



Date: September 15, 1999

From:



WHO Collaborating Center for
Research, Training and Eradication of Dracunculiasis

Subject:

GUINEA WORM WRAP-UP #94

To: Addressees

Detect Every Case, Contain Every Worm!

BENIN AND TOGO PREPARE FOR PEAK TRANSMISSION SEASON

Sharing a common border, the lesser-endemic nations of Benin and Togo are surrounded by the three Guinea worm heavyweights of West Africa: Nigeria, Ghana, and Burkina Faso (Figure 1). Guinea worm eradication officials from the two countries held a border meeting at Savalou in Benin's Zou Department on September 9th-10th, led by Dr. Aristide Paraiso and Mr. K. Ignace Amegbo, the national program coordinators of Benin and Togo, respectively. The principal outcomes of the meeting were agreements to: 1) coordinate actions against dracunculiasis in the endemic sub-prefectures (Benin) and prefectures (Togo) along the Benin-Togo border; 2) adopt identical modalities for rewarding case-patients, informers, and village based health workers, including rewarding only local cases (not cases imported from the other country); 3) begin implementation of the reward system first in formerly endemic areas; 4) seek to obtain permission from both governments to allow free-access of program staff across the border to implement interventions against the disease; 5) identify all sources of drinking water used by the endemic communities along the border, all health posts, markets, and all other infrastructure that may be helpful to the programs; 6) organize two meetings during October 1999 (one in Togo and one in Benin) to inform/ train all village volunteers and supervisors on both sides of the border on the system of rewards; 7) organize community mobilization days in both countries; 8) systematically treat all unsafe sources of drinking water along the border with Abate; and 9) regularly hold meetings between the staff of the two programs. Dr. Alhousseini Maiga of WHO and Drs. Ernesto Ruiz-

Figure 1

Highest Endemic Districts in Togo and Benin

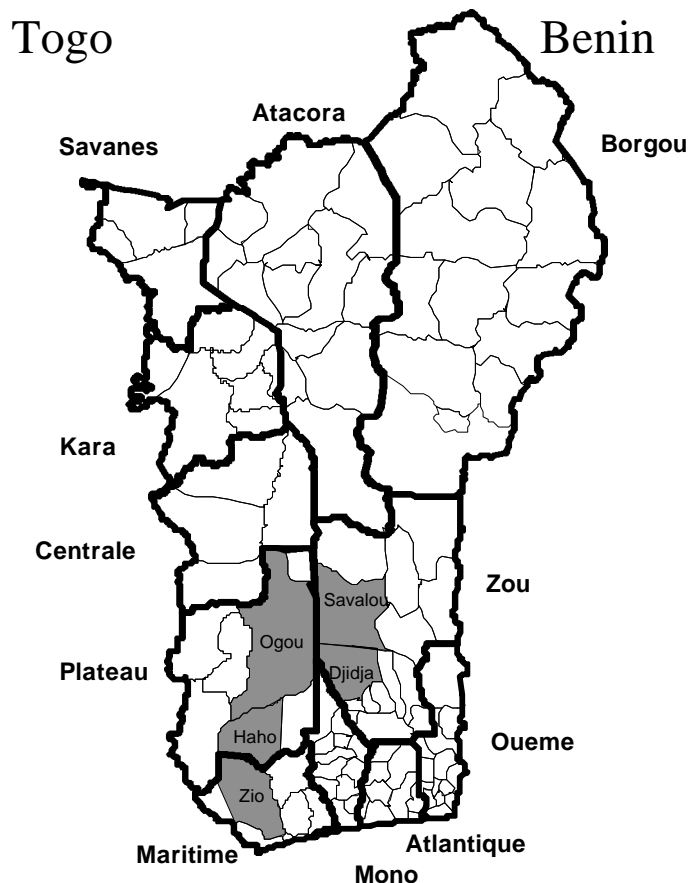


Figure 2

Benin Guinea Worm Eradication Program Number of Cases of dracunculiasis reported during 1998 and 1999

