




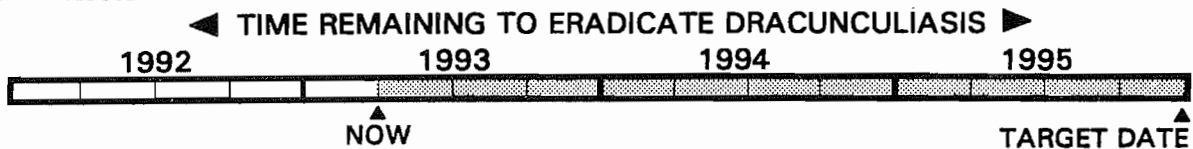
Memorandum

Date April 15, 1993

From  WHO Collaborating Center for
Research, Training, and Eradication of Dracunculiasis

Subject GUINEA WORM WRAP-UP #39

To Addressees



SAUDI ARABIA SUPPORTS GUINEA WORM ERADICATION



In a dramatic announcement at the Carter Center on March 12, 1993, Prince Bandar bin Sultan, the Saudi Arabian ambassador to the United States, presented former U.S. President Jimmy Carter with a check for \$1.9 million from King Fahd, Custodian of the two Holy Mosques and King of Saudi Arabia. This was the first of four annual grants of the same amount to support the Guinea worm eradication efforts of the Carter Center's Global 2000 project. The ambassador said King Fahd wanted to help "because the cause was right and because of his friendship with President Carter." Prince Bandar commended the humanitarian effort directed towards developing countries, many of whose populations are mostly Muslim, but he also noted that "Guinea worm does not know whether you are Christian, Jewish or Muslim." President Carter said that "With less than three years remaining until the target date for eradication of Guinea worm, this gift from King Fahd of Saudi Arabia is perfectly timed to help mobilize the final stages of the global campaign."

2ND MEETING OF NATIONAL PROGRAM COORDINATORS HELD AT COTONOU

The National Program Coordinators of Guinea Worm Eradication Programs from all endemic countries except Chad and Ethiopia met for the second time in Cotonou, Republic of Benin, from 23 to 26 March. Representatives of formerly endemic Gambia, Guinea, Central African Republic, and Iran also attended as did numerous other persons from the three sponsoring organizations: World Health Organization (WHO), United Nations Childrens Fund (UNICEF), and Global 2000. Nearly 80 persons registered for the meeting.

During this meeting, affected countries reported to WHO a total of 374,076 cases of dracunculiasis for 1992 (see Table 1). Provisional results of searches conducted by Ethiopia and Sudan revealed fewer cases than expected in areas of those countries that have been searched so far. The National Program Coordinator of Chad did not attend because the search in that country was beginning. Kenya is now the only endemic country which has not begun its search to identify affected villages. Significant progress in interventions since the 1992 Program Reviews were reported by Cote d'Ivoire, Togo, and especially Uganda (see Figure 1).

