



Memorandum

Date October 18, 1993

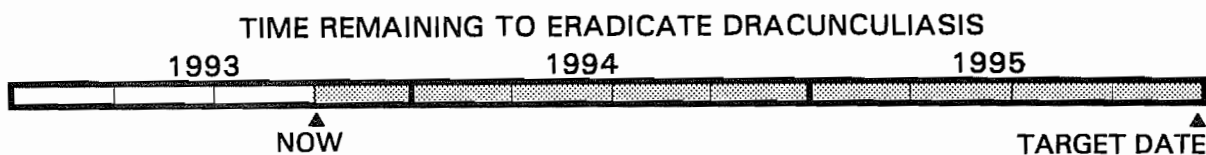
From



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

Subject GUINEA WORM WRAP-UP #41

To Addressees



EAST AFRICA: CARTER VISIT & 1993 PROGRAM REVIEW

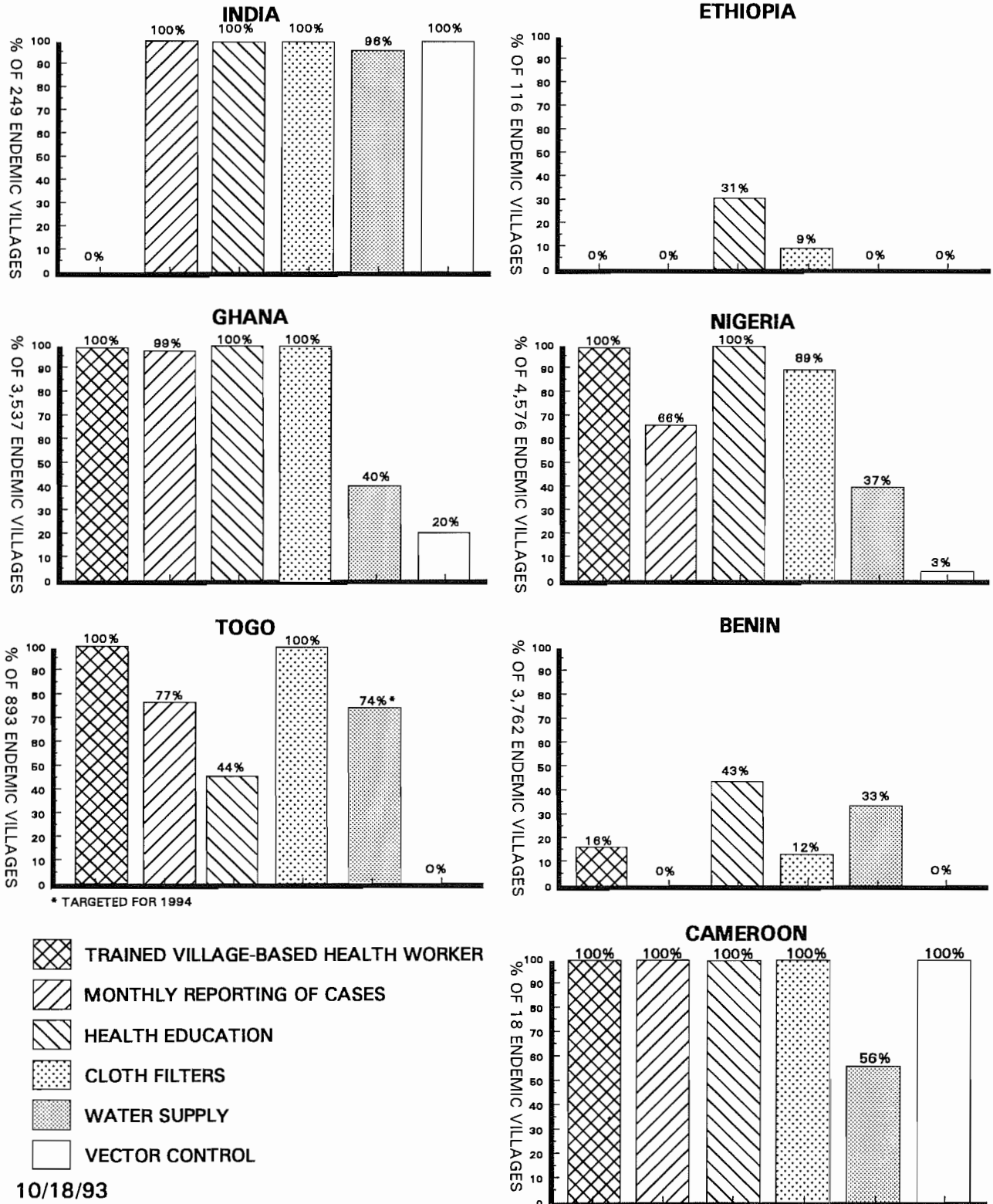
GLOBAL 2000



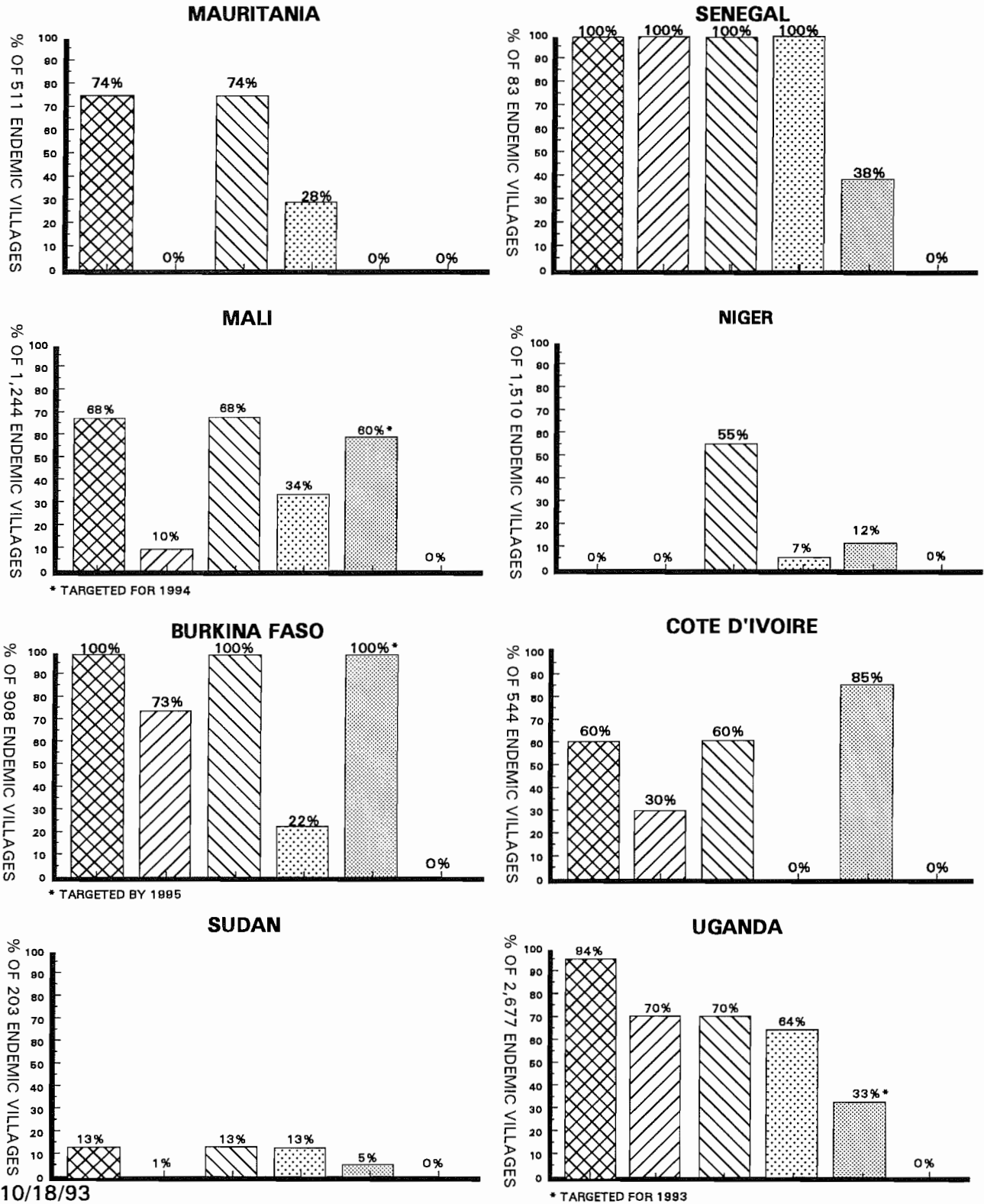
The last of the endemic sub-regions to mobilize in the campaign against dracunculiasis, East Africa (Ethiopia, Kenya, Sudan, and Uganda) experienced in August and September two seminal events which have increased the momentum of eradication activities there. From July 31 to August 8, former U.S. President and Mrs. Jimmy Carter visited Ethiopia, Kenya, Uganda, and Sudan to help focus attention on the Guinea worm eradication efforts in those countries. They were accompanied by Global 2000 senior consultant, Dr. Donald Hopkins, and the executive director of the Carter Center, Dr. John Hardman. In each country, President Carter met with the head of state, ministers of health, water, and other related ministries, and representatives of various international and bilateral agencies and non-governmental organizations. While in Kenya, members of the Carter group also met separately with the head of Operation Lifeline Sudan, Mr. Philip O'Brien, and representatives of two rebel groups from southern Sudan to discuss possibilities for implementing preventive measures in uncontested areas of that part of Sudan (see later article in this issue). Before arriving in East Africa, President Carter also discussed the status of Benin's Guinea Worm Eradication Program with President Nicéphore Soglo during a visit to Cotonou for a meeting on agriculture. President Carter's trip was made possible by an aircraft and crew loaned by the ARCO Company.

