EPI in 1980, relying largely on its own resources but with vaccine contributions from UNICEF and the AID/WHO project for Strengthening Health Delivery Systems (SHDS), demonstrates the commitment of Togo to the control of childhood diseases. As will be seen in Section C (4) - "Resources Currently Available or Committed", the National Economic and Social Development Plan makes provision for significant financial support to disease control activities.

Several agencies of the government, within the MOH and elsewhere (e.g. Ministry of Social Affairs and Feminine Status), have planned and implemented primary health care programs. Each of these agencies is using its own approach and most have their own community level workers. The MOH in its Basic Health Services Project, launched in the 1960s, hired and trained Itinerant Health Agents ("Agents Itinerants") to provide primary care to a prescribed number of communities. These agents now number 183, which is vastly insufficient to meet the needs of Togolese communities, and, according to MOH officials, few of the current agents really do their prescribed jobs, apparently for lack of mobility and logistical support. The implementation of these various community level activities by a range of government agencies, while giving evidence of commitment to primary health care, points up the need for

coordination. No one agency has the overall responsibility for this coordination.

3. Resources Required for Implementation

With current levels of health facilities and personnel, the Togo health system appears to provide relatively easy access for the majority of the population. The additional facilities and staff called for in the 1981-1985 plan would surely provide access to nearly everyone. Of particular importance for PHC is the planned increase in Agents Itinerants.

The existing and planned health infrastructure seems generally adequate upon which to build a comprehensive primary health care system. To build such a system, capable of providing the required services, significant inputs will be required in supplies, equipment and training. Drugs, vaccines, injection supplies and refrigerators for vaccine conservation will be needed in large numbers. All health personnel will need additional training to enable them to provide the required services.

These increased needs will require larger financial support from external sources and from the Government of Togo. Management of such a system will require very careful attention and management training needs special emphasis.

4. Resources Required for Maintenance (Recurrent Costs)

The proposed system of primary health care services will require not only initial increases in financial support for supplies, equipment and training, but also, and of more importance, a

significant increase in operating costs. A primary health care system, if it is to meet its objectives and maintain adequate levels of health service delivery, disease control, and public confidence, must be a permanent and reliable system. Such permanence and reliability require that the system be affordable within the means of the government.

It is essential, at the outset of planning PHC services, to draw the distinction between the cost implications of a necessarily permanent health system and the well known health projects and campaigns which are, by definition, time limited and non permanent. To provide PHC services, additional recurrent costs will occur in the area of drugs and supplies, more adequate systems of supervision, transport and logistics, and extension of activities to the community level through the Agents Itinerants.

In discussions of plans and needs for childhood disease control activities with MOH officials, several issues regarding recurrent costs have arisen which give cause for concern. Current budgetary levels for MOH operating costs are insufficient to provide needed gasoline for existing vehicles and per diem for current personnel. Current budget provisions for kerosene for refrigerators and stoves (used for sterilization of injection equipment), although perhaps adequate for existing equipment, will fall far short of what would be needed to supply projected increases in such equipment which would permit necessary extension of services.

The MOH has presented a proposal to provide integrated childhood disease control activities, with CCCD cooperation, beginning in 1983 in the Maritime Region. In reviewing recurrent cost implications for the sustenance of the proposed system, it is evident that an increase in operating costs on the order of 5-fold would be required to support optimal levels of transport and refrigerators. For instance, the current annual kerosene budget for the health subdivisions of the Maritime Region totals 850,000 francs CFA. This total represents less than 20% of the estimated kerosene requirement (4,860,000 francs) to fuel refrigerators in the existing fixed health facilities.

Similarly, the current budget for gasoline for all purposes in the same health subdivisions (1,100,000 francs) represents less than one third of the projected requirement for EPI activities alone (3,580,000 francs) as presented in the National EPI Plan.

The proposed increase and extension of services and the concomitant increase in supervision will require greatly increased mobility. Personnel who are required to travel incur additional costs for meals and lodging. Reimbursement for these additional expenditures is a logical necessity for motivating staff travel. MOH staff indicate that the system for providing such reimbursement does not function well and is inadequate.

In some of its existing cooperative programs with the Government of Togo, USAID provides support to the operating budget, helping to offset some of the recurrent costs such as per diem for Togolese staff and gasoline for project vehicles. Unless large increases in the operating budget can be made, it is clear that the proposed system for controlling childhood diseases will have to be scaled down, disease reduction objectives cut back, and services or coverage reduced. Expansion in services or geographic coverage will be restricted and should only proceed if and as the recurrent costs become affordable. If through CCDD USAID were to provide financial support to the MOH operating budget, it should do so only after careful planning and reasonable assurance that by the end of the CCCD cooperative activity, that is in 4 years, the MOH will be able to obtain the resources to cover all operating costs at the necessary level to provide continuing services.

Such an increase in the MOH operating costs will require generation of substantial new revenue. Either the MOH budget will have to be increased, donors identified, or some method of community participation implemented, such as fee for service, to provide a self-sustaining service.

The success of a childhood disease control service and for all the primary health care services will depend largely on the

maintenance of an effective, affordable system. The cost of maintaining such a system will require a major commitment from the government and the people of Togo.

5. Resources Currently Available or Committed

Identifying the resource commitments of the Government of Togo for the activities proposed in childhood disease control is possible only to the extent that estimates, based on past budgetary allocations apportioned to EPI, can be made from projected global health budgets. None of the proposed activities, including the already established EPI is discretely identified in the health operational budget. Moreover, since there are no full time staff assigned to EPI, it is only possible to calculate approximate personnel costs attributable to EPI. For malaria, diarrhea control and yaws it is similarly difficult. In 1980, 5 million francs CFA (\$15,150) were devoted to starting up EPI. Additionally, 7.48 million francs CFA (\$22,700) from the regular (operating) budget was allocated to EPI in both 1980 and 1981 (calculated according to estimated apportionment within the budget of the Epidemiology Division) and 10 million francs (\$30,300) was added in 1981 from the investment budget. Vaccine purchases by the GOT totaled 20,615,495 francs (\$62,500) during the same year.

The Five Year Plan (1981-1985) calls for 83 million francs CFA (\$251,500) for immunization activities, 50 million francs CFA (\$151,500) for disease control, and 30 million francs CFA (\$90,900) for health education. Portions of each of these allocations would be available for the proposed program.

UNICEF has agreed to provide vaccines during the period 1982-1984 in sufficient quantity to meet two-thirds of the needs beyond what the GOT will provide. In addition, UNICEF will furnish 2 vehicles, 2 cold rooms and several refrigerators, as well as 50,000 doses of penicillin for yaws.

Clearly, these resources will not suffice to cover projected needs. CCCD participation could go far in meeting the shortfall in the investment budget requirements.

6. Summary of Feasibility

The existing health infrastructure of Togo provides a solid framework, relative to many African countries, for the implementation of childhood disease control and some other primary health care activities. Large but reasonable initial investments will be required to equip and supply the health facilities and to train health staff. Much larger operating budgets will be required to keep the system going. Whether the system can become affordable to Togo is the paramount question and planning for additional services must take this into account.

4.2 Expanded Program on Immunization

A. Background

Until the start of the national EPI (PEV) in May 1980, vaccinations were performed by mobile teams from the Service des Grandes Endemies, in MCH (PMI) clinics and in maternity wards. From 1974-76 several plans of action were drawn up and discarded because they were deemed too costly. In 1979 it was decided to initiate an EPI program which would conform to the recommendations of WHO.

After a training program in the spring of 1980, operations began in July. A vaccination team consisting of 53 members and 7 vehicles travelled to the Savanes region to perform three rounds of vaccinations against measles, yellow fever, meningitis, tuberculosis, diphtheria, pertussis and tetanus. This mass campaign was found to be both economically and logistically impractical. As a result, responsibility for implementation of the program was transferred to the Chief Medical Officer of the Savanes region.

The new strategy calls for vaccinations to be performed at fixed health facilities and for mobile outreach teams which would be based at sub-divisional centers (necessary because of the inability to extend the cold chain to many of the peripheral facilities).

No formal evaluation of the program has taken place, nor has the MOH performed coverage assessment surveys, although these are being planned for late 1982. To date, progress is being following through monthly reports of the number of vaccinations performed in each subdivision (see appendix 2).