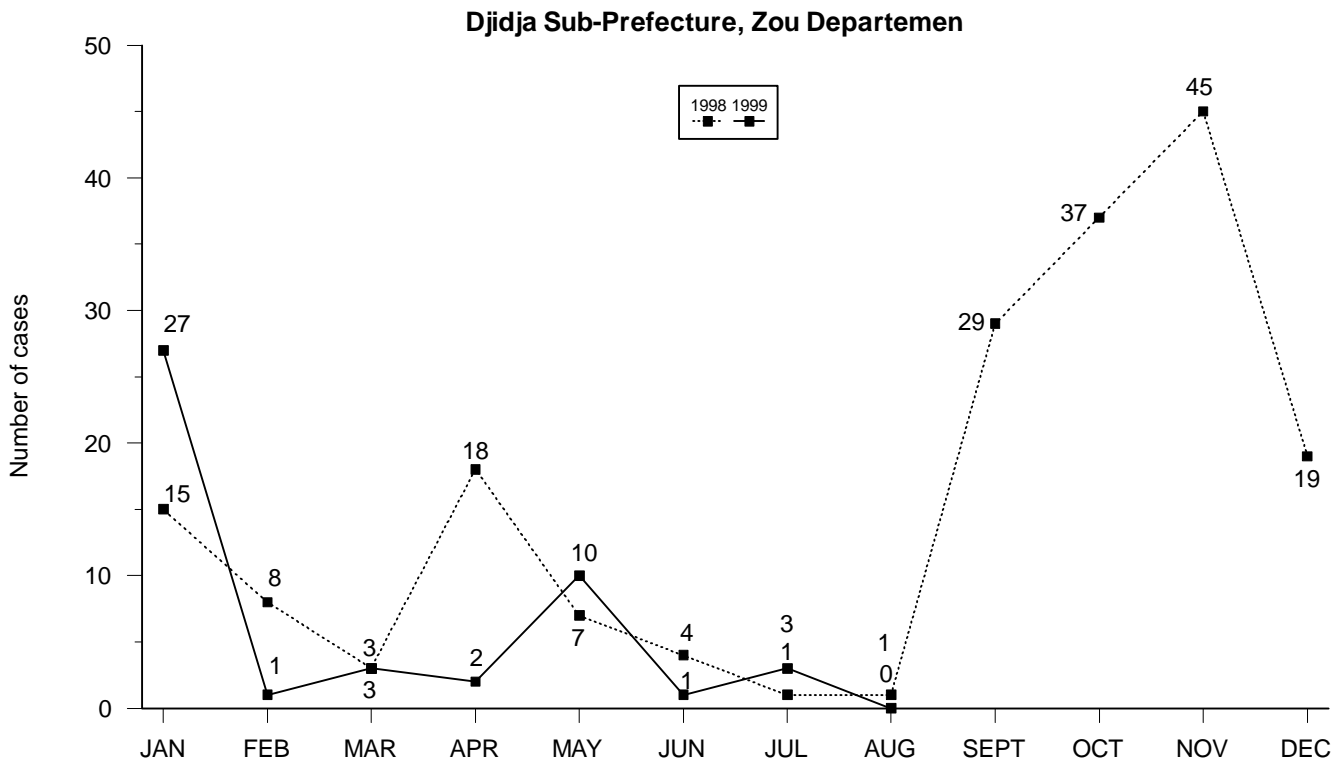
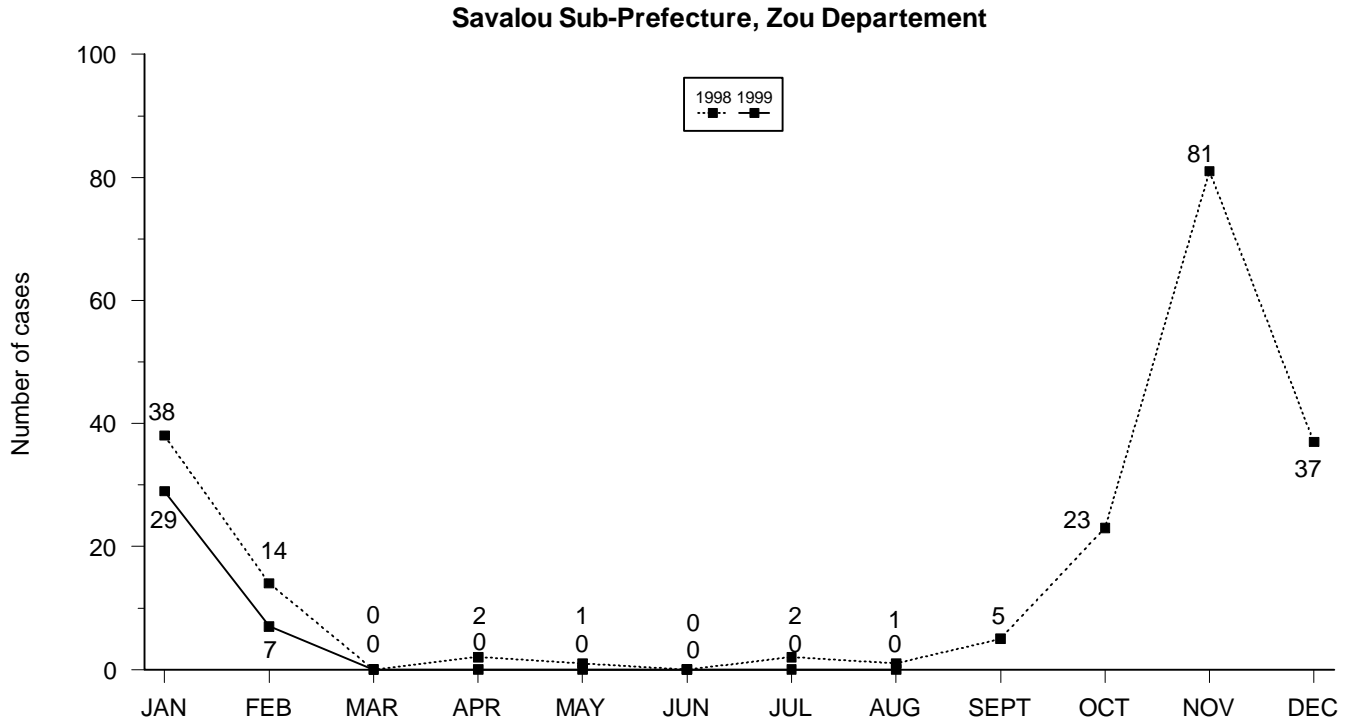
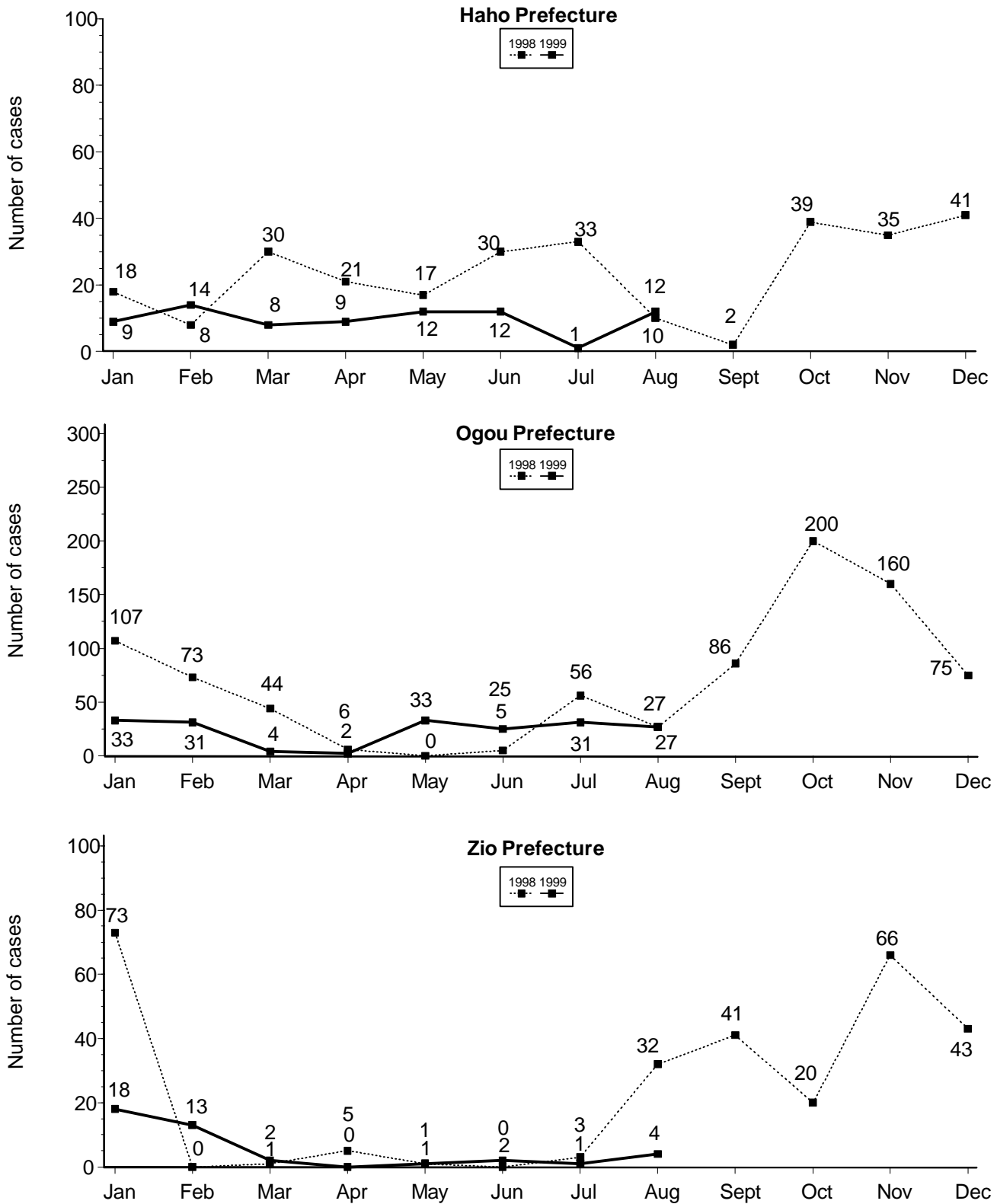