On September 20-24, the annual Program Review for the Guinea Worm Eradication Programs of Ethiopia, Kenya, Sudan, Uganda, Ghana, and Nigeria was held in Addis Ababa. An observer from Yemen also attended. This was a very exciting meeting, at which the impressive rapid progress being made by Ethiopia, Sudan, and Uganda was discussed, and those three late-starting countries were inspired by the examples of Ghana and Nigeria, which are much further along on the path to eradicating dracunculiasis (see next page). The participation of several health workers from the two endemic regions of Ethiopia was another positive aspect of this year's Program Review for the endemic English-speaking African countries. The Proceedings of this Review are being prepared by Global 2000 and the Collaborating Center at CDC, and will be available soon.

Figure 1 STATUS OF INTERVENTIONS: SEPTEMBER 1993



STATUS OF INTERVENTIONS: SEPTEMBER 1993



**SUDAN:
CASE SEARCH ENDS, INTERVENTIONS INCREASING**

The National Program Coordinator of Sudan, Dr. Sirraq el-Ghizouli, and his assistant, Dr. Isam Galander, report that the Sudan Guinea Worm Eradication Program has completed its search of all accessible areas of the country. Results are available for all nine states except Equatoria. A total of 2,608 cases have now been enumerated in 203 endemic villages. Most of the cases identified so far are in Central (1,544 cases), Bahr El-Ghazal (464), and Kordofan (333) States. Most of the cases in Central State are in three highly endemic villages. Interventions (trained village-based health worker, health education, and distribution of nylon cloth filters to 100% of households) are already in place in the three highly endemic villages of Central State, as well as in 26 endemic villages of Bahr El-Ghazal. Monthly reporting of cases has also begun in several of these villages, and the results are given in Table 1. This program plans to reach all accessible endemic villages with interventions by the end of 1993. External assistance is being provided by UNICEF and Global 2000.

**Table 1 MONTHLY REPORTING OF CASES OF DRACUNCULIASIS IN 1993
(Update: September 1993)**

COUNTRY	ANNUAL INCIDENCE (YEAR)	NUMBER OF CASES REPORTED DURING 1993												TOTAL	
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC		
NIGERIA	183,169 (1992)	7918	5268	6293	6802	5578	7845	5983	5028						
UGANDA	123,259 (1991)	5554	4733	3752	4562	3855	4028	4688	3312						
BURKINA FASO	42,187 (1990)	915	249	101	58	66	556	1533	976	273					
BENIN	37,414 (1990)	609	330	102											
GHANA	33,464 (1992)	3482	2893	2930	1990	1624	1046	693	379						
NIGER	31,676 (1991)														
COTE D'IVOIRE	20,064 (1991)				54	1352	255	204	229	1686					
MALI	17,716 (1991)								1167						
MAURITANIA	8,063 (1990)														
TOGO	5,381 (1992)	1472	1581	781	385	337	347	447	420						
SUDAN	2,608 (1992)					116+	149+	210+							
SENEGAL	1,686 (1991)						267	363							
INDIA	1,081 (1992)	4	9	9	59	99	98								
ETHIOPIA	817 (1992)														
CHAD	156* (1993)														
CAMEROON	127 (1992)	0	0	2	0	2	6	7	22	2	3*				
PAKISTAN	23 (1992)	0	0	0	0	0	1	0	0	0					
KENYA									3						
TOTAL															

