




Date: February 15, 1999

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

Subject: GUINEA WORM WRAP-UP #87

To: Addressees

Detect Every Case, Contain Every Worm!

BENIN: AIMING TO BREAK TRANSMISSION IN 1999; GLOBAL 2000 PROVIDES EMERGENCY FUNDING



BENIN

According to data supplied by the national coordinator, Dr. Aristide Paraiso, Benin reported a total of 695 cases of dracunculiasis in 181 endemic villages and hamlets in 1998. This represents a reduction of -19% from the 855 cases reported in 1997, and -15% from the 212 endemic villages and hamlets reported that year. Of the 181 endemic villages in 1998, 95 (52%) had only one case each. Oueme, which was the second-highest endemic department in 1997, reduced its incidence by -84% between 1997 and 1998 (from 110 to 18 cases)! The highest-endemic department, Zou,

only reduced its incidence from 637 cases to 592 cases (-7%) in the same period. Zou Department reported 85% of all cases in 1998 (**Figure 1**). Djidja and Savalou subprefectures in Zou Department reported 56% of all Benin's cases in 1998, and 80% of all cases that year were reported from only 6 of the country's 77 subprefectures: Djidja, Savalou, Ouesse, and Bante in Zou Department, Pobe in Oueme Department, and Aplahoue in Mono Department (**Figure 2**). None of the 21 cases reported in Atacora in 1998 were indigenous to that Department. Six of the cases in Borgou and 2 of Atlantique's cases were imported. The annual numbers of cases reported by Benin in 1993-1998 are: 16,334; 4,302; 2,273; 1,427; 855; and 695, respectively.