B. Current Achievements

The EPI program is underway in the two northernmost regions of Togo. Training courses for the personnel involved were organized and carried out in both regional capitals before the programs began. Training has also been done in the third (Central) region, with operations scheduled to begin this summer.

C. Objectives and Targets of Togo EPI

The EPI plan calls for 85-90% coverage of the target population throughout Togo by the end of 1984. This will be accomplished by extending operations to each of the five economic regions (one each year). The target age groups are as follows:

BCG	10-47 months
Measles	9-47 months
DTC-Polio	3 doses at one month intervals in children 3-47 months
VAT (TT)	2 doses to women 15-44 years old
DTC-Polio booster	one year after third dose administered every five years thereafter

D. Feasibility

1. Government commitment

The government of Togo has expressed its commitment to the EPI program by planning and initiating operations by itself, with little outside technical assistance. It recognized that material support will have to come from external sources, and it has arranged for this, at least to a degree. The responsible officials speak frankly about the problems involved and are willing to modify their targets and operational plans if it will help them achieve their stated objective of "establishing a permanent system of immunization in order to protect the entire population of Togo against the greatest morbidity and mortality at the lowest cost".

Ministry officials have expressed a desire to have their efforts to date evaluated as soon as possible, to obtain help for training their personnel, and to acquire the necessary material resources.

2. Resources required

See appendices 7-19

4.3 Control of Diarrheal Diseases

A. Background

In spite of the lack of reliable epidemiological information, diarrheal disease is perceived by the MOH as an important cause of both morbidity and mortality. A national plan has been drawn up, although not in great detail, and a WHO epidemiologist assessed the situation and made recommendations in December 1981. Oral rehydration

therapy is a new idea in Togo, but has been the subject of a study performed at the Centre Hospitalier Universitaire which concluded that ORS is an effective and inexpensive form of treatment which should be actively encouraged.

B. Current Achievements

Little has been done in the campaign against diarrheal illness, other than the formulation of the above mentioned outline of a national strategy. The responsibility for implementing this plan has been given to the Division of Maternal and Child Health Care which will presumably be working together with officials responsible for health education and those responsible for coordinating primary health care services.

C. Objectives and Targets of Togo CDD

The national plan outlines the following:

1. Overall objective: to work towards the goal of Health for All by the year 2000 by integrating the campaign against diarrheal disease within the plan for socio-economic development. This accomplishment will require the establishment of multi-disciplinary committees, all of which must contribute.
2. Intermediate objective: to integrate CDD into the primary health care activities in order to offer the most service to the most people.
3. Specific objectives:
 - a. to reduce mortality from diarrheal diseases
 - 1) to reduce overall mortality from diarrheal diseases by 10% annually

- 2) to reduce mortality in the 0-4 year age group by 10% annually
- 3) to reduce childhood malnutrition by an unspecified amount through CDD activities
- b. to reduce morbidity due to diarrheal disease by 10% annually
- c. to promote Togolese self sufficiency for the resources required for CDD

4. Strategy:

To achieve objective 3a

- a. The village health worker (agent itinerant) must
 - be able to recognize diarrheal illness
 - learn to use ORS
 - teach mothers how to prepare and use ORS
 - be familiar with indigenous treatments
 - be able to recognize different stages of dehydration and
 - know when to refer a severe case to the dispensary
- b. The peripheral health center (dispensary) worker must:
 - start to promote the use of ORS as a priority task
 - be able to give parenteral rehydration
 - be able to recognize cases needing hospitalization
 - educate parents
- c. The hospital personnel must:
 - be fully trained in the treatment of all forms of diarrheal illness

-prevent and treat dehydration according to WHO
recommendations

To achieve objective 3b

-a long list of specific health education activities is
given

To achieve objective 3c

- a) at all levels of health worker training, standardized
methods of CDD activities must be taught
- b) strengthen surveillance mechanisms
- c) promote epidemiologic and operational research
activities
- d) convince the political and fiscal authorities of the
importance of the problem to assure an adequate budget
- e) a directorate should be formed consisting of
the Director of MCH
the Director of PHC
the Director of Grandes Endemies
the Director of the Statistical Services
the Director of the Division of Laboratories
the Director of Health Education
the Director of Environmental Health

D. Feasibility

1. Government commitment

The existence of a national plan attests to the government's
recognition of the importance of the problem. Although no

implementation of the plan has yet taken place, the official responsible for CDD activities played a prominent role in the development of this assessment.

2. Resources required

The major requirements for a successful CDD program are a well functioning health service infrastructure, intensive and comprehensive training programs for all levels of personnel involved, and materials consisting, for the most part, of ORS packets and IV solutions. Since integration of CDD activities into an overall PHC strategy is envisaged, only the last of these requirements is specific to CDD. Furthermore, if one assumes that there already exist in Togo functional fixed centers with adequate curative materials, the greatest part of resource requirements for CDD is represented by ORS packets.

The national plan for CDD activities in Togo presumes simultaneous coverage of all regions. However, the assessment team feels that within the context of an integrated PHC program, a graduated, step-wise approach is a better strategy in terms of administrative, supervisory and logistic demands. A table in Appendix 8 estimates ORS requirements for the four years of proposed bilateral support, according to the expansion strategy described below.

3. Resources currently available/committed

Although some ORS is currently in Togo, it has not yet been inventoried. The government can probably count on continued

donations from UNICEF, but for how long and how much has not yet been determined. It would be useful to explore the possibilities of in-country manufacture.

4. Summary of Feasibility

The total costs of covering 60% of the 0-4 year old population of Togo in a CDD program would be, at the most, about \$250,000 per year. If other programs (malaria control, EPI, health education, environmental sanitation and well installation) are successful, this figure could be substantially reduced. If the government of Togo can find a way to reduce the cost of the ORS product, either by local manufacture or packaging, or through continued external assistance, the CDD program should be able to achieve its stated objectives.

4.4 Malaria Control

A. Background

There has been an anti-malaria service (Service National du Paludisme) in Togo for many years. Traditionally, this service has been responsible mainly for collecting epidemiological information on Malaria which is considered hyperendemic or holoendemic throughout the country. There have been relatively few control activities apart from a few pilot projects, because of a lack of resources.

One of their major activities since 1961 is "geographical reconnaissance"; teams go from village to village and perform a census, registering the number of houses and persons in each house by age and sex. The locations of health units are indicated on maps made

of sub-sectors and prefectures (Table 4). This activity was formerly required for spraying houses with residual insecticides, but spraying is not done currently. Prevalence surveys are done periodically to determine parasitemia in different population groups. Most of these surveys were done in or near Lome. Entomological studies, to identify the major Anopheline species and assess their potential to transmit malaria, have also been the responsibility of the malaria service. Recent epidemiological information on malaria cases by health subdivision is shown in Table 5. Rates vary from 7 to 16 cases per 100 persons per year, depending on year and region. The highest rates appear to be in the Kara and Savanes regions. No information on deaths due to malaris is available.

In 1975-76 a WHO sponsored malaria survey was done in different parts of the country; the results found in Table 6 are summarized below.