FIGURE 1

STATUS OF INTERVENTIONS: 1992

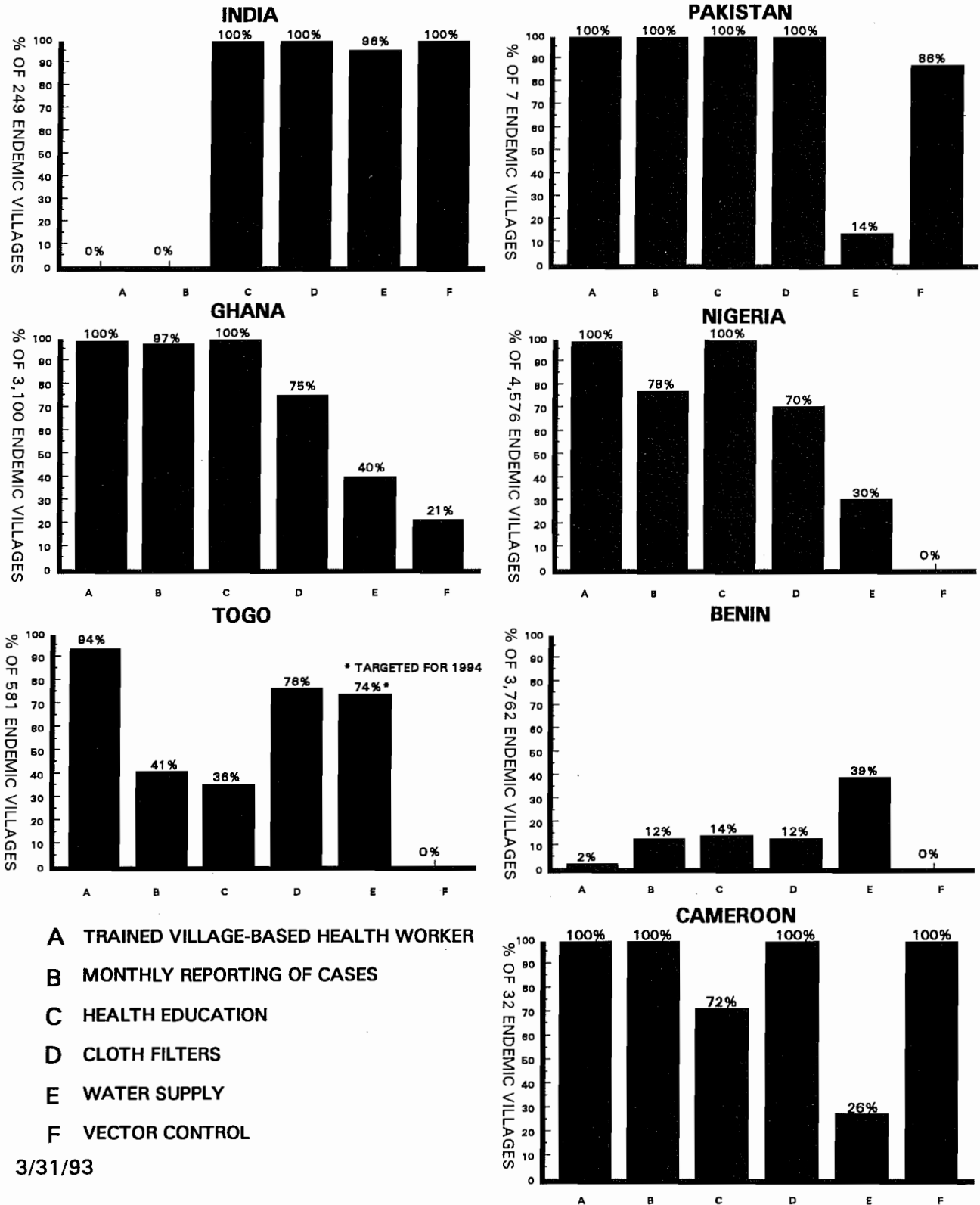


FIGURE 1
(continued)