Figure 3

Togo Guinea Worm Eradication Program Number of Cases of dracunculiasis reported during 1998 and 1999



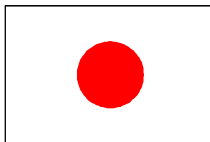
Tiben and Donald Hopkins of The Carter Center/Global 2000 visited the programs in both countries in August-September.

In Benin, the peak transmission season is October through January. Benin reported a total of 695 cases of dracunculiasis in 1998, of which 391 (56%) were in only two sub-prefectures of Zou: Savalou (204 cases) and Djidja (187). The 695 cases were reported from 179 endemic villages, 92 of which reported only one case each. Three of Benin's six departments (Atacora, Atlantique, Oueme) have reported no indigenous cases in January-July 1999; only 66 villages have reported one or more cases so far this year, and 38 of those have reported only one case. The incidence of disease in Savalou and Djidja Sub-Prefectures in 1998-99 is shown in Figure 2. Benin reports 32% fewer cases in January-July 1999 compared to the same period of 1998, and 91% of this year's cases have reportedly been contained.



Filters have been provided to all households in the endemic villages without safe water in Zou. Abate is used in about 55% of endemic villages, with follow-up spot checks for copepods in a sample of treated ponds. Of the 44 endemic villages (reporting 1 or more case since January 1, 1998) in Zou, 22 have adequate sources of safe water, and only seven villages without sufficient safe water had 10 or more cases in 1998. UNICEF will provide at least 17 new borehole wells in endemic villages of Zou Department this year, having provided 49 new wells in Zou during 1998. Two consultants funded by Health and Development International (HDI) arrived in country in early September to help intensify supervision of village-based health workers in Zou Department during the current peak transmission season. The Ministry of Health has purchased 400 more bicycles for village-based health workers; 85 bicycles from an earlier consignment are currently being delivered.

Togo's peak transmission season is September through January. Togo reported 2,125 cases in 1998, of which 1,408 (66%) were in only three sub-prefectures: Ogou (839 cases), Zio (285) and Haho (284). There were 203 endemic villages in 1998. In January-August 1999, 92 villages have reported cases (including 17 newly endemic), of which 26 have so far reported only one case each. The incidence of disease in Ogou, Haho and Zio Sub-Prefectures is shown in Figure 3. Togo reports 34% fewer cases in January-August 1999 as compared to the same period of 1998, and 67% of this year's cases so far have been reportedly contained.