Figure 1

Distribution by Department of 695 Cases Reported

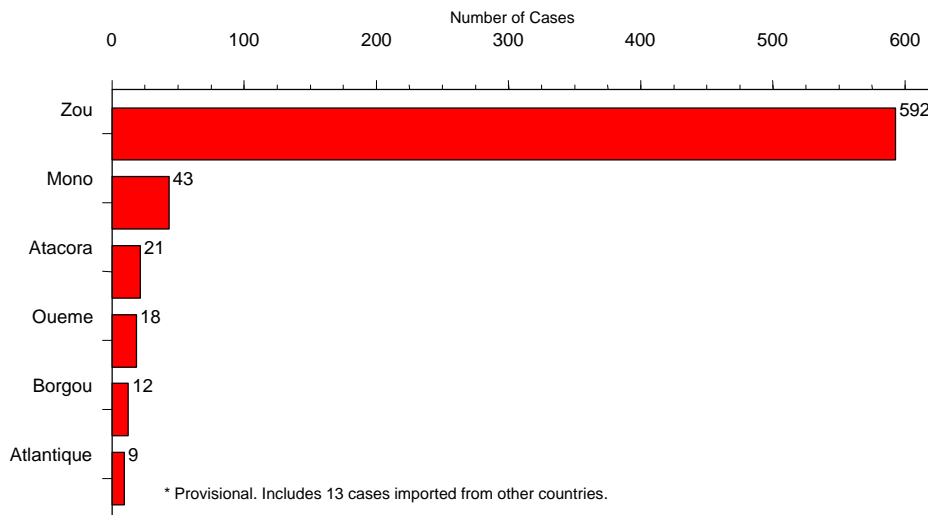


Figure 2

Togo & Benin Guinea Worm Eradication Programs

Dracunculiasis Incidence in 1998

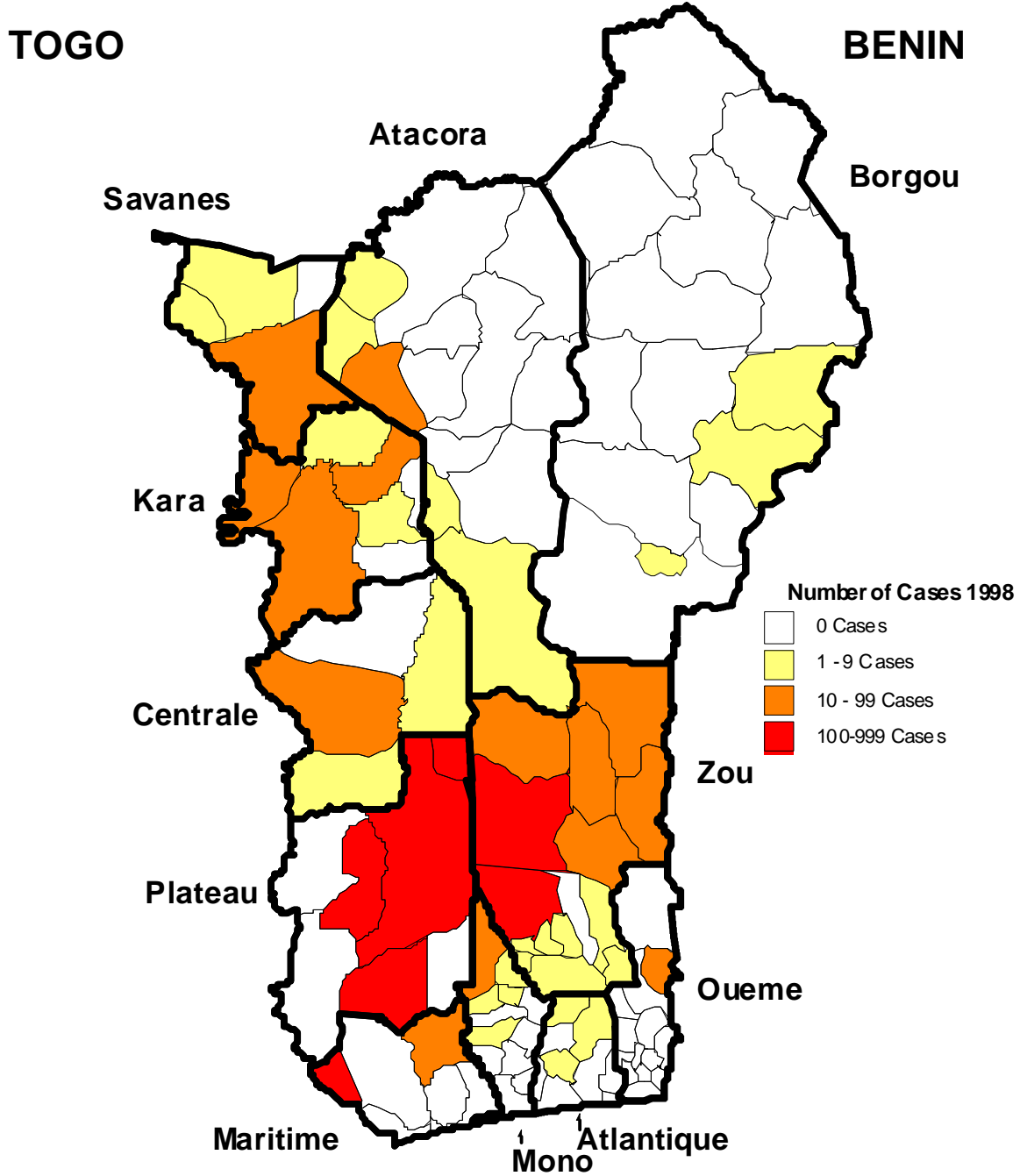


Figure 3

**GHANA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES REPORTED BY REGION: 1996**

REGION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Western ³	11	9											24
Central	42	31	23	21	8	12	7	10	13	13	9	9	198
Eastern ⁵	4	24	5	4	11	9	2	6	17				102
Greater Accra ¹			5										18
Volta	51	34	34	34	11	46	17	14	27	24	49	77	418
Ashanti	4		6			17						22	49
Brong Ahafo	17	20	16	5		5			3		27	12	105
Northern	475	741	632	470	456	265	204	66	26	29	164	374	3902
Upper West ⁴	4				10	24							39
Upper East ²													22
TOTAL	611	863	728	535	502	386	235	100	87	68	263	499	4,877

¹ Greater Accra reported 3 imported cases in Jan., 2 in Feb., 4 in May, 1 in June, 2 in Aug., and 1 in Dec.

² Upper East reported 2 imported cases in Feb., 7 in March, 2 in May, 7 in June, 2 in July, and 2 in Aug..

³ Western reported 3 imported cases July, and 1 in Sept..

⁴ Upper West reported 1 imported cases in April.

⁵ Eastern reported 2 imported cases in Oct., 14 in Nov., and 4 in Dec..

■ Denotes zero indigenous cases reported.