STATUS OF INTERVENTIONS: 1992

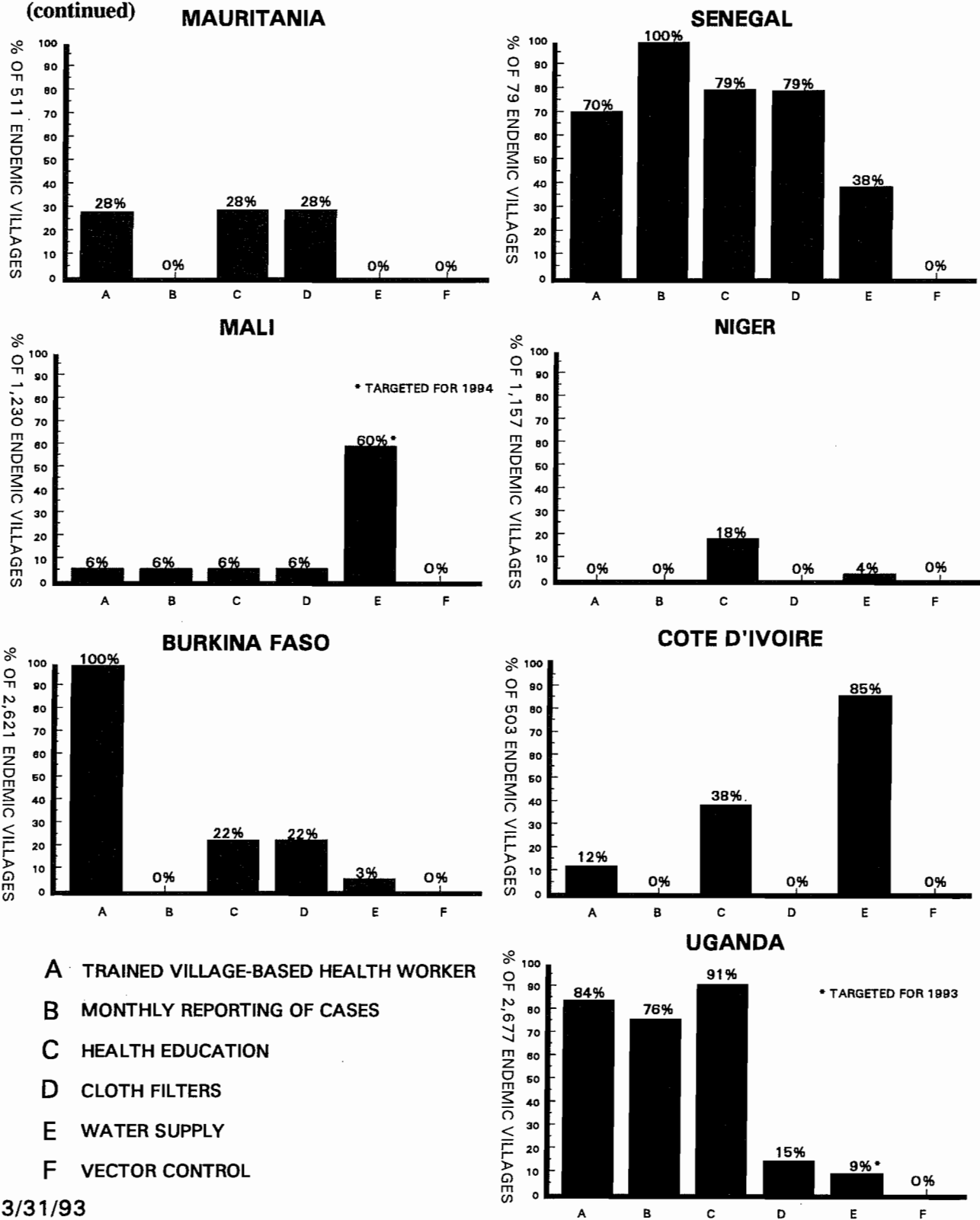


TABLE 1

REPORTED CASES OF DRACUNCULIASIS BY YEAR: 1985 - 1992

COUNTRY	1985	1986	1987	1988	1989	1990	1991	1992
BENIN	-	-	400	33,962	7,172	37,414 ⁺	4,006	4,315
BURKINA FASO	458	2,558	1,957	1,266	45,004 ⁺	42,187 ⁺	-	11,784
CAMEROON	168	86	-	752 ⁺	871 ⁺	742 ⁺	393 ⁺	127 ⁺
CHAD	9	314	-	-	-	-	-	-
COTE D'IVOIRE	1,889	1,177	1,272	1,370	1,555	1,360	20,064 ⁺	-
ETHIOPIA	1,467	3,385	2,302	1,487	3,565	2,333	12,690	303 ⁺
GHANA	4,501	4,717	18,398	71,767	179,556 ⁺	123,793 ⁺	66,697 ⁺	33,464 ⁺
INDIA	30,950 ⁺	23,070 ⁺	17,031 ⁺	12,023 ⁺	7,881 ⁺	4,798 ⁺	2,185 ⁺	1,081 ⁺
KENYA	-	-	-	-	5 ⁺	6 ⁺	-	-
MALI	4,072	5,640	435	564	1,111	884	16,024 ⁺	-
MAURITANIA	1,291	-	227	608	447	8,036 ⁺	-	1,557
NIGER	1,373	-	699	-	288	-	32,829 ⁺	500
NIGERIA	5,234	2,821	216,484	653,492 ⁺	640,008 ⁺	394,082 ⁺	281,937 ⁺	183,169 ⁺
PAKISTAN	-	-	2,400	1,110 ⁺	534	160 ⁺	106 ⁺	23 ⁺
SENEGAL	62	128	132	138	-	38	1,341 ⁺	728
SUDAN	-	822	399	542	-	-	-	2,477 ⁺
TOGO	1,456	1,325	-	178	2,749	3,042 ⁺	5,118	8,179 ⁺
UGANDA	4,070	-	-	1,960	1,309	4,704	-	126,369 ⁺
TOTAL	57,000	46,043	262,136	781,219	892,055	623,579	443,390	374,076

FROM PASSIVE REPORTING AND/OR AREA LIMITED CASE SEARCHES UNLESS OTHERWISE INDICATED.

⁺ NATIONAL CASE SEARCH^{*} VILLAGE-BASED REPORTING

- NO DATA AVAILABLE

Niger reported that it had adapted surveillance books from Burkina Faso, a teachers' guide from Togo, and flip charts from Nigeria for use in its program. Togo reported its representatives had visited the eradication project in Zou Province of Benin and sent others to learn about worm extraction in Ghana. Togo is also preparing a postage stamp with financing provided by WHO. In addition to country reports, featured presentations and discussions included sessions on case containment, mapping & geographic information systems, strategies for surveillance, a review of the WHO document describing proposed requirements and procedures for certification of dracunculiasis eradication, and experiences to date in vector control. Guidelines for the selection of clusters of affected villages where temephos should be used as a component part of control interventions were prepared by the WHO Collaborating Center at CDC and discussed with participants (see page 11). Countries belonging to the francophone organization OCCGE held a meeting to discuss plans for holding a common National Guinea Worm Eradication Day in the eight member states on April 30. UNICEF held the 6th meeting of its Technical Support Team immediately after the meeting of NPCs.