* PROVISIONAL RESULTS, NATIONAL SEARCH UNDERWAY

* PARTIAL REPORT

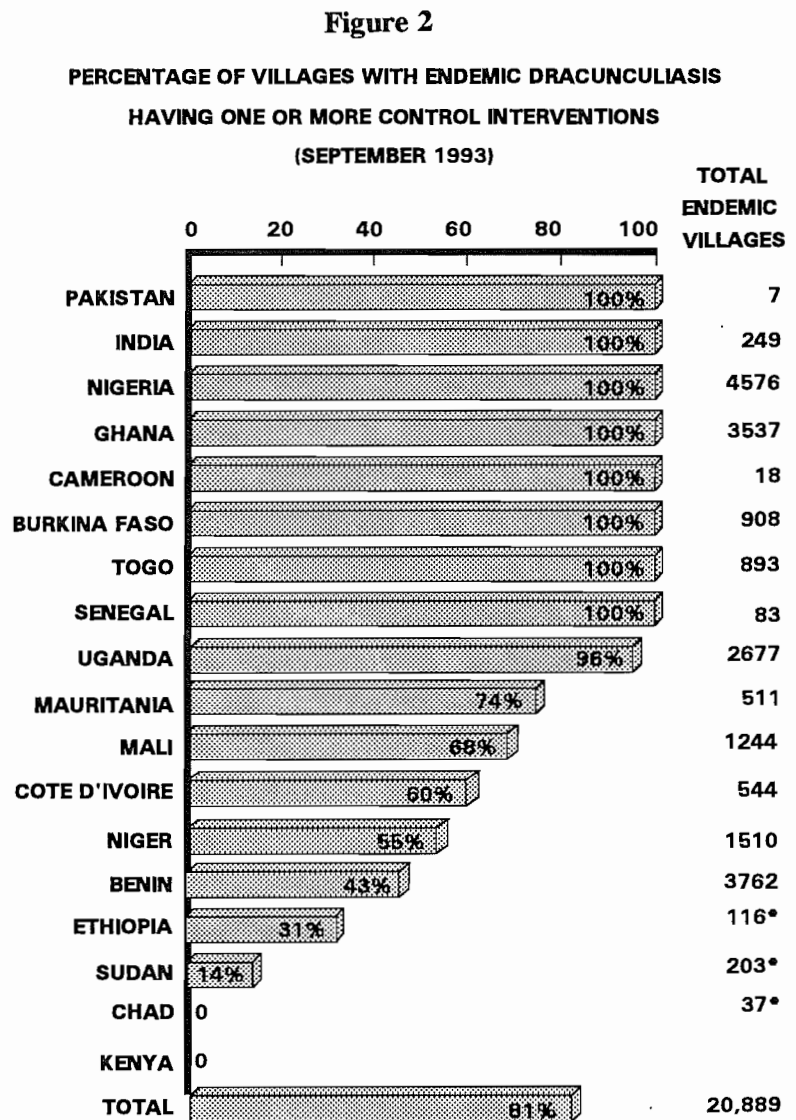
UNICEF's Operation Lifeline Sudan (OLS) plans to coordinate identification of endemic villages and initiation of control measures in uncontested areas of southern Sudan that are not now accessible to the Khartoum-based Guinea Worm Eradication Program. In early October, Dr. Philip Simani, who works with OLS in Nairobi, held discussions at Global 2000 and at CDC's WHO Collaborating Center regarding plans for activities in southern Sudan, during a visit to Atlanta. President Carter has also contacted the United Nations High Commissioner for Refugees, Ms. Sadako Ogata, who has agreed that UNHCR will help to conduct routine reporting of cases among Sudanese refugees in camps in countries adjoining southern Sudan.

ETHIOPIA: INTERVENTIONS, ACTIVE SEARCH CONTINUES

Ethiopia has now searched 6 of the 8 regions where dracunculiasis is suspected. According to the report presented by the national program coordinator, Dr. Seyoum Tatischeff, and the national program manager, Mr. Teshome Gebre, at the recent Program Review, a total of 817 cases have now been identified in 116 endemic villages. All of the endemic villages are in Gambella (84) or South Omo (32) regions. No cases were found in the Keffa Region, which is located between South Omo and Gambella in southwestern Ethiopia. Health education has begun in 28 of the 32 endemic villages in South Omo, and in 8 of the 84 endemic villages in Gambella. Distribution of nylon filters has just begun. This program is being assisted by UNICEF, the Swedish Philadelphia Church Mission, and Global 2000.

UGANDA: INTERVENTIONS, NEW USAID SUPPORT

Uganda has moved rapidly to implement control measures in its endemic villages. As of August 1993, the program had trained



* Provisional

10/19/93

village-based health workers in 81% of 2,677 endemic villages, conducted at least one health education session in 70%, distributed cloth filters in 44%, and targeted safe drinking water in 19%. A recently received shipment of nylon filter material will permit them to achieve full coverage with that intervention soon. Approximately 70% of endemic villages are now reporting cases monthly (see Table 1), and have reported a total of 31,172 cases from January to July 1993. A course to train trainers in the use of Abate will be conducted in October 1993; trainers from Ethiopia and Sudan are also expected to attend.



Soon after the visit by President Carter, the USAID mission to Uganda informed the government that it would make available nearly US\$80,000 per year for three years, beginning immediately, in support of the Guinea Worm Eradication Program. Other new support has been pledged by Peace Corps, the European Economic Community, World Vision, and the Lutheran World Federation. In July, key persons in the Uganda Guinea Worm Eradication Program (also Benin) participated in an interactive televised WorldNet broadcast from Washington, in which they exchanged questions and answers with Dr. Donald Hopkins and Ernesto Ruiz-Tiben of Global 2000.

**KENYA:
NATIONAL WORKSHOP HELD**

In July 1993, Kenya held a workshop with public health and medical leaders from 5 suspected endemic districts, at which time plans were made for establishing active surveillance for dracunculiasis in the 5 districts. Support for the workshop was provided by UNICEF. At the Program Review in Addis Ababa, this program was urged to complete the search for cases in the five districts by the end of 1993. Three cases of dracunculiasis were reported from one of the districts (Turkana) in August.