JAPAN



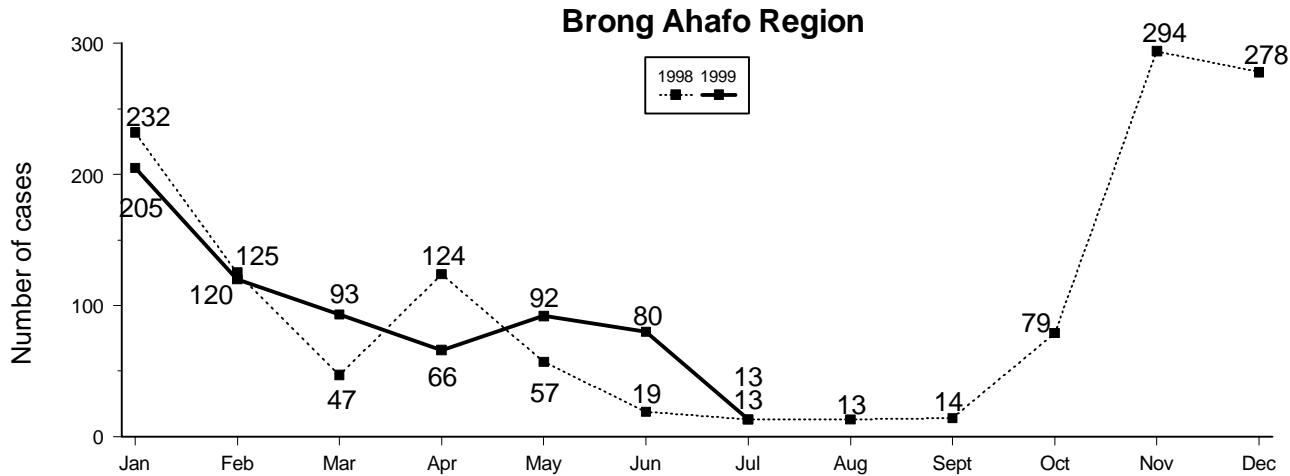
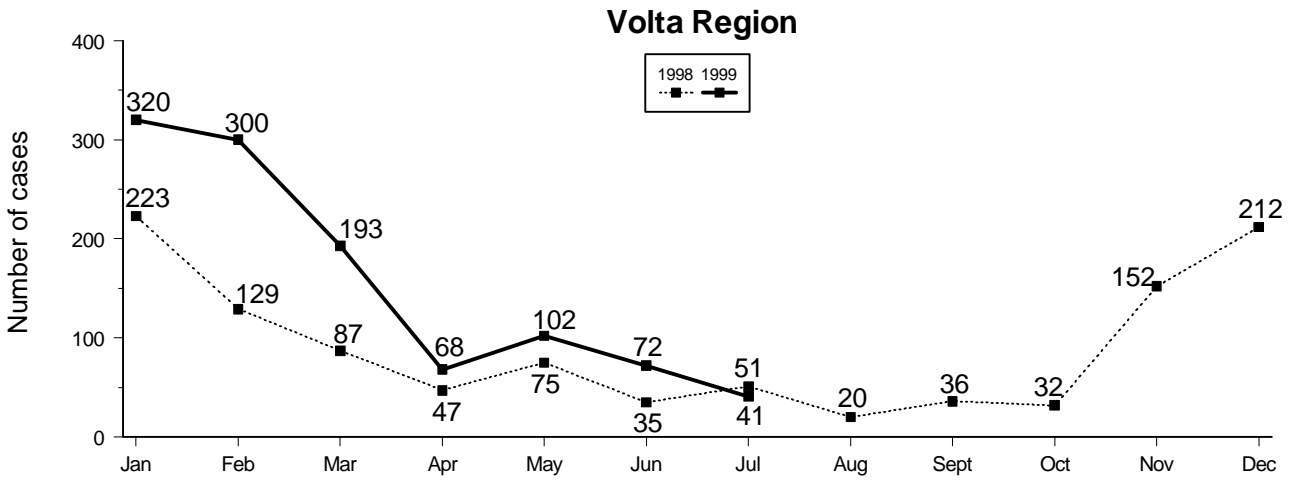
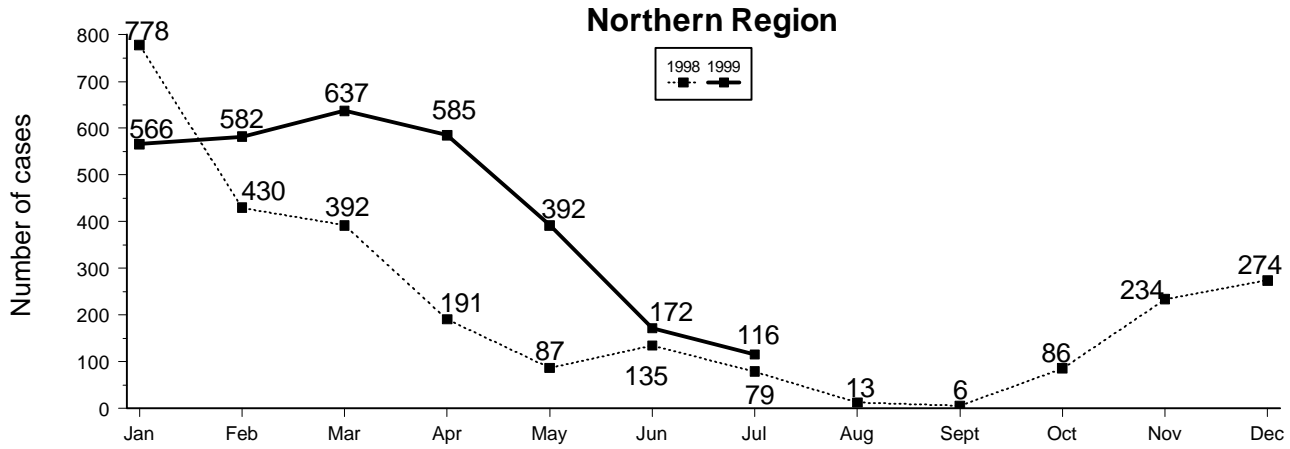
Filters have been distributed recently to all households in endemic villages of Zio Sub-Prefecture; filters will be distributed in Ogou and Haho before the end of September. The village of Hakedji, which in 1998 was the highest endemic village in the country, and was visited by the minister of health for that reason, received two new sources of safe water in July-August, drilled under a Japanese-funded program which is providing safe water to several endemic villages in Zio. (The half-hour videotape of the minister's visit was re-broadcast on national television in early September). Ogou and Haho Sub-Prefectures unfortunately share the same difficult geology for provision of safe water as Djidja and Savalou Sub-Prefectures in Benin. No external donor is currently helping to provide safe water in those two endemic Togolese sub-prefectures. Togo used Abate in 78% of all endemic villages in 1998. Two U.S. Peace Corps volunteers will be assigned to Ogou, and one to Haho before the end of 1999. Peace Corps will also fund re-training of village-based health workers in endemic villages. One consultant provided by HDI is assisting this program from mid-August to mid-December; another is scheduled for October-November.

GHANA REVIEWS NATIONAL PROGRAM

On September 9th-10th, Ghana's Ministry of Health held a meeting in Accra to review the status of the Guinea Worm Eradication Program since the Vice-President and Regional Ministers resolved in September 1998 to eradicate dracunculiasis in Ghana by the end of this year. The minister of health was represented by the Deputy Minister of Health, Dr. Moses Adibo. Also attending were almost all of the ten regional ministers, regional

Figure 4

Ghana Guinea Worm Eradication Program Number of Cases of Dracunculiasis Reported During 1998 and 1999



Guinea worm coordinators, and several regional directors of health service, as well as health officials from some key endemic districts. Representatives of the Community Water and Sewerage Agency, UNICEF, and The Carter Center/Global 2000 also attended. The meeting was chaired by the national program coordinator, Dr. Sam Bugri. Representatives of Northern, Brong-Ahafo and Volta Regions made detailed presentations. These three of Ghana's ten regions have reported 91% of Ghana's cases so far this year. While the involvement, beginning at last year's meeting, of many of the political leaders at regional and district levels was hailed as a good achievement of the program, participants readily acknowledged that much more needed to be done, given the increase in cases over the past year. Ghana experienced shortages of Abate during the first five months of 1998 and in March 1999, as well as delayed governmental funding during January-May 1998. All agreed that action against the disease in Northern, Brong-Ahafo and Volta Regions will benefit all other regions indirectly by reducing exportation of cases to non-endemic and lesser-endemic regions. The cases reported monthly in these three regions are summarized in Figure 4. Of Ghana's 110 districts, 7 have reported 63% of the 5,326 cases in January-July this year: Savelugu-Nanton (626 cases), Zabzugu-Tatale (515), Nanumba (441), East Gonja (361), and Saboba-Chereponi (328) in Northern Region; Atebubu (509) in Brong-Ahafo Region, and Kete-Krachi (588) in Volta Region.