A complete report of this meeting will be published by WHO. The first recommendation adopted by the meeting, however, is as follows:

"By the time of the next Program Reviews in about six months from now, all endemic countries should have: 1) a trained village-based health worker in each endemic village, 2) monthly village-based reporting from each endemic village, 3) filter material in each endemic village that does not have adequate safe drinking water source(s), and 4) have completed at least one health education session in each endemic village."

General A. Toumani Toure, former head of state of Mali, received a standing ovation as he departed the meeting after he described activities and plans for social mobilization in the Malian GWEP. General Toure, whose visit to Benin was supported by Global 2000, left the meeting early in order to confer with President Nicephore Soglo of Benin. Participants at the meeting adopted a special recommendation, which "thanks General Amadou Toumani Toure, former head of State of Mali for his efforts to promote the eradication of dracunculiasis. Participants request him to consider visiting other affected countries, and to address the annual meeting of the Organization of African Unity."

GLOBAL 2000 ASSISTS MALI & NIGER

GLOBAL 2000



Global 2000 resident advisors Mr. Aaron Zee and Ms. Lesley Chace arrived in Mali and Niger, respectively, in March to begin assisting the national secretariats of those two countries' Guinea Worm Eradication Programs. The program in Mali is led by the President of the Intersectoral Committee, General A. Toumani Toure, and Dr. Issa Degoga, the national program coordinator (NPC). The NPC of Niger's program is Mr. Mohamed Salissou Kane. The assistance to these two countries, which are the first such support to affected francophone countries by Global 2000, is supported by funding provided by King Fahd of Saudi Arabia. These two countries detected 32,829 (Niger) and 16,024 (Mali) cases in their national searches, which were conducted in 1991 with funding provided by UNICEF.

GHANA: NATIONAL PROGRAM REVIEW HELD IN ACCRA

Ghana's Guinea Worm Eradication Program held a national review of its program at Accra on March 18-19. In a speech read on his behalf by the Director-General of Health, Dr. Moses Adibo, the Secretary for Health, Commodore (Rtd) Steve Obimpeh, recalled an encounter in 1988 when he was the Secretary for Agriculture and visited a village in a fertile maize-growing area of Brong-Ahafo Region, only to find nearly all the farmers down with Guinea worm. As Secretary for Health, Mr. Obimpeh vowed that "I will personally chase out the last [Guinea] worm before I leave the Ministry of Health." Two days before, in a televised speech to an international meeting of nurses in Accra, the Ghanaian President, Flt Lt J.J. Rawlings declared that Ghana needed not only nurses who could operate sophisticated equipment, but also those who could "mobilize a village to combat Guinea worm." Representing the Minister of Agriculture at the program review, the director of agricultural extension services offered his field staff to be trained for appropriate actions against Guinea worm at village level. The director of rural water supply for Ghana Water and Sewerage Corporation, Mr. P.O. Sackey, noted that his agency has set 300 million cedis (US \$0.5 million) aside from a surcharge to urban users, for use in helping residents of villages with Guinea worm to construct hand dug wells. He also gave a detailed inventory of external support being provided for rural water supply projects in each region of the country. The UNICEF WATSAN officer, Mr. E.M. Bawa, suggested that the government consider arranging a national Guinea worm week, or month, as a way of increasing awareness, social mobilization, and resources for the program.

During the meeting, at which the WHO Regional Director was represented by Dr. Frederick Wurapa, which was chaired by Ghana's NPC Dr. Sam Bugri, and attended by about 60 persons, the regional health directors each described the status of dracunculiasis and of interventions in their regions (see Table 2). Health education has been conducted in all endemic villages.

TABLE 2 **GHANA GUINEA WORM ERADICATION PROGRAM**
INTERVENTION INDICES: MARCH 1993

REGION	NUMBER OF ENDEMIC VILLAGES (1/93)	PERCENTAGE OF ENDEMIC VILLAGES WITH:		
		CLOTH FILTERS	WATER SUPPLY*	VECTOR CONTROL**
UPPER EAST	2	100%	100%	59%
GREATER ACCRA	92	100%	100%	87%
VOLTA	612	77%	78%	55%
BRONG-AHAFO	261	80%	100%	13%
NORTHERN	1659	70%	39%	1%
WESTERN	20	100%	55%	50%
CENTRAL	150	100%	50%	67%
EASTERN	146	63%	19%	38%
UPPER WEST	66	< 100%	62%	24%
ASHANTI	92	70%	40%	11%
TOTAL (GHANA)	3100	75%	40%	21%