NUMBER OF CASES REPORTED BY REGION: 1997

REGION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Western ¹	9	6											19
Central	3	44	38	14	22	13	1	8		27	14	21	216
Eastern ²	15	10	9	10	8					5	16	8	86
Greater Accra ³													26
Volta	37	386	145	90	70	86	84	38	34	63	249	179	1461
Ashanti ⁴	26		33										116
Brong Ahafo	24	23	15	36	19	13	10	18		33	296	435	922
Northern	1560	1113	975	720	523	246	176	32	8	31	223	382	5989
Upper West ⁵		35	7	9	3		1		8				77
Upper East ⁶													9
TOTAL	1,685	1,625	1,226	909	652	376	274	97	69	162	808	1,038	8,921

¹ Western reported 1 imported case in Mar., 1 in May, and 2 in Sept.

² Eastern reported 2 imported cases in Jul. and 3 in Sept.

³ Greater Accra reported 2 imported cases in Feb., 3 in Mar., 7 in May, 2 in Apr., 6 in Jun., 3 in Oct., and 3 in Nov.

⁴ Ashanti reported 1 imported case in Feb., 23 in Apr., 2 in May, 10 in Jun., 3 in Sept., 6 in Nov., and 12 in Dec.

⁵ Upper West reported 10 imported cases in Jan. and 1 each in June, Aug., Nov. and Dec.

⁶ Upper East reported 1 imported case in Jan., 5 in Feb., 2 in May, and 1 in June.

■ Denotes zero indigenous cases reported.

NUMBER OF CASES REPORTED BY REGION: 1998

REGION	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Western ⁶													4
Central	5	4	4	2	5	1	3	7	8	15	4	4	62
Eastern ¹	15	9			21	15	10	3				36	121
Greater Accra ²													33
Volta	223	129	87	47	75	35	51	20	36	32	152	212	1099
Ashanti ³													64
Brong Ahafo	232	125	47	124	57	19	13	13	14	79	294	278	1295
Northern	778	430	392	191	87	135	79	13	6	86	234	274	2705
Upper West ⁴	4		7	7	11	13	13						62
Upper East ⁵													28
TOTAL	1,278	709	554	382	263	226	178	58	67	214	710	834	5,473

¹ Eastern reported 4 imported cases in March, 1 in Sept., and 7 in Nov..

² Greater Accra reported 9 imported cases in Feb., 12 in March, 5 in April, 2 June, 1 in Aug., 3 in Nov. and 6 in Dec..

³ Ashanti reported 21 imported case in Jan., 2 in Feb., 5 in April, 7 in May, 4 in June, 4 in July, 2 in Oct., 13 in Nov., and 6 in Dec..

⁴ Upper West reported 1 imported case in Feb., 1 in Aug., 2 in Sept., and 15 in Dec..

⁵ Upper East reported 1 imported case in March, 6 in April, 2 in June, 1 in July, 3 in Nov. and 3 in Dec..

⁶ Western reported 4 imported cases in July.

■ Denotes zero indigenous cases reported.

Benin's target is to interrupt all transmission of dracunculiasis in 1999. As in some other countries, the high rate of reported case containment in 1997 (85%) was not reflected in overall reduction of cases in 1998 (-19%), but Oueme Department clearly shows what Benin's Guinea Worm Eradication Program can do. This program improved distribution of cloth filters and use of Abate in 1998, although bandaging of cases was infrequent during most of the year. Global 2000/The Carter Center has provided almost \$30,000 in emergency funding for this program over the past two months, because of delays in expected support from other sources. These funds are helping the Benin program to prepare cloth filters, provide supervision, and maintain its secretariat during the current peak transmission season. Global 2000 also provided Mr. Harry Godfrey for a one month return consultation in January-February. The Government of Benin has agreed to provide approximately 40 million FCFA (~\$61,000) later this year for transportation and health education.

FIVE OF GHANA'S TEN REGIONS HAVE NO INDIGENOUS CASES IN SEPTEMBER-DECEMBER 1998



As indicated in **Figure 3**, five of the ten regions of Ghana reported no indigenous cases during the four month period of September-December 1998, which includes two months of Ghana's peak transmission season (November-April). Four regions (Western, Greater Accra, Ashanti, Upper East) reported no indigenous cases in all of 1998. In 1998, 94% of Ghana's cases were reported from Northern, Brong-Ahafo, and Volta Regions. World Vision began drilling in the first week of February to provide safe drinking water for the town of Savelugu, in Northern Region. Ghana, which remains the third-highest endemic country, after Sudan and Nigeria, is aiming to stop all transmission of dracunculiasis by the end of this year.