**BURKINA FASO:
ALL ENDEMIC VILLAGES TARGETED FOR SAFE WATER BY 1995**



World Bank



UNICEF



WHO

Burkina Faso, which in its 1990 national case search identified 42,187 cases of dracunculiasis in 2,621 endemic villages, reported during the recent Program Review at Abidjan that its Guinea Worm Eradication Program had identified retrospectively a total of 11,784 cases in 908 endemic villages for 1992 and that so far in 1993 (January-September), a total of 4,727 cases of the disease had been reported from 847 endemic villages. No verification of the completeness of these data has been conducted, however. Of the endemic villages in 1993, 31 are known to be newly endemic. So far in 1993, 954 village-based health workers have been recently trained or re-trained, 973 endemic villages have benefited from health education, nearly 42,000 nylon filters have been distributed at village level, and 36 endemic villages have received safe sources of drinking water. Most notably, the program reports that all other endemic villages have been targeted to receive safe water in 1993 and 1994 (a total of 215 villages). The latter statistic is a first for any endemic country. This program is assisted primarily by The World Bank, UNICEF, and WHO.

**CAMEROON:
63 CASES IN 18 VILLAGES**

As of October 8, Cameroon had recorded a total of 63 cases in 18 endemic villages since January 1, 1993 (see Table 1). This compares to a total of 108 cases reported in 32 endemic villages during the same period of 1992 (the peak transmission season is from May to September). Of the 63 cases in 1993, 36 (57%) were from only two villages. In one of those villages (Kangaleri), a single case occurred in 1992, but was only detected after the end of the transmission season. The other village (Kodogo), with 16 cases in 1992, had 13 cases in 1993. This program now offers rewards of 1000 FCFA (about US\$4) to each patient with dracunculiasis, and 500 FCFA to the health worker or other person who reports the case, as a means of improving the completeness and promptness of reporting.

**COTE D'IVOIRE:
RISING INTERVENTIONS, MONTHLY REPORTING BEGINS, MORE HELP**

Of the 544 known endemic villages in Cote d'Ivoire, 271 have reported cases so far in 1993, including 41 newly endemic villages. A total of 3,780 cases have been reported from the endemic villages in North-West, Center-West, and North-East Regions of the country where monthly reporting has begun, following the training of village-based health workers in those areas. Another 833 cases have been reported so far in 1993 (through September) from other endemic villages that have not yet begun monthly surveillance. Training has also been conducted for 650 village-based health workers in 325 endemic villages (two per village) or 60% of the known endemic villages. Nylon filter material has been distributed to seven regions; village-level distribution is planned to begin in late October.

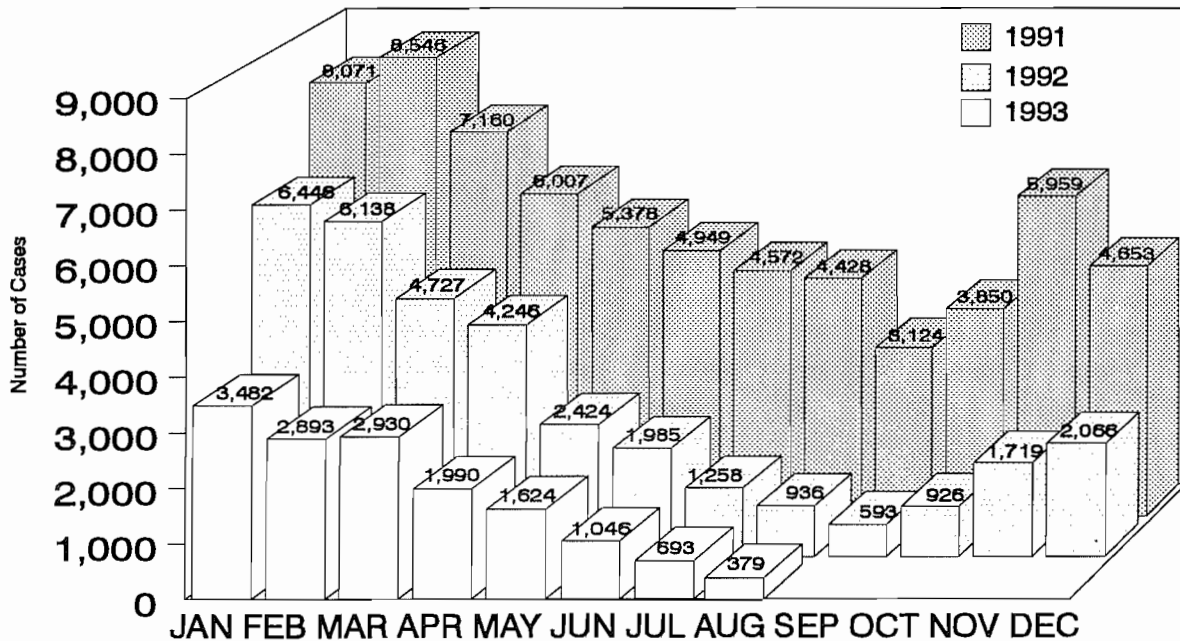
The U.S. Peace Corps has agreed to assign Peace Corps Volunteer Ms. Michelle Spring as an assistant to the national program coordinator, Dr. Henri Boualou, in response to a request from the Ivoirian government. Ms. Spring, an MPH graduate of Tulane University, has worked with the Guinea worm eradication activities in the Bouafle Region of Cote d'Ivoire for the past year. During the recent Program Review in Abidjan, it was also announced that Hydro-Chem, an Abidjan-based Norwegian fertilizer manufacturing company, would donate 50,000 Norwegian kroner (about US\$7,000, or FCFA 1.75 million) in support of incentives for village-based health workers in Cote d'Ivoire's Guinea Worm Eradication Program. This donation was arranged by Dr. Anders Seim of Health and Development International.