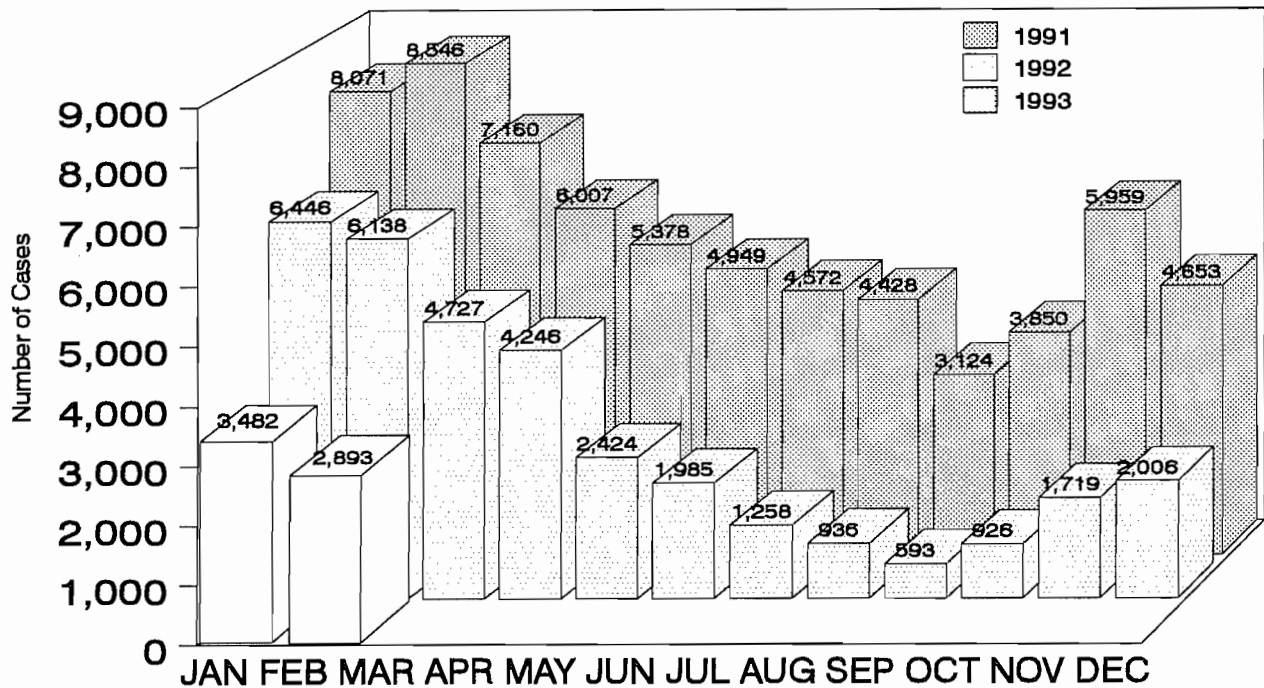
* VILLAGES WITH SAFE DRINKING WATER: CURRENT OR PLANNED BY 12/1993

** USE OF ABATE (TEMEPHOS)

Ghana recorded a nationwide reduction of 49% during the first two months of 1993, compared to the same period of 1992 (Figure 2). During this period, the decline in cases reported from the Northern Region, with 68% of the cases, was only 28%, vs 69% for the rest of the country. The Upper East Region has reported no indigenous cases of Guinea worm for the past nine months.