Northern Region (Mr. Patrick Apoya, regional coordinator), which has reported 3,113 cases (58% of the national total) so far this year, from 320 villages, has reportedly contained 50% of its cases. Filters have so far been distributed to all households in only 25 villages, or 8% of the villages with cases so far in 1999. Abate was used in 27% of endemic villages during the peak transmission months of January-February 1999. Twenty-one percent (21%) of the region's endemic villages have at least one source of safe drinking water. The long-awaited safe water supply for the endemic district capital of Savelugu is scheduled to be completed by the end of October, and UNICEF will provide or rehabilitate safe water sources in several endemic villages in the region.

Volta Region (Mr. Vernance Attivor, regional coordinator) has reported 1,107 cases from 104 villages in January-July this year (21% of the national total), of which 65% have reportedly been contained. In Volta region, 52% of the 12,635 households in endemic villages have received cloth filters (61% of households in endemic villages of Kete-Krachi District). During the peak transmission months of January-February 1999, ponds in 23% of endemic villages were treated with Abate. Twenty-six percent (26%) of endemic villages have a source of safe drinking water. The Danish International Development Agency (DANIDA) has rehabilitated safe water sources in ten endemic communities in Kete-Krachi District.

Brong-Ahafo Region (Mr. Anthony Ofori, regional coordinator) has reported 669 cases from 58 endemic villages so far this year, accounting for almost 13% of the national total. All households have received cloth filters in 15 (26%) of the 57 endemic communities in Atebubu District, but the proportion of endemic villages in the region with 100% coverage of households is not yet known. During the peak transmission months of January-February, ponds in 23% of endemic villages were treated with Abate. The proportion of endemic communities which have a source of safe drinking water is not available. The regional ministry of health recently assigned a new vehicle to the program in Atebubu District.

Two Peace Corps Volunteers will begin working with the local Guinea worm programs in Atebubu District (Volta Region) and Zabzugu-Tatale District (Northern Region) in mid-October. Three consultants provided by The Carter Center (Global 2000) have begun work in Atebubu (Brong-Ahafo Region), East Gonja (Northern Region) and Kete-Krachi (Volta Region) Districts. All filter material and Abate for the impending season have been cleared from the port and received by the secretariat of the program.

LINE LISTING: A TOOL FOR EFFECTIVE MANAGEMENT AND ADVOCACY

Table 1 is a line listing of the five highest endemic villages in Atebubu District of Ghana's Brong-Ahafo Region, as of July 1999. The villages are listed in descending order of number of cases reported in January-July 1999, including the four months of highest transmission (January-April). It also includes columns for tracking indices for the three key interventions in each endemic village listed: provision of cloth filters to all households, treatment

of water sources with Abate, and the status of clean water source(s). This table is adapted from similar ones being used in parts of Benin, Ghana, and Togo for tracking the status of clean water sources in endemic villages. In this example, data on the status of Abate treatment and on whether borehole wells are working or not are not available, and no intervention data are yet available for the newly endemic village #4. Some population figures are estimates. Data can be updated and refined monthly.

By using a line listing such as this, programs can monitor the status of interventions in priority villages, and easily see where they need to direct their efforts in order to cover all endemic villages with all appropriate interventions, beginning with the highest priority ones. Similar listings have been used to monitor all remaining endemic villages in Pakistan, Cameroon, Chad, Senegal and Ethiopia, for example (see Guinea Worm Wrap-Up #86). Endemic villages with no source of clean water (e.g., villages #1 & #3), with an inadequate source (village #2), or with a broken source of clean water, for example, can then be targeted for priority coverage of 100% of households with cloth filters and all appropriate ponds with Abate. At this stage of the eradication effort, programs should prepare and regularly update a summary of this kind for each of their highest endemic districts, and such summaries for such districts should be updated monthly and displayed at district and national headquarters. In addition to being used to monitor the status and progress of the program in the highest endemic districts, the same line listing can serve as a powerful tool for advocacy, by showing clearly which endemic villages should be prioritized for help in providing or rehabilitating safe sources of drinking water (in this example, villages #1 and #3) in order to obtain maximal impact from the water supply intervention over the next 16 months.

Table 1

**Ghana Guinea Worm Eradication Programme:
List of Endemic Communities in Descending Order of 1999 Cases**

Region: Brong-Ahafo		District: Atebubu		Date: July, 1999		Name of District GW Coordinator: _____			
	Villages	Zone	Cases January-July 1999	Population	Number of Households	Number of Households with filters	Monthly Rx Abate	Situation* Clean Water	Comments
1	Wokasua	Abease	78	308	42	42	N/A	0	e.g. case containment rate
2	Parembo	Parembo	62	4000	450	450	N/A	2	
3	Fawomang	Abease	58	1000	73	50	N/A	0	
4	Nwowam	Duabone	43	N/A	N/A	N/A	N/A	N/A	
5	Hiampe	Abease	38	680	35	35	N/A	1	

N/A = not available

*Key

1+ = 1 working handdug well or borehole

1- = 1 handdug well or borehole, not working

0 = no handdug well or borehole

UGANDA REDUCES DRACUNCULIASIS BY 63% IN 1999 PEAK SEASON

As documented in Figure 6, Uganda's Guinea Worm Eradication Program has reduced the reported incidence of dracunculiasis by 63% in January-July 1999 as compared to the same period of 1998, from 667 cases to 239 cases. This includes all of the peak transmission season of April-July. Ninety-four percent of this year's cases so far have reportedly been contained (Table 1). A cumulative total of 93 villages have reported one or more case(s) in January-July 1999, compared to 145 villages having done so during the same period of 1998 - a reduction of 36% in endemic villages. Of the 252 cases reported so far in 1999 (including imported cases), 155 (62%) were reported

from Kotido District, 52 (21%) from Moroto, and 40 (16%) from Kitgum District. Uganda's Pre-certification Steering Committee is scheduled to meet again on February 18, 2000. This report is based on information provided by the national program manager, Dr. J. Bosco Rwakimari.