1. Plasmodium falciparum comprises 85% of cases, P. malaria 13% and P. ovale 2%; the latter 2 species are almost always associated with mixed infections, usually with P. falciparum.
2. The parasite rates in different age groups were: 0-11 months, 45%; 1-14 years, 60%; Adults (15 years +), 24%; General Population, 41%.
3. Using these figures one Togolese author (reference Table 6) has computed the following number of cases of malaria would occur in Togo annually in a population of 2 million: 0-22 months, 44,000; 1-14 years, 548,000; Adults, 238,000; Total 830,000. The computed rate of malaria for children 0-14 years

TABLE 4

GEOGRAPHIC RECONNAISSANCE

Censuses and Maps made by the National Malaria Service,
by Region, Prefecture, Sub-Divisions and Sub-Prefecture

<u>Region/ Prefecture</u>	<u>Sub-Prefecture</u>	<u>Date done</u>		<u>Population</u>
		<u>Past</u>	<u>Recent</u>	
Maritime		1969		304,874
Golfe		1965	1978	127,787
Lacs		1965		113,493
Vo		1968		662,272
Yoto		1970		145,708
Zio	Ave	1970		-
Plateaux		1970		153,506
Kloto		1970		70,040
Haho	Moyen Mono	1970		-
Ogou		1971		105,204
	Est Mono	1971		-
Amou		1971	1981	135,085
Wawa		1971	1981	62,383
	Agou	1970		-
	Danyi	1970		-
Centrale				
Sotoboua		1973		80,524
	Blitta	1973		
Tchaoudjo		1974	1982	
Nyala		1974	1982	111,333
Bassar		1975		88,610
	Dankpen	1975		
Assoli		1975		29,360
Kara				
Kozah		1972		92,319
Binah		1972		41,274
Doufelgou		1972		52,425
Keran		1972		38,599

TABLE # (con't)

<u>Region/ Prefecture</u>	<u>Sub-Prefecture</u>	<u>Date done</u>		<u>Population</u>
		<u>Past</u>	<u>Recent</u>	
Savanes				
Oti		1976		59,734
Tbne		1977		219,973
	Tandjcare	1977		
	Kpendjal	1977		

TABLE 5
REPORTED CASE AND RATES OF MALARIA IN TOGO BY HEALTH SUBDIVISION 1977-1981

REGION Health Subdiv.	Populat. 1981	1977		1978		1979		1980		1981	
		Cases	Rate*								
<u>Maritime Region</u>											
LOME/GOLFE	441,559	37,762	10	39,740	10	25,907	6	18,885	4	34,622	9
LACS	137,162	19,219	6	34,649	13	41,142	15	22,733	8	4,850	4
VO	150,309									3,978	3
YOTO	100,387	7,469	8	8,356	9	7,144	8	10,048	10	11,982	12
ZIO	199,671	19,102	11	21,258	12	11,598	6	19,796	10	16,973	9
TOTAL	1,029,088	83,552	9	104,003	11	85,791	9	71,462	7	72,405	7
<u>Plateaux Region</u>											
KLOTO	186,119	16,738	9	16,163	9	27,263	16	26,361	16	27,612	17
HAHO	109,756	4,316	11	7,886	7	9,967	10	9,624	10	7,206	7
COOU	165,138	31,851	10	35,339	11	32,237	10	21,591	17	9,786	6
AMDU	78,585									5,737	8
WAWA	108,394									16,348	15
TOTAL	647,992	52,905	9	59,388	10	79,458	13	73,924	12	64,860	10
<u>Centrale Region</u>											
SOTOBOUA	132,572	24,691	10	27,831	11	9,438	8	5,564	5	11,594	10
TCHAUDUJO	95,643					14,796	10	7,499	9		
NYALA	44,912					8,981	23				
TOTAL	273,127	24,691	10	27,831	11	24,234	9	28,007	11	28,074	10
<u>Kara Region</u>											
ASSOLI	32,447	4,690	14	4,672	15	5,399	18	5,459	18	3,448	12
BASSAR	118,682	11,056	9	10,424	9	8,579	8	9,812	9	7,441	7
KOZAH	120,264	27,910	23	22,286	19	21,503	19	22,997	21	14,115	13
BINAH	50,077	9,118	18	11,694	24	12,031	26	11,521	25	4,739	11
DOUFELMOU	57,797	6,697	12	9,794	17	9,267	17	10,643	20	9,247	18
KERAN	44,607	3,444	8	3,444	8	3,000	7	3,000	7	3,318	8
TOTAL	423,874									59,471	16
<u>Savanes Region</u>											
OTI	77,862	6,713	9	7,223	10	7,597	10	8,515	12	10,711	16
TCNE	251,002	25,543	10	32,955	14	40,303	17	37,312	16	24,690	11
TOTAL	328,864	32,256	11	40,178	13	47,900	15	45,827	14	35,401	11
GRAND TOTAL	2,702,945	252,875	11	293,669	12	294,162	12	282,652	11	243,048	9

per 100 persons

TABLE 6 *

Malarionetric Surveys Done Throughout Togo
in 1975-76

<u>Age</u>	<u>Slides taken</u>	<u>% with parasites</u>	<u>Parasite formula (%)</u>			<u>Indices (%)</u>	
			<u>P.falcip.</u>	<u>P.mal.</u>	<u>P.ovale</u>	<u>Gameto- cyte</u>	<u>Splenic</u>
0 -	283	45	87	10	3	13	46
1 - 14	3,222	60	83	15	2	10	49
15+	3,495	24	89	8	3	3	18
TOTAL	7,000	41 %	85 %	13 %	2 %	7 %	34 %

* Taken from : Awoume, Kodzo Agbelessi, "Epreuve de Sensibilite in vitro de Plasmodium falciparum a la chloroquine (macro-technique) au Togo."

Mémoire pour l'obtention du Diplôme Universitaire de Technologie, IUT de Santé et des Sciences Biologiques, Université du Bénin, Lomé, Togo, 28 Janvier 1982, p. 12.

(47% of the population) represents about 0.6 episodes per year. This is substantially less than the 3 episodes of fever per year used later in this document for computing annual chloroquine needs. This is one area indicated for operational research.

4. The principal vector is Anopheles gambiae, followed by A. funestus. A. nili is limited to forest areas only.

5. An average of 5.3 A. gambiae and 2.2 A. Funestus per house were found in close to 1,000 houses examined. The sporozoite rate of A. gambie was 3.4% and 1.8% for A. funestus. Studies done in Lome by a WHO sponsored malaria team found a parasite rate of between 17.2% and 20% for the entire population; in 1969 the rate was 10.6% for Lome. In Lome, in a group of 2,000 persons (age unspecified), P. falciparum comprised 91% of the infections and P. malariae 9%. The gametocyte index was 1.4% and the splenic index was 6.1%. A. gambiae was the principal vector (1.2 per house with 1.4% sporozoite rate - 44 houses visited).

The rainy seasons (heaviest, April-July; light, October-November) tend to be related to the higher number of blood slides taken for malaria during and slightly after these periods; a somewhat higher percent of slides positive for malaria is also observed during these periods.

One study done in Lome on chloroquine resistance of 10 strains of P. falciparum showed that this phenomenon did not exist

(see ref. Table 6). Eight strains were inhibited by 0.75 nanamole or less of chloroquine and 2 strains by 1.25 nanamoles.

B. Past and Current Achievements in Malaria

From 1972 to 1976 there was a United Nations Development Programme (UNDP) sponsored project in the Kara Region. Malaria control was included. Activities included parasitological and entomological surveys, provisions of drugs for treatment and chemoprophylaxis and a study of mosquito resistance to insecticides. Village health workers and nurse aides were active in this program. Survey results and precise information on the effect of this program and the reason for its discontinuation were not available.

Another malaria activity integrated into general rural health activities, including vaccination, is in the Dapaong area of the Savanes Region. A Catholic mission has enrolled about 4,000 - 5,000 mothers and children in a chemoprophylaxis program. A six weeks supply of Nivaquine (chloroquine sulfate) is given and completion of this indicates the need for a revisit to the mother-child clinic where vaccinations and other services are given. It is sensed that malaria and measles have diminished markedly since this activity began. The families are charged a nominal fee (25 francs CFA, (\$0.07) at each visit.

C. Objectives and Targets

In 1981 the Service National du Paludisme, a section of the Division of Epidemiology, developed a "national strategy" (Strategies Nationales de lutte contre le Paludisme au Togo). The

objectives of the strategy are to reduce the rate of morbidity and mortality due to malaria.

1. Short term goals

To prevent malaria in children 0-5 years and pregnant women by chemoprophylaxis using chloroquine.

2. Mid-term goals

To reduce morbidity and mortality in children and adults. In addition to the above, all "fever cases in the country receive single dose treatment". Following treatment, each patient would be encouraged to begin chemoprophylaxis, paid for by the individual. In addition, certain measures for personal protection against mosquitoes would be encouraged to be done on the local level by individuals and communities (e.g., some residual spraying of insecticides, use of mosquito nets, screening of windows, elimination of local mosquito breeding sites, etc.).

To promote these activities, local health committees would be created on the cantonal and village level. Anti-malaria activities were to be one function of the "Association Togolaise pour le Bien Etre Familial: (ATBEF).

3. Long term objectives

Long term objectives are to add large scale anti-vector measures to the above. These include, vector source reduction activities through sanitary engineering; destruction of adult mosquitoes by residual spraying; and larval control by use of larvivorous fish.