**GHANA:
DECLINE OF 47% SINCE 1992**

Ghana has reported a total of 15,037 cases of dracunculiasis in January-August 1993, vs. 28,160 cases in the same period of 1992 - a reduction of 46.6% (Figure 3). Two-thirds (67.5%) of Ghana's cases are now in the Northern Region, as compared to 51.2% of all cases in 1992. The reduction in cases in all other nine regions of Ghana between January-August 1992 and the same period of 1993 was 70%, as compared to only 41% in the large, highly endemic Northern Region. Elsewhere, the Greater Accra Region achieved a reduction of 94.4% in cases from January through August 1993, as compared to the same period of 1992, and the Upper East Region has not had an indigenous case

since June 1992. The percentage of endemic villages reporting on time, on a monthly basis, is now consistently over 95%. Overall, more than 93% of 2,026 endemic villages (those that have reported at least 1 case since January 1993) have received cloth filters, all have received some health education, and Abate is being used widely in selected endemic villages. The program is taking special measures to intensify interventions in the Northern Region, and to augment case containment in the other 9 regions.

**Figure 3 GHANA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED BY MONTH**



**INDIA:
278 CASES TO END OF JUNE 1993**

India, which now also is reporting cases monthly (see Table 1), has enumerated a total of 278 cases in 78 endemic villages during the first six months of 1993. This represents an overall reduction of 49% in the number of cases from the same period of 1992. However, of the three states where these cases are located, Karnataka (29 cases, 11 villages) had a reduction of 82%, and Rajasthan (79 cases, 30 villages) a reduction of 75%, while Madhya Pradesh (170 cases, 33 villages) had an increase of 139% in the number of cases found in 1993, as compared to 1992.

**MALI:
TRAINING, INTERVENTIONS INCREASING**

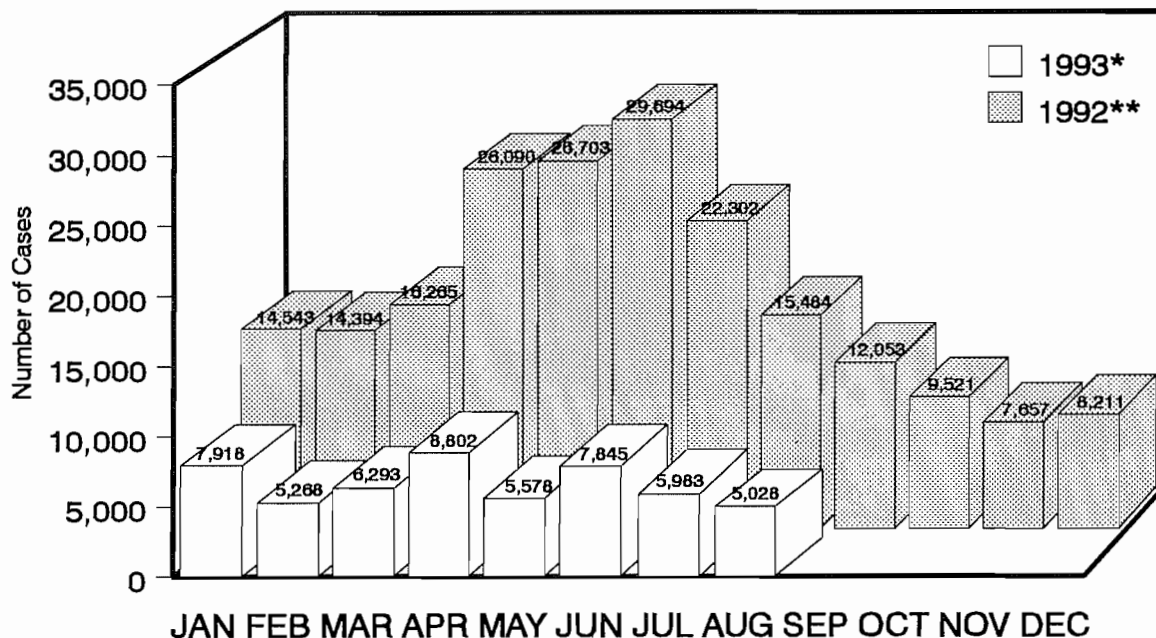
Mali, which in March 1993 had at least one intervention in place in only 6% of its endemic villages and had raised that to 13% as of the end of June, had an intervention in place in 68% of endemic