INTERAGENCY MEETING AT THE CARTER CENTER

The 38th Meeting of the Interagency Coordinating Group for Dracunculiasis Eradication met at The Carter Center in Atlanta on August 26, 1999. Participants included representatives from the Carter Center/Global 2000, CDC, The World Bank, the World Health Organization (WHO), and the United Nations Children's Fund (UNICEF). Dr. Joel Breman, a member of the Global Commission for the Certification of Dracunculiasis Eradication also attended. Participants discussed reasons for the increases in cases this year in Ghana and Nigeria as well as the continuing difficulties of the program in Burkina Faso. The need to accelerate and monitor the rehabilitation and provision of safe water sources to key endemic villages in Nigeria was emphasized.

IN BRIEF

Côte d'Ivoire Ms. Nwando Diallo, senior program associate at the headquarters of Global 2000/The Carter Center, arrived in Côte d'Ivoire in early September to begin a six month assignment. She will work with Dr. Henri Boualou and his colleagues as they prepare to end transmission of dracunculiasis next year.

Nigeria Nigeria has reported 892 cases for August 1999, which is a reduction of 26% from the 1,197 cases reported in August 1998 (Table 1). The number of cases reported during 1998 and during January – August 1999 from each of the four zones are shown in Figure 5. General (Dr.) Yakubu Gowon has made first time visits on behalf of the Nigerian Guinea Worm Eradication Program (NIGEP) to Kano State (August 16th-18th) and Niger State (August 20th). He was accompanied by a team of representatives from the Yakubu Gowon Center, the Federal Ministry of Health (NIGEP), and Global 2000/The Carter Center. In Niger State, the Executive Governor, Engineer A. Kure, instructed that two of the four drilling rigs in the state be moved immediately to the endemic communities, and he promised that all endemic areas of the state would be provided safe drinking water by the year 2000. In Katsina State, the governor has released 2 million naira (~US\$23,000) for interventions, including provision of safe water to endemic villages.

Burkina Faso Burkina Faso finally trained its 14 agents renforts, one for each of the 14 most highly-endemic districts of the country, on August 17-21. Burkina Faso's peak transmission season is May-September.

WHO SUPPORT TO SOUTHERN SUDAN



Joint WHO / Global 2000 review meetings took place during a recent mission of WHO staff in Nairobi to revise the new proposals submitted by the three NGOs already funded last year. The following contributions to foster and implement Guinea worm elimination activities were approved:

1. Comitato Collaborazione Medica will receive US \$ 35,000 from WHO to extend the present intervention in the Adior area up to the end of this year;
2. Christian Mission Aid will receive a total of US \$ 28,650 from WHO, to extend the activities in Langken area up to end August 2000;
3. Mundri Relief and Rehabilitation Association will be funded by WHO for a total amount of US \$ 28,704 to extend the activities up to March 2000 in Mundri County and Taly Payam.

Figure 5

Nigeria Guinea Worm Eradication Program Number of cases of dracunculiasis reported during 1998 - 1999