FIGURE 2

**GHANA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED BY MONTH**



NIGERIA CELEBRATES FOURTH NATIONAL GUINEA WORM DAY

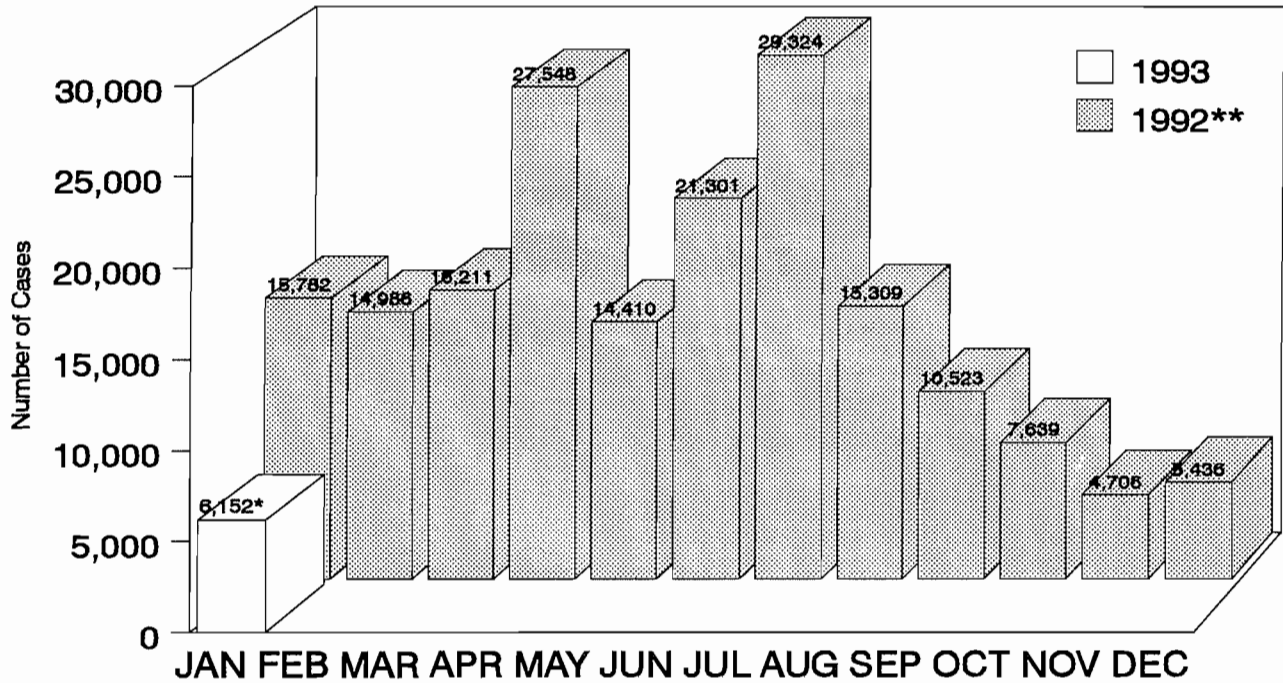
In a ceremony held at the Nigerian Institute for International Affairs in Lagos on March 19, the Nigerian Guinea Worm Eradication Program (NIGEP) marked its Fourth National Guinea Worm Eradication Day. The ceremony was hosted by the Secretary for Health, Dr. Christopher G. Okojie, and chaired by the head of NIGEP's National Task Force, Professor O.O. Kale. The Vice-President of Nigeria, the Honorable Augustus Aikhomu, was guest of honor. At the ceremony, NIGEP presented Merit awards to the vice-president and to the recently retired former minister of health, Professor Olikoye Ransome-Kuti. The current minister of health noted that he'd had Guinea worm several times as a child. The program included a drama by Jimi Sholanke's Troupe, and the bestowing of this year's Jimmy and Rosalynn Carter Awards. The three Carter Awardees were: Paikoro Local Government Area Chairman, Mr. Danjuma Baba (First); National Youth Corper Baba A. Ahmed (Second); and the Secretary of Sokoto State's Guineaworm Task Force, Mallam Bello Dogndaji (Third). The nomination of the first prize winner noted that he had "personally visited virtually all endemic villages in the LGA. In one,

[which the nominator witnessed] . . . the village head wept openly because, according to him, Chairman Danjuma Baba was the first government official ever to visit the village." In a related event on Saturday, March 20, an exhibit, "Guineaworm: Scourge of the Nation", funded by the West African Museums Project in collaboration with the National Commission for Museums & Monuments, was inaugurated at the National Museum in Abeokuta, Ogun State. This exhibit will travel to other parts of the country.

Nigeria has reported a total of 183,169 cases of dracunculiasis for the 1992 calendar year, in 4,616 endemic villages (Figure 3). 95% of the cases occur in only 86 LGAs (out of 294 endemic LGAs, and 589 total LGAs in the country). The average rate of endemic villages reporting monthly in 1992 was 72.8%. Notably, a provisional total of 6,152 cases were reported for January 1993, with 64% of endemic villages reporting, as compared to 16,083 cases reported in January 1992, with 71% of endemic villages reporting: a reduction of 66.6%.