Additionally, a program to monitor chloroquine resistance would be mounted as operational research.

A budget has been established (table 7) to treat 400,000 fever cases (malaria) and to give chemoprophylaxis to children 0-4 and pregnant women. A review of this budget indicates that chloroquine alone would take 40% of the hospital and health subdivision allotments for medicine purchases. Because of budgetary limitations it is recommended to give chemoprophylaxis only to pregnant women. Costs would be borne by budgets of the health subdivisions. Where possible the malaria service would try to augment subdivisional budgets to buy chloroquine, particularly for chemoprophylaxis activities. However, field visits in the Maritime Region indicate that pregnant women are given prescriptions for chemoprophylaxis. The effect of this approach remains to be assessed. Recently the "League of Arab Gulf States" granted 15 million chloroquine tablets (100 mg.) to Togo through WHO as part of an anti-malaria effort in 10 African countries. In addition to the above, the malaria service plans to continue their geographical reconnaissance activities in Amlame, Badou, Sokode, Tchamba and Vo to explain the new strategy to the senior physicials at regional hospitals and health subdivisions; to study the status of the "agent itinerant" system - to determine vacancies and the financial situation with a view toward

TABLE 7

ESTIMATED CHLOROQUINE NEEDS AND COSTS FOR MALARIA ACTIVITIES BY MEDICAL FACILITIES, 1981*

HEALTH UNIT	ESTIMATED CHLOROQUINE NEEDS				Credit for Medicine received in 1981	
	Chemotherapy (Tablets)	Prophylaxis (Tablets)	Total Cost CFA	Total** Cost \$U.S.	CFA.	% needed for Chloroquine
Hospitals						
1. Atakpame	92,414	0	208,856	= 632.90	22,000,000	1 %
2. Dapaong	92,414	0	208,856	= 632.90	22,000,000	1 %
3. Lama Kara	92,414	0	208,856	= 632.90	22,000,000	1 %
4. Sokode	92,414	0	208,856	= 632.90	22,000,000	1 %
5. Aneho	92,414	0	208,856	= 632.90	22,000,000	2 %
6. Kpalime	92,414	0	208,856	= 632.90	22,000,000	2 %
7. Tsevie	92,414	0	208,856	= 632.90	22,000,000	4 %
8. Ebebe	92,414	0	208,856	= 632.90	22,000,000	5 %
Total	739,312	0	1,670,848	= 5,063.20	117,500,000	1 %
Subdivisions						
9. Atakpame	92,414	2,672,952	6,249,728	= \$ 18,938.57	11,000,000	57 %
10. Amlame	92,414	2,672,952	6,249,728	= 18,938.57	5,000,000	125 %
11. Badou	92,414	2,672,952	6,249,728	= 18,938.57	8,000,000	78 %
12. Bassar	92,414	2,672,952	6,249,728	= 18,938.57	10,000,000	62 %
13. Klouto	92,414	2,672,952	6,249,728	= 18,938.57	17,000,000	37 %
14. Dapaong	92,414	2,672,952	6,249,728	= 18,938.57	16,000,000	39 %
15. Bafilo	92,414	2,672,952	6,249,728	= 18,938.57	5,000,000	125 %
16. Aneho	92,414	2,672,952	6,249,728	= 18,938.57	12,000,000	52 %
17. Lama-Kara	92,414	2,672,952	6,249,728	= 18,938.57	18,000,000	35 %
18. Notse	92,414	2,672,952	6,249,728	= 18,938.57	9,000,000	69 %
19. Mango	92,414	2,672,952	6,249,728	= 18,938.57	7,000,000	89 %
20. Niamtougou	92,414	2,672,952	6,249,728	= 18,938.57	9,000,000	69 %
21. Kante	92,414	2,672,952	6,249,728	= 18,938.57	5,500,000	114 %
22. Pagouda	92,414	2,672,952	6,249,728	= 18,938.57	6,000,000	104 %
23. Sotouboua	92,414	2,672,952	6,249,728	= 18,938.57	8,000,000	78 %
24. Sokode	92,414	2,672,952	6,249,728	= 18,938.57	9,000,000	69 %
25. Tchamba	92,414	2,672,952	6,249,728	= 18,938.57	6,000,000	104 %
26. Tsevie	92,414	2,672,952	6,249,728	= 18,938.57	11,000,000	57 %
27. Tabligbo	92,414	2,672,952	6,249,728	= 18,938.57	9,000,000	69 %
28. Lome	92,414	2,672,952	6,249,728	= 18,938.57	23,000,000	27 %
29. Vo	92,414	2,672,952	6,249,728	= 18,938.57	8,000,000	78 %
Total	1,940,694	56,131,952	131,244,288	= 397,709.94	212,500,000	62 %
Grand Total	2,680,006	56,131,952	132,915,136	= 402,773.14	330,000,000	40 %

*

Service National du Paludisme, Strategies pour la lutte contre le Paludisme, 1981

**330 CFA = \$1.00

activating this system for anti-malaria work; to perform entomological studies on the tsetse-tsetse fly in North Togo; and to study chloroquine resistance in all 5 regions.

D. Feasibility

1. Government commitment

The government commitment to malaria control can be judged by several factors:

- support of the principles contained in the malaria service plan, which seems to have been obtained;
- allocation of necessary resources, e.g., purchase of chloroquine to achieve short and medium term objectives, which seems to have been accomplished in part only. Table 7 indicates the credit each hospital and health subdivision received in 1981 to purchase drugs, and an estimation by the malaria service of needs for mounting the chemotherapy and chemoprophylaxis program. For the hospitals, the estimated chloroquine needs for treatment only comprise 1%-5% of the budget; however, for the health subdivisions, where public health activities are promoted, the cost of chloroquine alone would represent from 27% to 125% of the current medicine budget.
- support or creation of an infrastructure to deliver the services proposed. In principle, the existing health service, including the "agents itinerants" should provide a strong base for identifying some fever cases and most pregnant women in

rural areas; however, only 30% of the 183 "agents itinerants" are alleged to be active. During the visit to 4 subdivisions in the Maritime Region (Aneho, Vo, Tabligbo, Tsevie) it was found that the "agents itinerants" had not been visiting villages regularly due to lack of transport, since resolved by purchase of bicycles. Further, they do not have medicines to distribute to the population other than those supplied for leprosy. Visits to village occur about every 1-6 months and are focussed on health education. As a result, there is little effect on the incidence or prevalence of malaria. Strong community participation will be needed to assure that patients with fever, and pregnant women, avail themselves of the services provided by the "agents itinerants" or the dispensaries. It is difficult to quantitate the government commitment to promotion of the agent itinerant system and development of community support for health programs. Better coverage can only be obtained by more agents, adequate supplies, proper training and supervision, transport and more rational use of time. Even with this it would be more effective to have communities participating by use of a village health market and village health committee, particularly in areas more than 5 km. from the dispensaries; these comprise about 50% of the villages in the Maritime

Region. Nevertheless, there are promising signs in that some health committees have been formed and the ATBEF has an active role in health matters.

- The malaria program has 1 medical director, 2 nurse-malariologists, and 1 entomologist; there are 2 Land Rovers about 10 years old for their activities.

2. Resources required

For the CCCD activities the anti-malarial drugs and materials required are found in the summary table appendix 8. This presupposes that the health infrastructure and support, mentioned in the EPI section above, also applies to malaria related activities.

The calculations are based on the following: each child 0-4 years (18% of the population) will have 3 episodes of fever per year; each episode of fever will be treated by one dose of chloroquine 10mgm/kgm. body weight. About 2 tablets per episode will be required, one in 20 episodes will require injectable chloroquine (total 500 mgm.). Pregnant women (5% of the population) will take 300 mgm. of chloroquine weekly (average 28 weeks).

3. Resources currently available/committed

Currently, Togopharma orders about 35 million chloroquine tablets (100 mgm.) for the entire country (see section on pharmaceuticals). This will be supplemented by 15 million tablets provided by the Arab League through WHO. Quinine in the form of injectable "Quinimax", "Quiniform" is provided by Togopharma

throughout the country. In addition other antimalarials, including Fansider, are available. Despite the above, it appears that shortages of anti-malarials exist. This may be due to indiscriminate use, inadequate funds, as previously discussed, or other reasons yet understood poorly.