villages by the end of September. This includes trained village-based health workers in 252, or 57% of endemic villages in Kayes Region, and in 478 (71%) of endemic villages in Mopti Region. Cloth filters had been distributed to approximately 34% of all endemic villages in the country. Mopti and Kayes Regions contain 98% of the cases enumerated in the active case search. Monthly reports of cases from 9.6% of known endemic villages for August totalled 1,167. Meanwhile, Dr. Mamadou Bathily has been assigned to supervise activities in Kayes Region, with support provided by USAID. And U.S. Peace Corps has agreed to assign two more volunteers to Kayes and four others to Mopti to work with Malian counterparts on Guinea worm eradication, beginning November 1st this year. This will bring the number of PCVs working full-time on Guinea worm eradication in Mopti Region to six.

**NIGERIA:
70% REDUCTION IN CASES REPORTED**

Nigeria has reported a total of 45,687 cases in January-July 1993, as compared to 149,991 cases reported during the same period of 1992 - a reduction of 69.5% (see Figure 4). The rate of on time monthly reporting is about 67% in 1993. About 89% of endemic villages have received nylon filter cloth, and all have a trained village-based health worker and have conducted some health education. A comprehensive plan for health education has just been completed. Private donations to the Nigeria Guinea Worm Eradication Fund have been used to provide 216 bicycles for village health workers. Dr. Anders Seim of Health and Development International has facilitated the donation of 10,000 DM (about US\$6,100) by the Daimler Benz Corporation for the purchase of first aid kits for treating persons with dracunculiasis.

**Figure 4 NIGERIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED BY MONTH**



**PAKISTAN:
1 CASE in 1993**

Pakistan, which in 1992, had 23 cases of dracunculiasis, has found only 1 case in 1993, as of early October. The single 1993 case occurred in the formerly highly endemic village of Ganju, North West Frontier Province, in June.

**SENEGAL AND TOGO:
100% ATTACK UNDERWAY**

Both Senegal (83 endemic villages) and Togo (584 endemic villages) have trained village-based health workers, health education, monthly reporting, and nylon cloth filters in place in all of their endemic villages. In Togo, 77% of the endemic villages actually reported for the most recent period, and that program indicates it has implemented "full-scale" health education (as compared to a single health talk, which has been done in all) in 44% of its endemic villages. The numbers of cases reported by these two countries so far in 1993 are given in Table 1 (page 4). Dr. Alhousseini Maiga of the ITECH team consulted with the program in Senegal from June 28 to July 8, 1993. The national program coordinators from the two countries, Dr. Abou Bekr Gaye (Senegal) and Mr. K. Ignace Amegbo (Togo), and one other person from each country also participated in the training course for vector control using Abate that was conducted in Niger in early September.

**NIGER:
ABATE COURSE HELD**

From September 7-9, a course to train trainers in the use of Abate (temephos) in Guinea Worm Eradication Programs was held in Niamey, Niger. Course instructors were Drs. Alhousseini Maiga of ITECH (WHO) and Ernesto Ruiz-Tiben of Global 2000. In addition to trainers from Niger, two persons each from the national programs of Senegal and Togo participated in the course, including the respective national program coordinators.

TRANSITIONS

Dr. Robert L. Kaiser retired from the Centers for Disease Control and Prevention (CDC) in August. He had been head of the CDC's WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis for the previous six years. Among other activities since his retirement, Dr. Kaiser has begun working part time as a Consultant to Global 2000's Guinea worm eradication project. Dr. Kaiser's successor as director of the Collaborating Center is Dr. Trenton Ruebush.

Dr. Iyorlumun Uhaa in September began his post as coordinator for UNICEF's Guinea worm eradication activities in East Africa. He is based in Nairobi, Kenya. For the previous three years, he had been at the CDC as an Epidemic Intelligence Service Officer and as a Guest Researcher.

Dr. Sam Bugri, national program coordinator of Ghana's Guinea Worm Eradication Program, has

been transferred to Accra, from Tamale in the Northern Region. He will continue as national program coordinator while serving in his new position as head of the Epidemiology Division, MOH.

MEETINGS

The 1993 Program Review for Benin, Burkina Faso, Cameroon, Cote d'Ivoire, and Togo was held October 11-15 in Abidjan, Cote d'Ivoire. Results are included in those country reports.

The Fifth African Regional Conference on Dracunculiasis Eradication will be held in Ouagadougou, Burkina Faso March 29-31, 1994. Co-sponsors include WHO, UNICEF, Global 2000, and CDC.