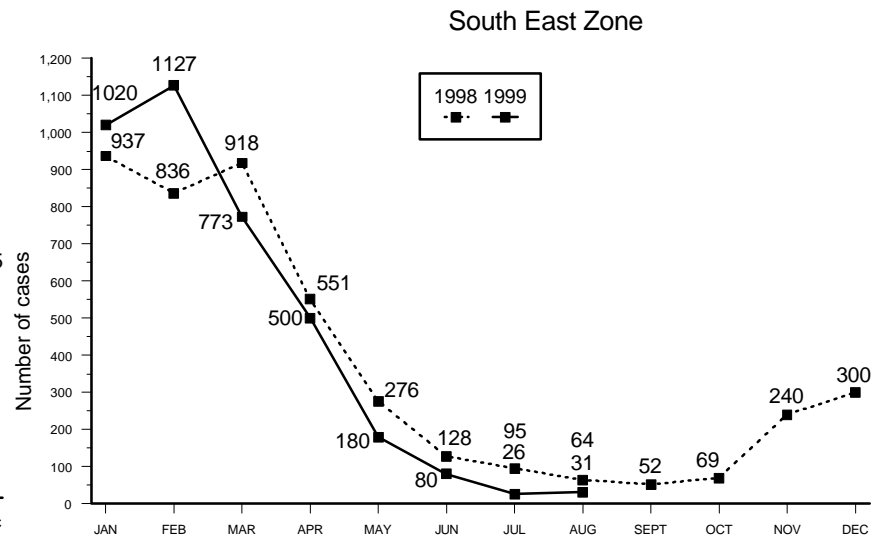
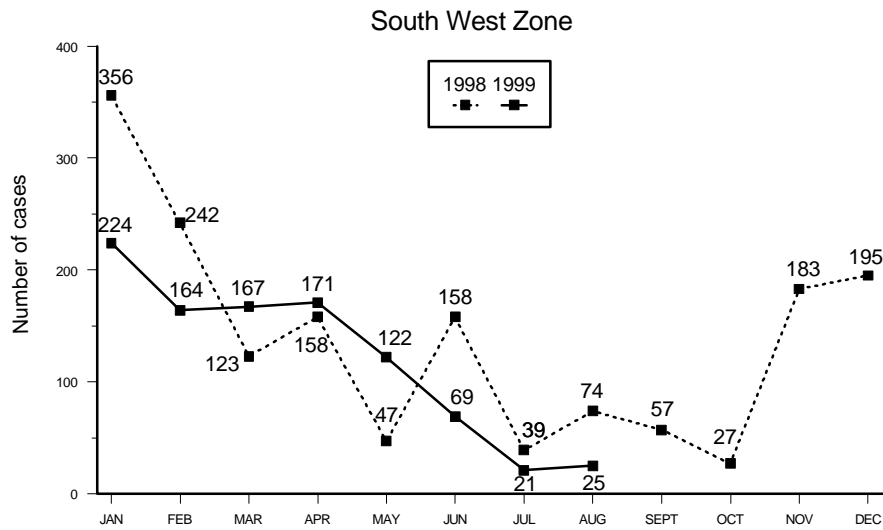
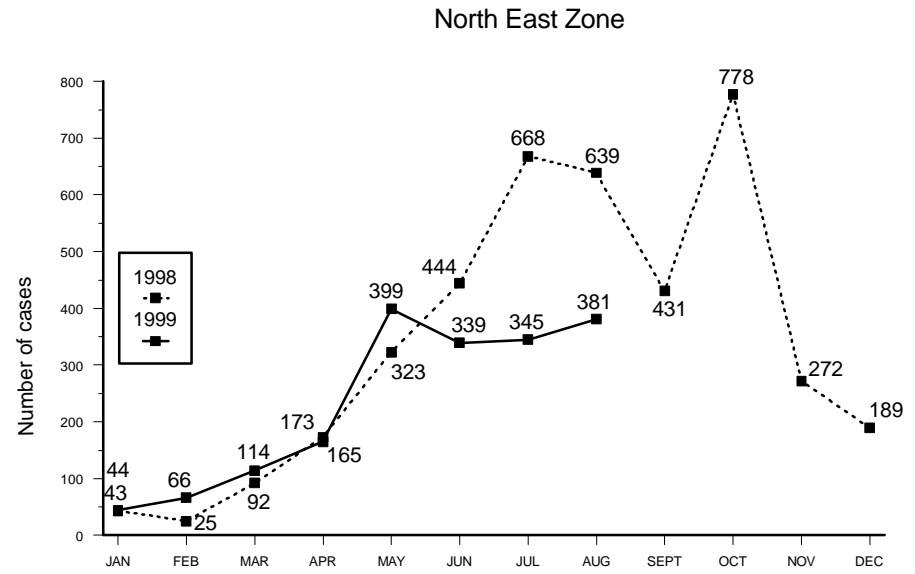
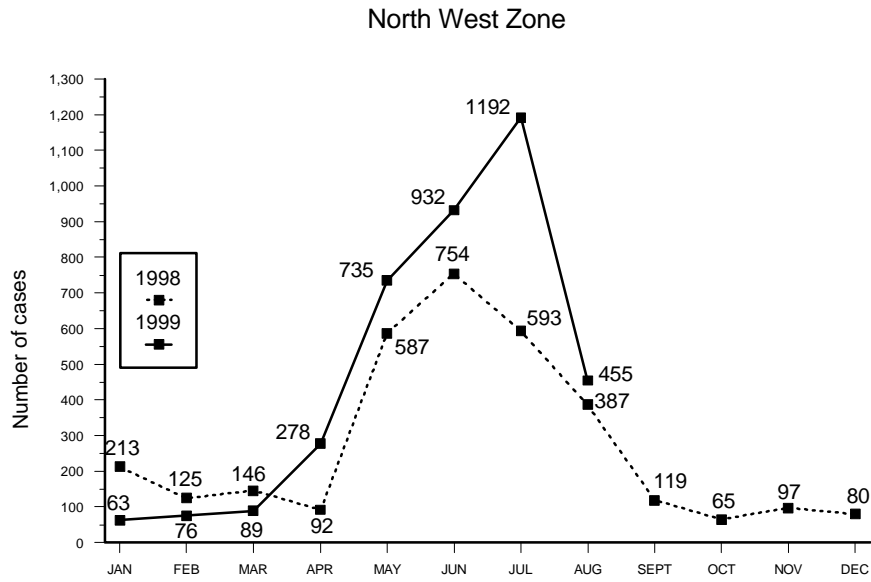
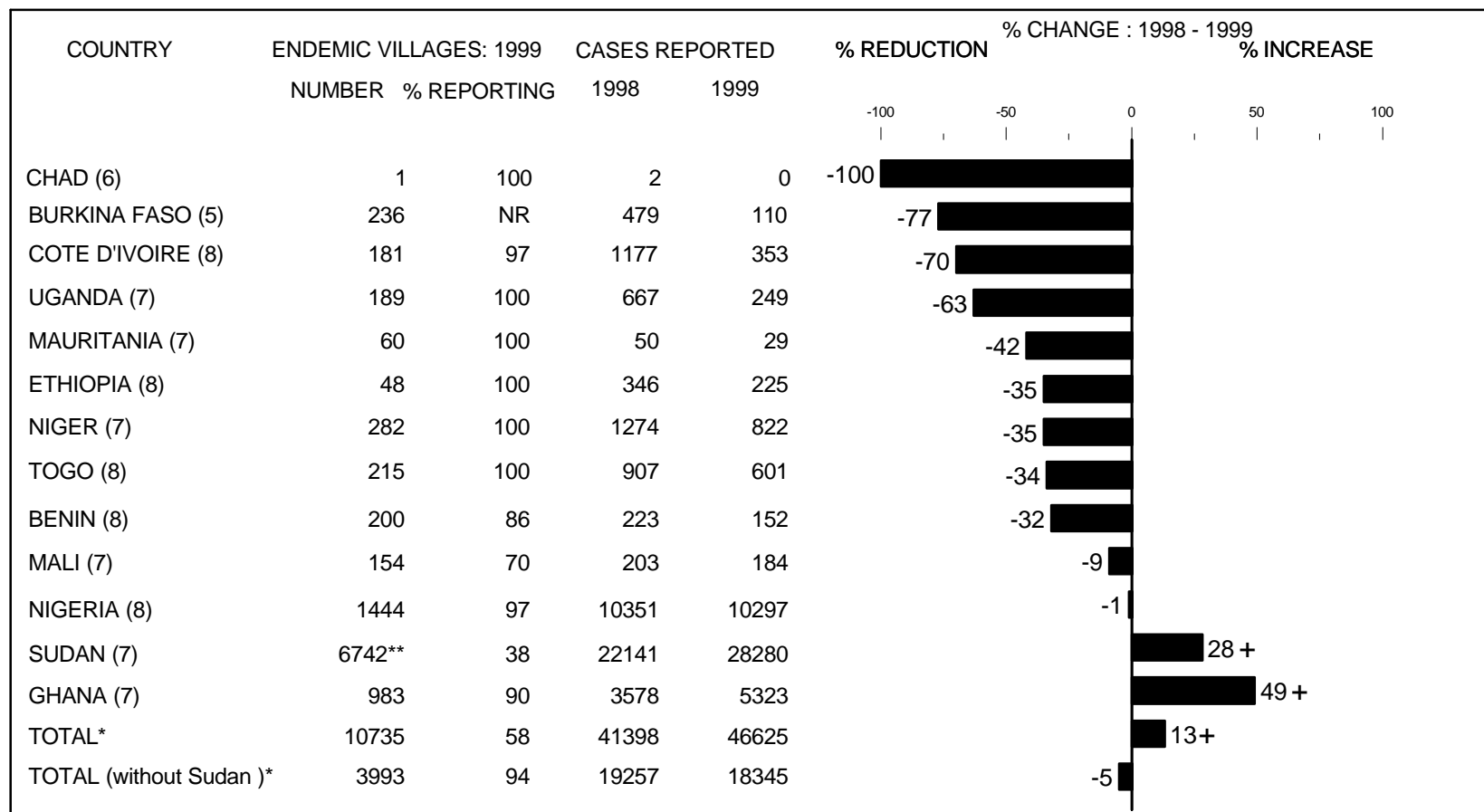