4. Summary of feasibility

The widespread network of health facilities (1 dispensary per 6,000-10,000 persons), the partially active "agent itinerant" system (183 agents, no more than 30% active) and the potential to mount community participation programs make the success of malaria control within CCCD possible. Much will depend on how well trained and motivated health workers are and become, and their support and supervision. For optimal coverage a village health worker system might be considered by certain communities located more than 5 km. from a health facility or where treatment for malaria was otherwise inaccessible. Further operational research on anti-malarial drug resistance, effectiveness of the delivery system and other topics (see section on operational research) could probably be done properly in Togo with the complete collaboration of national health personnel.

4.5 Yaws

A. Background

From 1961 to 1966 there was a mass campaign against yaws in Togo supported by WHO. It was implemented by 6-8 mobile teams from the Service National des Grandes Endemies (SNGE) and coupled yaws work

TABLE 8

YAWS IN TOGO, 1974 - 1981*

Table 1 A National Data, 1974 - 1981 (Tables 1A - 1D)

<u>Year</u>	<u>Cases</u>	<u>Rate (number/10⁵ persons)</u>
1974	2,463	126.1
1975	2,864	155.0
1976	4,864	249.0
1977	4,426	226.6
1978	3,862	197.7
1979	2,440	105.0
1980	3,468	150.0
1981	3,692	136.0

* 11,000 cases

Table 8 B Health Subdivision Ranking for Combined Years, 1975-1977

<u>Subdivision</u>	<u>Cases 75-77</u>	<u>Rate Cases/10⁵</u>	<u>Rank</u>	
Lome	1,066	154.1	6	
Tsevie	1,963	420.2	3	
Aneho-Vogan	3,361	443.9	2	
Tabligbo	885	410.9	4	
Kpalime	711	151.2	7	
Atakpame	691	97	9	
Nuatja	70	30.5	15	
Sckode	1,625	312.6	5	
Bafilo	112	128.1	8	
Bassari	1,736	609.3	1	all children under 15
Lama-Kara	263	91.1	10	
Pagouda	70	52.3	13	
Niamtougou	55	34.9	14	
Mango	128	73.3	11	
Kande	34	27.0	16	
Dapango	328	70.4	12	11,000 cases per 100,000
Total	13,152	224.4	-	20 d
		609	10,000	7,000
				25 d

Table 8 C Reported Cases of Yaws and Rates (per 100,000 pop., 1981 census) by Region, 1977-81

<u>Region</u>	<u>Cases Reported</u>					<u>5 yr. Average</u>	<u>Average Annual Rate/100,000</u>
	<u>1977</u>	<u>1978</u>	<u>1979</u>	<u>1980</u>	<u>1981</u>		
Maritime	2,602	2,173	1,038	1,438	1,335	1,717	166.9
Plateaux	511	519	199	356	971	511	78.9
Centrale	623	355	211	560	484	447	163.7
Kara	1,056	841	830	968	845	908	214.2
Savanes	138	144	162	146	57	129	39.2

Table D Age Distribution of Reported Cases of Yaws, Togo, 1979

<u>Age (yrs)</u>	<u>Cases (% total)</u>	
0 - 4	163 (13.8)	} 60.7%
5 - 14	549 (46.9)	
15+	<u>469 (39.7)</u>	
Total	1,181	

* Above Tables taken from

1) Rapport d'Evaluation du Pian, Graitcer, P.L. and Nelson, J.W. -
May 1979 (1974-78)

2) National Health Statistics (1979-81)

There are certain minor differences in these data with those reported in the yaws section, USAID End of contract Report, Maryanne Neill, Lome, 1982.

with administration of smallpox vaccine as well as prospection for and treatment of leprosy cases. The Aneho-Vogan area (Maritime Region) had the highest prevalence of yaws in the country; 1% of the population had the contagious form and 3% had hyperkeratotic skin lesions. During the campaign with long acting penicillin employed, it was estimated that the prevalence of yaws dropped after the campaign to less than 0.5%. Little follow-up activity occurred after the mass campaign.

In 1974-78 the SNGE reported that the yaws prevalence, particularly in the Aneho-Vogan area was still high, due in part to the climatological and socioeconomic conditions. Table 8 indicates the number of cases reported for the entire country for 4 years, and the ranking of each health subdivision for the period 1975-77. The 4 health subdivisions of Bassar, Aneho-Vogan, Tsevie and Tabligbo, with about 29% of the population, had about 60% of all yaws cases in Togo.

In 1979 a study of 521 persons done in the Aneho-Vogan by a CDC team showed the following age prevalence: less than 5 years, 47 cases/1,000; 5-14 years, 14.1 cases/1,000; 15 years and over, 0.8 cases/1,000; and total 6.0 cases/1,000 persons, which was 12 times higher than reported in 1977. This evaluation also found, by a record review, that an increased seasonal incidence of yaws occurred in February and September-November.

The OCCGE, in May-June 1981, did a clinical and seroepidemiological study of yaws in the health subdivisions of Vo Tabligbo and Bassar. Of 13,103 persons examined, 2.18% had clinical lesions (Vogan 2.20%,

Tabligbo 3.44%, Bassar 1.88%). The age group 4-14 years was affected most, with males appearing to have a higher prevalence of yaws than females. The serological surveys of 1,380 persons indicated a positive "Kline test" in 13.38% in Vogon, 9.46% in Tabligbo and 22.02% in Bassar. Male children from 1-4 had seropositivity rates of 17.24% and females of 8.11%. These rates were about the same from 1 year up to age 14 for males and to age 18 for females. The sensitivity and specificity of this test for detecting the trepanematoses is unknown to the assessment team.

Both studies, cited above, recommended yaws control programs; the first advised possibly combining work with some components of an expanded vaccination program, and coordinating the yaws activity with concurrent action in the Ivory Coast and Ghana. The second study suggested the best way to approach the problem was a mass campaign of about 6 months. This option, considered by the first study, noted its great cost. Both groups stressed the importance of surveillance as part of any yaws activity.

B. Current Achievements

Passive case detection and treatment by the health units provides the major anti-yaws activity. This level activity represents coverage of less than 2%-8% of those with yaws in the Aneho-Vo area, according to the OCCGE and CDC surveys, respectively.

C. Objectives and Targets of Togo Yaws Control

There is no national plan for yaws control. However, the Service National des Grandes Endemies and Director of Epidemiology would like

to couple anti-yaws activities with the CCCD program wherever possible, particularly in the Maritime, Kara and Central regions.

D. Feasibility

1. Government Commitment

There is definite interest in controlling yaws, as expressed above and by the Director General of Health. Statistics on the amount of penicillin (especially the long acting form) used for yaws patients and their contacts, is not available.

2. Resources Required

Detection of yaws cases requires a capability for discerning skin lesions of yaws. This would require special training of peripheral health workers at fixed health units as well as the "agents itinerants" attached to these units. Additionally, in the most heavily infected subdivisions of the country (Aneho-Vogan, Tsevie, and Taglibo in the Maritime Region and Bassar in the Kara Region a more active case detection and treatment program would be most effective in rapidly reducing the reservoir of infection and spread of the disease. However, yaws has a very low mortality rate. The cost effectiveness of a mass campaign against yaws would probably not be as great as primary health care actions for the other disease components of this program. Nevertheless, a specialized epidemiological and operational approach will be needed to detect and treat yaws cases.

According to WHO, treatment for yaws with long acting penicillin is based on the prevalence. Everyone in the community is treated

if 10% or more are affected; all children under 15 years when the prevalence is 5-10%; only cases and household contacts are treated when the prevalence is less than 5%. This latter category appears to be the situation in most of Togo, even in the most heavily infected areas. Indeed, the Togo health officials recommended that about 2 contacts per family would require treatment (1,200,000 units of penicillin for cases and contacts from 1-15 years).

Resources needed to detect and treat yaws cases in the subdivisions mentioned above are found in the overall budget.

3. Resources Currently Available

The SNGE teams are available but limited by lack of supplies and gasoline. It appears they might be more available for anti-yaws work, as well as for other CCGD activities, when EPI activities are fully integrated into existing health care system.