CASH REWARDS FOR REPORTING CASES OF DRACUNCULIASIS

Dr. Anders Seim of Health and Development International has announced the availability of THE HDI GUINEA WORM AWARDS. These are cash rewards for reporting of cases of dracunculiasis in countries which have only 500 cases of the disease or less remaining. Grants of up to US\$2,000 per country per year can be made to provide funding for such awards in appropriate countries of Africa or Asia. The purposes of this cash reward system, which is similar to rewards now being offered in Cameroon, Pakistan, and part of India, are to increase the sensitivity of active surveillance in the cooperating countries, and to help guard against concealment of cases during the final stages of national eradication campaigns and in formerly endemic areas where no confirmed cases have been reported for several years. Dr. Seim may be contacted at: Health and Development International, N-1464 Fagerstrand, NORWAY (telephone 4766-910022; telefax 4766-919416).



RECENT PUBLICATIONS

Bermejo A, Bekul A, 1993. Community participation in disease control. *Soc Sci Med*, 36:1145-1150.

Bloch P, Sinonsen E, Vennervald BJ, 1993. The antibody response to Dracunculus medinensis in a endemic human population of northern Ghana. *J Helminthology*, 67:37-48.

Hopkins DR, Ruiz-Tiben E, Kaiser RL, Agle AN, Withers PC Jr, 1993. Dracunculiasis eradication: beginning of the end. *Am J Trop Med Hyg*, 49:281-289.

Leykun J, Seyoum T, 1993. Dracunculiasis (Guinea worm disease) in the Bume (Nyangaton) people of South Omo, Ethiopia. *Ethiop Med J*, 31:209-222.

Migliani R, Louis JP, Sam-Abbenyi A, Mana D, Graham S, Alami B, Trebucq A, Greer G, Desfontaine M, 1993. [Towards dracunculosis eradication in Cameroon?] *Med Trop (Marseilles)*, 53:77-81.

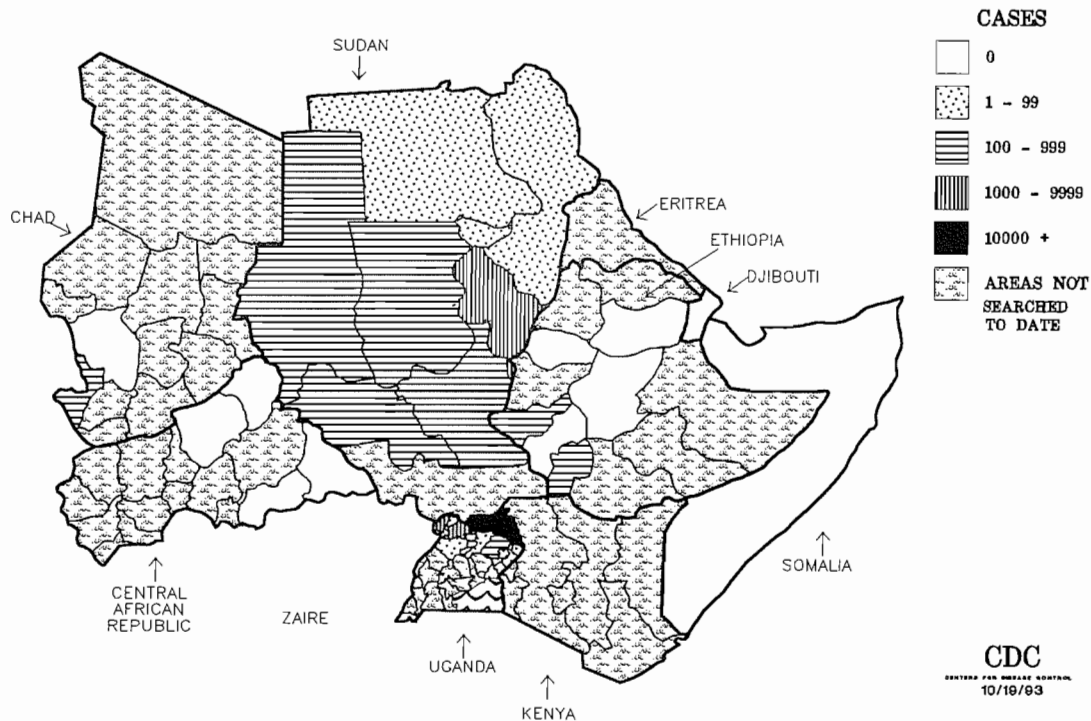
Prakash D, Parab PB, Sharma RN, 1993. Immunodiagnosis of dracunculiasis by dot-ELISA. *Ann Trop Med Parasitol*, 87:195-199.

Tayeh A, Cairncross S, 1993. Dracunculiasis eradication by 1995. Will endemic countries meet the target? *Health Policy and Planning*, 8:191-207.

World Bank, 1993. After smallpox: slaying the dragon worm. *In: World Development Report 1993: Investing in Health*. Oxford: Oxford University Press, p.92.

Figure 5

**NUMBER OF REPORTED CASES OF DRACUNCULIASIS
IN CENTRAL AND EAST AFRICA, 1990-1993**



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CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.