FIGURE 3

**NIGERIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED BY MONTH**



* Provisional: 64% of 4,576 villages reported

** 73% of 5,607 endemic villages reported monthly on average

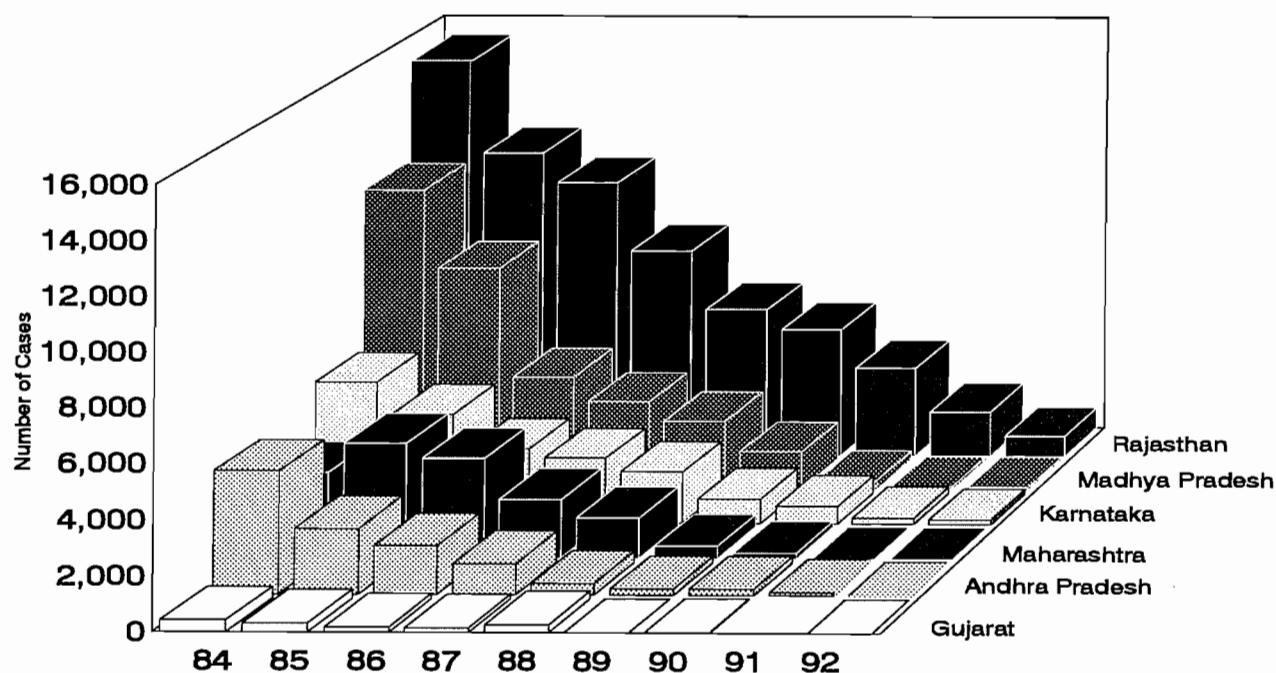
INDIA HOLDS ANNUAL TASK FORCE MEETING

India convened the Fifteenth Annual Task Force Meeting under the chairmanship of the director general of health services, in Delhi on 19-20 January 1993. According to the report of the meeting, India recorded 1,081 cases of dracunculiasis in 249 endemic villages in 1992.

Surveillance is being maintained on a total of 1,244 villages. Tamil Nadu State has been free of the disease since 1985. Gujarat and Maharashtra States have had no indigenous cases since 1991. (see Figure 4).

FIGURE 4

**INDIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES: 1984-1992**



STATE	INDIA: NUMBER OF GUINEA WORM CASES REPORTED DURING 1984 - 1992								
	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>
RAJASTHAN	15210	11644	10500	7896	5619	4872	3376	1712	792
MADHYA PRADESH	11341	8349	4217	3285	2565	1408	333	120	91
KARNATAKA	5239	4035	2754	2405	1909	896	634	226	167
MAHARASHTRA	3115	4211	3646	2159	1496	475	209	0	1
ANDHRA PRADESH	4461	2389	1772	1122	407	224	224	126	30
GUJARAT	426	322	181	164	27	6	22	0	0
TOTAL	39792	30950	23070	17031	12023	7881	4798	2184	1081

IN BRIEF

Chad: Chad began the operational phase of its national case search on March 4, using two survey teams. The teams are expected to cover nine sanitary districts within six weeks. It is hoped that most of this search will be completed in time for interventions to be extended to most of the endemic villages starting before this year's peak transmission season begins in June.

Ethiopia: The case search has now been completed in five regions (Gambella, South Omo, West Shoa, West Gojjam, South Wollo). Guinea worm is endemic in the first two of these, especially Gambella. The numbers of cases and endemic villages found have not yet been officially released by the government. Current plans are to search four additional regions by the end of July 1993, and to begin interventions in known endemic villages by June 1993.

Sudan: Sudan has completed searches of five states: Khartoum, Central, Darfur, Kordofan, and Bahr El-Ghazal. A total of 2,448 cases were recorded in 180 endemic villages; 63% of the cases were in Central State, which borders Ethiopia. Still unsearched are Equatoria, which borders Uganda, Kenya, and Ethiopia, as well as Upper Nile, which also borders Ethiopia. This program plans to begin interventions in the known endemic villages before the peak transmission season in May-July. The first shipment of nylon filter material arrived in March.