4. Summary of Feasibility

It is reasonable to conclude that peripheral health workers can get more involved in anti-yaws work. However, many patients, and certainly their close contacts (average 2, less than 15 years), will not come to the dispensary until rather late if at all because the lesions of yaws are not often life-threatening or otherwise disabling. For these, an active case detection approach and treatment in the highly endemic zones is advised. The SNGE is the reasonable organization to carry out this activity, to train and supervise local health personnel and perform certain

evaluations in conjunction with other services involved in the CCCD program, such as malaria. These activities should be coordinated with concurrent activities against yaws in Ghana and could be the object of a special action. In the interim, the CCCD emphasis for yaws should be through support of the primary health care system. As for other CCCD interventions operational research should address yaws issues (see section 5.3 on operational research).

5. Proposals for CCCD in Togo

5.1 Proposed Scope of CCCD in Togo

The previous sections of this assessment document the importance of the CCCD target diseases (measles, diarrheal disease, malaria and yaws) in Togo. These conditions are perceived by the Togo MOH as priorities, as shown by the operation already underway for EPI, the existence of national plans of action for diarrheal disease and for malaria control and the amount of interest expressed in yaws control during the course of the assessment team's discussions.

CCCD would be a useful and appropriate support mechanism for the Ministry of Health's control programs for these target diseases by promoting integrated operations using a primary health care strategy. Since integration of basic health services is a desired, but not yet implemented, goal of the MOH, the strategy of using CCCD support activities in Togo can take one of three paths:

I. Strategy A

Begin integrated activities in an area of the country which is not yet being served, e.g., the Maritime Region, and increasing activities

annually within this region while simultaneously expanding the territory served, by starting services in one additional region per year.

A. Advantages

1. The Maritime Region has 38% of the national population and includes the capital city. A successful sustained program in this region would have the greatest and most immediate impact insofar as achieving the goal of reducing morbidity and mortality in the target population.
2. Because the capital, Lome, is in the Maritime Region, organization, supervision and evaluation, as well as logistics, would be facilitated during the initial stages of the program when they are most crucial.
3. Since other programs have not yet begun in this area, implementation of integrated services would not conflict with alternate strategies.
4. The current EPI plan would be accelerated by one year and yaws control activities would be begun in an area of high prevalence.

B. Disadvantages

1. CCCD supported activities would be started de novo and would not have the opportunity to "plug in" to training and operations which have already begun for EPI in other areas until a later stage.
2. Supervisory personnel would have to divide their time between new activities and on-going programs, perhaps to the detriment of the latter.

II. Strategy B

CCCD supported activities would join the on-going EPI in the north of the country and then follow the extension policies of the national EPI plan.

A. Advantages

1. CCCD support would be able to take advantage of trained personnel and existing facilities and equipment during the difficult start-up phase of operations.
2. Both on-going and new programs would be taking place in the same areas at the same time.

B. Disadvantages

1. The on-going programs have not yet been evaluated and it is not clear what modifications would be required, in terms of training, strategy, and materials.
2. Supervision and logistical problems would be maximized.

III. Strategy C

CCCD supported activities would join the current EPI program when it reaches its next stage of geographical expansion.

A. Advantages

1. The current national EPI plan would be preserved

B. Disadvantages

1. CCCD activities would have to be extended in both directions simultaneously creating major logistic and strategic problems.
2. See other disadvantages of strategies A and B.

5.2 Proposed CCCD Strategy

The assessment team has opted for strategy A. The proposed schedule for expansion of CCCD activities is as follows:

Coverage of	1983	1984	1985	1986
Target Population				
Maritime	30%	50%	65%	80%
Plateaux		30%	50%	65%
Centre and La Kara			30%	50%
Savanes				30%
National	11%	26%	45%	63%

This strategy allows for progressive coverage of the target populations of CCCD supported activities within each region while dividing start-up procedures over the four years of bilateral assistance. Needed revisions can be made based on annual evaluations and coverage goals adjusted accordingly. By the end of the four years a structure will be in place throughout Togo which might be expected to be able to continue to support primary health care delivery.

NOTE: It is extremely important to point out that proposed CCCD support for ~~integrated~~ primary health care services differs substantially from current plans. The discrepancies are as follows:

Activity	CCCD	National Plan
A. EPI		
a. measles	9-23 months	9-47 months
b. DPT-polio	3-23 months	3-47 months
c. BCG	0-23 months	0-47 months

d. TT (VAT)	2 doses, one month apart	4 doses to all women 15-44 years; 3 doses to all pregnant women
B. Malaria (children)	treatment of all febrile episodes, 0-4 years pro- phylaxis of pregnant females	same and prophylaxis of all 0-4 year olds unspecified
C. Yaws	treatment of cases and 2 contacts during the first year (Maritime Region); further plans to be formu- lated in 1983	

5.3 Proposed CCCD Regional Support

The Togo Ministry of Health understands that the CCCD program includes both regional and bilateral assistance. On a regional basis the following activities are planned:

Category	Activity	Time	Responsibility
A. Training	sponsor inter-regional participants for a) CCCD management course b) mid- level management/training of trainers course c) refrigerator maintenance and repair course	1983-84	CCCD Liaison Officer Brazzaville
B. Training Development/			
Adaptation	assist the development of integrated materials for EPI, CDD, malaria and	1983-84	Training consultant designated by CDC

yaws

assist the development of
training materials for
inclusion in medical school
and para-medical school
curricula
evaluation of the effect of
training materials and courses

Medical
epidemiologist with
responsibility to
Togo

Both of the above

C. Health Education/

Promotion

develop techniques for
increasing the impact of
"agents itinerants"
develop materials and
methods to assist health
services at the family
level vis-a-vis the
target diseases

1983-84

Health Education

D. Health Information

Systems

develop survey techniques
for establishing baseline
and evaluation data;
work with Division of
Epidemiology to improve
current HIS

1983-86

ME/Togo

E. Operational Research:

Interventions to be used in the CCCD program have been proven safe and effective. Nevertheless, there are several areas where specific operational research projects are indicated. These could address key issues such as population coverage, acceptability of the interventions, functions and success of peripheral health workers, cost-effectiveness, changes in mortality and morbidity, etc. Togolese authorities have expressed great interest in these and other operational research questions. In addition to the divisions participating actively in the CCCD program, other collaborators might include persons from the medical school and Centre Hospitalier Universitaire, the Institut d'Hygiene, WHO, the Division of Health Education, and from the Ministry of Social Affairs. Some projects that might be undertaken include the following:

1. Surveillance: the effect of program on overall and disease-specific mortality and morbidity using different approaches
 - sentinel hospitals
 - village based surveys
 - special population-based prospective studies
2. EPI:
 - coverage
 - vaccine efficacy
 - cost effectiveness
 - vaccination and spread of hepatitis B virus
 - effect of vaccinating ill children

3. CDD:

- coverage
- community acceptance of ORS
- cost effectiveness
- alternative approaches to decreasing diarrheal diseases

4. Malaria:

- sensitivity of *P. falciparum* to chloroquine and other anti-malarials
- coverage
- acceptability of single dose oral treatment
- compliance
- accuracy of diagnosis
- cost effectiveness
- parasite prevalence surveys
- adverse reactions

5. Yaws:

- coverage
- cost effectiveness

6. Community participation:

- different approaches to community motivation
- self financing mechanisms

7. Training:

- evaluate different approaches to training workers of different levels

Operational research will require approved funding and material support, be directed toward solving practical problems and require that all participating collaborators approve the protocol before studies are undertaken.

In addition to the above outlined activities, the regional component of CCCD will also provide all funds and materials necessary to support the work of a Technical Officer, to be designated by CDC, who will work with the Togo MOH. This Technical Officer may also have limited responsibilities to other governments (e.g. Ghana), if cooperative yaws control programs are developed.

A medical epidemiologist, based in West Africa, also funded from the regional component of CCCD, will have part-time responsibility to the Togo CCCD program, particularly for activities dealing with health information systems, operational research and program evaluation.

Other consultants in training, operational research (including epidemiological studies), health education and evaluation activities will be made available, as necessary, from regional funds.

5.4 Proposed CCCD Bilateral Assistance

CCCD bilateral assistance will be proposed in an ensuing project grant agreement. Assistance will be offered for incorporation into an integrated program of EPI, malaria, diarrheal disease and yaws control activities. Materials, vaccines and medications, training opportunities, health education programs, operational research and surveillance and evaluation activities will be included.