Figure 6

Percentage of Endemic Villages Reporting and Percentage Change in Number of Indigenous Cases of Dracunculiasis During 1998 and 1999 *, by Country



* Provisional. Totals do not include imported cases.

** Includes 1,830 known endemic villages that are not accessible to the program because of insecurity.

(6) Denotes number of months for which reports were received, e.g., Jan. - Jun., 1999

NR Countries with unknown or low rate of reporting.

Table 2

**Number of cases contained and number reported by month during 1999*
(Countries arranged in descending order of cases in 1998)**

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	1300 / 2699	1611 / 3252	1510 / 2926	1598 / 3104	3297 / 6051	3487 / 7014	1579 / 3234	/	/	/	/	/	14382 / 28280	51
NIGERIA	596 / 1358	752 / 1432	902 / 1131	887 / 1111	1112 / 1369	1097 / 1420	780 / 1584	495 / 892	/	/	/	/	6621 / 10297	64
GHANA	921 / 1140	616 / 1139	546 / 1000	450 / 771	378 / 650	231 / 412	124 / 214	/	/	/	/	/	3266 / 5326	61
NIGER	2 / 2	3 / 3	2 / 2	5 / 5	35 / 45	156 / 300	215 / 468	/	/	/	/	/	418 / 825	51
BURKINA FASO	1 / 1	0 / 2	2 / 5	5 / 32	56 / 70	/	/	/	/	/	/	/	64 / 110	58
TOGO	87 / 102	57 / 84	15 / 28	32 / 34	48 / 71	55 / 66	55 / 103	53 / 117	/	/	/	/	402 / 605	66
COTE D'IVOIRE	58 / 58	32 / 43	31 / 33	16 / 28	36 / 39	62 / 85	36 / 43	20 / 27	/	/	/	/	291 / 356	82
UGANDA	3 / 6	7 / 7	7 / 7	20 / 21	66 / 70	99 / 102	36 / 39	/	/	/	/	/	238 / 252	94
BENIN	84 / 89	22 / 27	14 / 15	9 / 10	11 / 12	2 / 3	6 / 6	4 / 4	/	/	/	/	152 / 166	92
MALI	1 / 2	2 / 2	3 / 3	2 / 2	11 / 14	44 / 72	62 / 89	/	/	/	/	/	125 / 184	68
MAURITANIA	0 / 0	0 / 0	0 / 0	0 / 2	0 / 0	2 / 2	10 / 25	/	/	/	/	/	12 / 29	
ETHIOPIA	0 / 0	0 / 0	5 / 5	14 / 15	38 / 42	68 / 68	56 / 56	40 / 40	/	/	/	/	221 / 226	98
CHAD	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	
CAMEROON**	1 / 1	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	/	/	/	/	/	/	3 / 3	100
C.A.R. ***	0 / 1	2 / 3	3 / 5	0 / 0	0 / 1	0 / 0	/	/	/	/	/	/	5 / 10	50
TOTAL*	3054 / 5458	3102 / 5991	3037 / 5155	3038 / 5135	5089 / 8434	5304 / 9545	2959 / 5861	612 / 1080	0 / 0	0 / 0	0 / 0	0 / 0	26195 / 46659	56
% CONTAINED	56	52	59	59	60	56	50	57					56	

* Provisional

** Cameroon reported one case imported from Nigeria during January, May, and June.

*** Central African Republic reported 10 alleged (unconfirmed) cases of dracunculiasis for the period January - June, 1999. These cases are not included in the totals.

EXTERNAL REVIEW OF GUINEA WORM ERADICATION IN YEMEN.



Since October 1997, Yemen has been reporting zero cases of dracunculiasis. A team of the WHO Dracunculiasis Eradication Project visited Yemen from 23 July to 6 August 1999 to assist the Yemeni GWEP in strengthening surveillance during the pre-certification period. Seventeen villages in 3 governorates were visited. The surveillance system and reporting to the Ministry of Health were reviewed and discussed at all levels. The amount of the reward for reporting of a case has been increased from YR 3000 to YR 20000. A nation-wide search for new cases will take place in October 1999, most likely in conjunction with the National Immunization Days. Support will be provided by WHO to enable the computerization of surveillance data in Yemen. Other partners (UNICEF and The Water Authority) will target formerly endemic zones for dracunculiasis as priority areas for provision of (a) safe water supply.

A training workshop organized by the Ministry of Health was attended by over 30 persons. Participants were physicians, area co-ordinators, from the field, and village volunteers. The workshop emphasized the role of surveillance after zero cases have been reached and the importance of reporting in view of certification of dracunculus free status.

RECENT PUBLICATIONS

Karam M, Tayeh A, 1999. Eradication of dracunculiasis in the Libyan Arab Jamahiriya. Report of the International Certification Team. Geneva: World Health Organization. WHO/CDS/CEE/DRA/99.7

Homeida MMA, Goepf I, Ali M, Hilyer E, Mackenzie CD, 1999. Medical achievements under civil war conditions [letter]. *Lancet* 354:601

*Inclusion of information in the Guinea Worm Wrap-Up does not constitute "publication" of that information.
In memory of BOB KAISER.*

For information about the GW wrap up, contact Dr. Daniel Colley, Acting Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: (770) 488-4532.

The GW Wrap-Up is also available on the web at http://www.cdc.gov/ncidod/dpd/list_drc.htm.



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