Uganda: Uganda is rapidly instituting interventions in its 2,677 endemic villages. As of March 1993, 84% of the endemic villages had a trained village-based health worker, 91% had received at least one health education session, and 76% were reporting monthly. (see Figure 1). The most highly endemic district, Kitgum, reported over 14,000 new cases from August 1992 through January 1993. This rate of intervention is in contrast to that of Benin and Burkina Faso, each of which has similar numbers of endemic villages and started their programs much earlier.

Benin, Chad, Cote d'Ivoire, Mauritania, and Niger each received in March 2,400 yards of the Faso Fani-produced "Guinea worm cloth" with the campaign's logo, courtesy of Global 2000. Earlier shipments were sent to Ghana, Nigeria, and Togo.

Pakistan: Dr. Karl Kappus, WHO Collaborating Center in Atlanta, consulted with Dr. Mohamed Azam, Pakistan National Program Coordinator, to assist with preparations for an intensified surveillance and case-containment campaign during the forthcoming (May-Sept) transmission period. With only 23 cases reported from 7 villages during 1992, Pakistan's Program is striving to achieve the goal of zero cases during 1992.

DR. HOPKINS RECEIVES AWARD

At a luncheon during its annual meeting in Washington D.C. on February 25, The Institute on African Affairs presented an award to Dr. Donald R. Hopkins, Global 2000 senior consultant, "in recognition for his contribution in the fight to eradicate the Guinea worm in Africa". Also receiving an award at the ceremony was Merck & Company for their fight against river blindness.

GERMANY OFFERS POSSIBLE ASSISTANCE

GTZ, Germany's organization for technical cooperation, has indicated willingness to integrate interventions against Guinea worm into relevant on-going GTZ projects. They are planning to send information on the eradication effort to all GTZ personnel. National Guinea Worm Eradication Programs may consider approaching the German Embassy for assistance. [This information has been provided courtesy of Dr. Anders Seim, of Health and Development International.]

**ADDITIONAL GUIDELINES FOR THE USE OF TEMEPHOS:
SELECTION OF VILLAGES AFFECTED BY DRACUNCULIASIS**

Rationale

The object of applying Abate (temephos) to sources of drinking water is to kill copepods ("Cyclops") infected with larvae of Dracunculus medinensis and temporarily suppress the density of copepod populations. Collective field experience has demonstrated that interventions such as health education, provision of safe drinking water, and chemical control of copepods (vector control) applied singly or in combination, effectively reduce transmission of dracunculiasis. However, because of technical, human safety, and cost considerations, vector control must be utilized selectively as a complement (additive) to other interventions.

Effective utilization of temephos is now a more critical issue in dracunculiasis eradication because less than three years remain in which to achieve the goal of eradication. The Guidelines for Chemical Control of Copepod Populations in Dracunculiasis Eradication Programs, developed by the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis at the Centers for Disease Control and Prevention (CDC) in 1989 provide general guidance on the selection of places to apply temephos. This document elaborates on the selection of places where vector control should be used as a component part of control interventions to provide an effective additional barrier against transmission of dracunculiasis.

Guidelines

1. Consider instituting vector control in affected communities where:
 - 1.1 disease incidence is very high and emergency measures to control transmission by all means must be rapidly undertaken;
 - 1.2 case-containment is being implemented;
 - 1.3 incidence data indicates that control interventions (other than vector control) have not reduced transmission by >50%, from baseline, after 24 months;
 - 1.4 provision of safe drinking water source is not feasible or forthcoming;
 - 1.5 infected migrants (farmers, market women, nomads, etc.) pass through or encamp, increasing the risk of contaminating unprotected sources of drinking water.
2. Using the above mentioned characteristics, identify the number and location of affected communities in the area (region, district, etc.) to define clusters where human and logistical resources need to be mustered to sustain vector control operations.
3. Identify and train vector control cadres (other than village-based health workers) for operations in selected clusters of affected villages.
4. Develop a map (hand made sketch) of each village and the relative location of sources of drinking water used by villagers.
5. Determine which sources of drinking water in each affected village are to be scheduled for monthly applications of temephos. Include sources of drinking water:
 - 5.1 with volume equal to or less than 500 cubic meters (500,000 liters) of water;
 - 5.2 without barriers to prevent entry of persons with Guinea worm lesions;
 - 5.3 used most frequently by villagers during the transmission season;
 - 5.4 used frequently by more than one community.
6. Develop a schedule of applications and consistently monitor the frequency and quality of these applications to ensure adherence to established standards of applications (see Guidelines for Chemical Control of Copepods in Dracunculiasis Eradication Programs).



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