The possible approaches to integrating CCCD activities into an integrated PHC system are outlined above and estimated costs of each of the options is

presented in the appendix to this report (appendices 7-10). It must be emphasized that the bilateral assistance proposed includes an annual reduction of 25% for recurrent costs. The Government of Togo will, therefore, be requested to increase its financial support of the project over the four years of proposed bilateral assistance. For this reason, a careful evaluation of the resources to be obtained from external sources other than USAID, be they international or bilateral, needs to be performed.

Finally, the projected estimates will not necessarily accord to the reality of the situation as the project progresses. Periodic evaluations will have to be performed, and the actual need for commodities will be continually reassessed. CCCD project support should not be fixed to the estimates projected in this report, but, instead, should be linked to actual program expansion. If the activities described in this report are delayed or impeded for any reasons, bilateral commodity assistance will be correspondingly lower. The following outline shows the kinds of non-commodity assistance which will be offered:

CCCD component	Activity
Training	Mid-level and peripheral in-country integrated PHC training courses (see Appendix 6)
Training development/ Adaptation	Development of PHC course materials
Health education	As in regional assistance
Operational research	Allocation of funds for bilateral research costs is possible. Regional funds will be available on a competitive basis.

Health information

systems

As in regional assistance

Program evaluation

Strengthen and utilize appropriate indicators for evaluation of program process and outcome

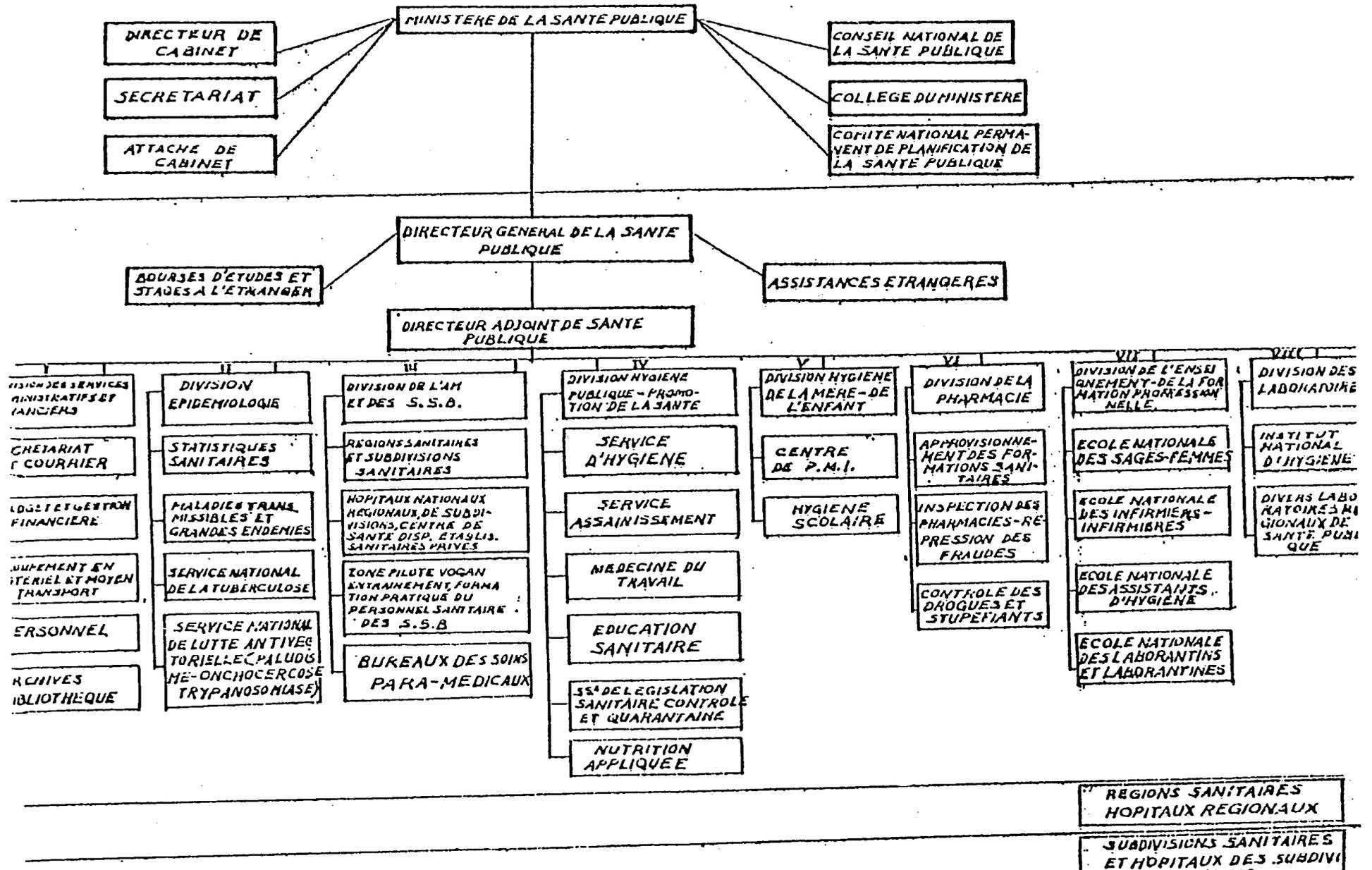
Participate in program evaluations as requested

(Annual evaluations are proposed.)

All of these programs will be the responsibility of MOH officials involved in implementing the CCCD project, assisted by the Technical Officer assigned to work with the Togo Ministry of Health.

Current plans for supervision of CCCD activities call for the active participation of the heads of the functional units within the MOH with responsibility for the various disease control programs. The Director of the Epidemiology Division has been tentatively designated to coordinate the supervision of all activities and take primary responsibility for EPI. The director of Maternal and Child Health Care would look after CDD; the Chief of Endemic Diseases would lead the yaws control program; the Chief of Malaria Control would head up the malaria program. In supervisory visits, each of these officials would evaluate all components of the CCCD program.

ORGANIGRAMME DU MINISTERE DE LA SANTE PUBLIQUE



IMMUNIZATIONS GIVEN AND % OF POPULATION COVERED

VACCINATION	KANDE (KERAN)	DAPAONG (TONE)	MANGO (OTI)	PAGOUDA (BINAH)	LAMA-KARA (KOZAH)	NIAMTOUGOU (DOUFELGOU)	TOTAL
BCG	4308 51%	24,497 87%	8704 97%	3015 32%	6961 33%	1012 9%	48,497
DTC I	4199 59%	26,720 102%	8696 105%	2978 34%	8857 49%	1652 16%	53,102
DTC II	1803 25%	10,604 40%	2781 34%	1274 15%	1987 11%	710 7%	19,159
DTC III		6,702 25%	1096 13%	680 8%	761 4%	555 6%	9,794
POLIO I	1706 24%	19,955 76%	8696 105%	2985 34%	8857 49%	1654 16%	43,853
POLIO II	1803 25%	8,955 34%	2781 34%	1274 15%	1987 11%	725 7%	17,525
POLIO III		6,640 25%	1096 13%	680 8%	761 4%	651 6%	9,828
MEASLES	746 12%	32,066 146%	7529 111%	3093 43%	7347 48%	1514 18%	52,295
VAT	3944 84%	34,524	6082 42%	4834 84%	12697 105%	1282 20%	63,363

OBSERVATIONS

Nov. 81 - Mars 2 VAT includes all four injections. (Although coverage is low - technique is excellent).

Sept 81-Mars
The VAT includes all 4 in series of injection therefore % of pop. covered is a false statistic.

Dec 1981-April 1982. Covers Pagouda and at least 1 visit to each of 8 dispensaries VAT injections grouped together.

Sept 1980-Oct 1982 (Target population hasn't been adjusted for since 1980)

July 1980 - March 1982 (Target population hasn't been adjusted for since 1980)

VAT grouped together. Only 4 of 8 dispensaries covered. Started in Oct 81-(Feb. 82) Measles started in Feb. 82. *Team does not vaccinate against measles when outbreak occurs.

Appendix 3

Projected Population by Region, Togo, 1981-1985

<u>Region</u>	<u>Growth Rate (%)</u>	<u>1981 pop. (census)</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>
Savane	2.7	328,864	337,743	346,862	356,228	365,846	375,724
Karc	1.4	423,874	429,808	435,826	441,927	448,114	454,388
Centre	4.3	272,127	284,871	297,121	309,897	323,227	337,121
Plateaux	2.8	647,992	666,136	684,788	703,962	723,672	743,935
Maritime	3.3	1,029,088	1,063,048	1,098,128	1,134,367	1,171,801	1,210,470
TOTAL	2.9	2,702,945	2,781,606	2,862,725	2,946,381	3,032,660	3,121,638

Population = $P_0 \left(1 + \frac{x}{100}\right)^h$, where P_0 = 1981 population
 x = growth rate (%)
 h = years

Proportion of Population in Certain Age Groups, Togo

< 1 year	- 4.1%	} 21.0%
1-4 years	- 16.9%	
5-9 years	- 19.0%	} 28.8%
10/14 years	- 9.8%	
14-44 years	- 21.0%	} 49.7%
45 + years	- 29.2%	
	<u>100.0%</u>	

Contacts - Personnes Rencontres

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 Rudy Thomas, Program Officer
 Paul Guild, Program Officer
 Maryanne Neill, Health Advisor (Contractor)

Ministere de la Sante Publique - MOH

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Dr. Barandao,	Directeur Generale Adjoint
Dr. Karsa Tchasseu	Directeur Division de l'Epidemiologie
Dr. Devo	Directeur, Division PMI (MCH)
Dr. Eдорh	Chef de Service des Grandes Endemies
Dr. Gayibor Anani	Chef de Service Antipalustre (Malaria)
Mr. Glikpo	Chef de Service de Statistiques Santes
Mr. Y.N. Kpedzroko	Chef de Service d-Education Sanitaire
Dr. Assimedi	Chef de Service de Pediatrie, CHU Lome
Mr. Aholou	Responsable, Formation des Infirmiers, Auxiliaires, et Agents Itinerants

UNICEF

Mr. d'Almeida, Responsable de Liaison, Ministere du Plan
 Mr. Mwilambwe, Responsable Regional, Abidjan
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WHO

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 Dr. d'Almeida, Directeur Adjoint, Centre Regionale de Formation
 Dr. Mbaye, Co-ordinateur

Togopharma

M. Adjovi-Sossani, Directeur Generale Adjoint

Service National de Statistiques, Ministere du Plan

Mr. Figa, Directeur

Field Trip

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 Dr. T.D. Logbovi, Medecin Chef, Subdivision Sanitaire de Vo (Vogan)
 Dr. Tobgi, Medecin Chef, Subdivision Sanitaire de Yoto (Tabligbo)
 Dr. Kutowogbe, Medecin Chef, Subdivision Sanitaire de Zio (Tsevie)
 Mr. L. Tchaou, Prefet, Prefecture de Vo

Documents Consulted

Guidelines for CCCD Country Assessment

National EPI Plan (1979)

National Policy Guidelines for Diarrhea Control

National Plan for Malaria Control, 1981

Epreuve de Sensibilite in Vitro de Plasmodium Falciparim a la Chloroquine
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OCCGE Report on Yaws in Togo, Dr. J. M. Toure, 1981

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WHO Country Profile, Togo, 1979

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Annual Health Statistical Reports, 1977, 1978, 1979

Trip Report, EPI/CDD, Dr. A.E. Delas, WHO, 19 Nov - 6 Dec 1981

Report of 1970 National Census

Preliminary Results of 1981 National Census

USAID/Togo Briefing Portfolio

CCCD Country Assessment Background Data Report, Neill, 1982

National Economic and Social Development Plan, 1981-1985

TRAINING PLAN

<u>TYPE</u>	<u>CATEGORY</u>	REGIONAL				<u>TOTAL</u>
		<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	
CCCD Mgt	Nat'l Mgrs	4	-	2	-	6
MLM/ TOT	Med Chef S/S	5	5	11	-	21
MLM/ TOT	Med Chef Reg Hosp	2	-	3	-	5
MLM/ TOT	Health Educ	2	1	3	-	6
Refr. Repair	Technicians	<u>2</u>	<u>1</u>	<u>3</u>	<u>-</u>	<u>5</u>
MLM - Mid-Level Managers TOT - training of trainers		14	7	22		43

205
252
27
277
283
28
311

NATIONAL

<u>TYPE</u>	<u>CATEGORY</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>TOTAL</u>
CCCD MLM	H/C & Disp. Nurse	100(5)	105(4)	102(4)	41(2)	348(15)
Peripheral	Mid-Wives	100(5)	105(4)	102(4)	41(2)	348(15)
Peripheral	Agents Itin.	<u>40(2)</u>	<u>40(2)</u>	<u>95(3)</u>	<u>95(3)</u>	<u>270(10)</u>
		240	250	299	177	968

@ \$10 per day/person + \$20 travel/person

MLM @ 15 days = 150 + 20 = 170 per person

Periph, @ 15 days = 150 + 20 = 170 per person

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>TOTAL</u>
MLM	17000	17850	17340	6970	59150
Peripheral	<u>23,800</u>	<u>24650</u>	<u>33490</u>	<u>23120</u>	<u>105060</u>
	40800	42500	50830	30090	164220
Facilitators	<u>4080</u>	<u>4250</u>	<u>5083</u>	<u>3009</u>	<u>16422</u>
TOTAL	44880	46750	55913	33099	180642

Equipment and Supplies
Start-Up Requirements
(Option 1)
In U.S. Dollars

<u>ITEM</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>TOTAL</u>
Refrigerator, large, elec. @ 685	(8)5480	(6)4110	(14)9590	(2)1370	(30)20550
Refrigerator, small, elec. @ 450	(8)3600	(10)4500	(10)4500	(5)2250	(33)14850
Freezer @ 800 (9) 7200		(5)4000	(1) 800	(2)1600	(1) 800
Cold Box, large @ 400	(5)2000	(5)2000	(9)3600	(2)800	(528)10560
Vaccine Carrier, @ 20	(120)2400	(164)3280	(164)3280	(80)1600	(528)10560
Ice Packs, @150	(480)720	(656)984	(656)984	(320)480	(2112)3168
Bicycles, @ 100	(38)3800	(40)4000	(58)5800	(31)3100	(167)16700
Vehicles/spare parts @15000, increasing	(5)75000	(1)1700	(2)3800	(1)20000	(9)150000
Photocopies	(1)5000				(1)5000
Mimeograph	(1)3000				(1)3000
Typewriter, electric	(2)2700				(2)2700
Megaphones, @ 70	(5) 350	(5) 350	(5)350	5)350	(20)1400
Vehicle loud speaker @ 250	(1) 250	(1) 250	(2)500	(1)250	(5)1250
Needles/syringes	13000	13000	26000	13000	65000
TOTALS	121300	50274	94204	44000	324778

108

37

68

31

\$ 260,000

260 +

SUMMARY
 VACCINE/DRUG NEEDS*
 Options 1, 2, & 3
 in U.S. \$

	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>TOTAL</u>
TOTAL NEED					
Option 1	98,799	242,150	433,295	650,812	1,425,056
Option 2	73,299	224,214	458,284	666,005	1,421,802
Option 3	61,630	215,688	412,346	628,446	1,328,110
CCCD Input	100%	75%	50%	25%	
Option 1	98,799	181,613	216,647	162,703	659,762
Option 2	73,299	168,161	229,142	166,501	637,108
Option 3	61,630	161,766	206,173	157,112	586,681

*Excludes Penicillin for Yaws

probably no more than \$300,000

SUMMARY BUDGET
 CCCD TOGO
 USAID CONTRIBUTION
 IN U.S. DOLLARS

<u>ITEM</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>TOTAL</u>
Supplies/Equipment	121,300	50,274	94,204	44,000	309,778
*Vaccines/Drugs	104,985	181,613	216,647	162,703	665,948
Operations Research					
Support/Laboratory	5,000	5,000	5,000	5,000	20,000
Training	48,880	46,750	55,913	33,099	180,642
Health Education	5,000	5,000	5,000	5,000	20,000
Contingency	20,000	15,000	10,000	5,000	50,000
Total	301,165	303,637	386,764	254,802	1,246,360

*Option 1