NIGERIA STEERING COMMITTEE MEETS; NEW "GUINEA WORM CLOTH"

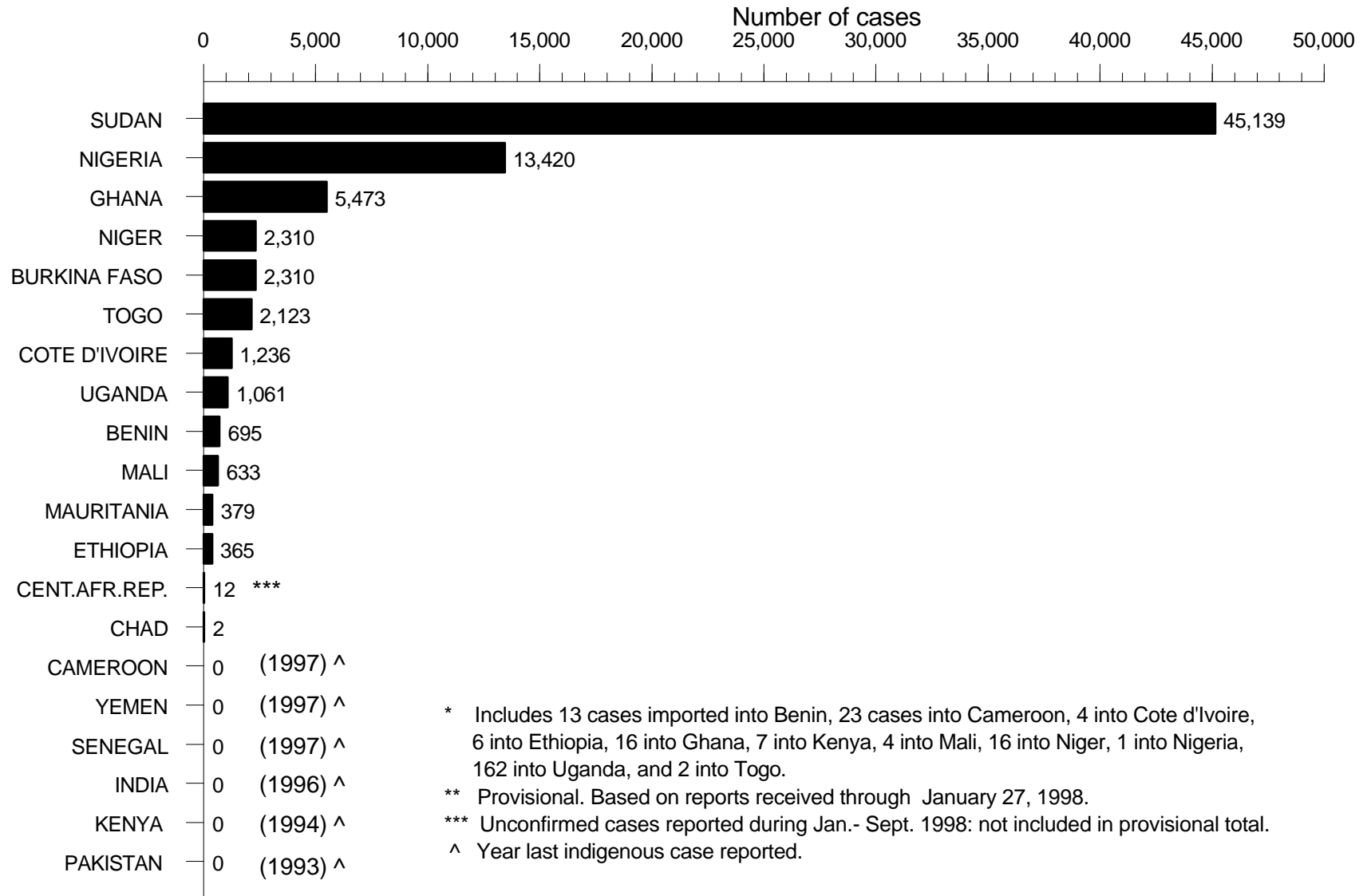


The Steering Committee of Nigeria's Guinea Worm Eradication Program (NGEP) met in Jos, Plateau State, on February 1, under the chairmanship of National Program Coordinator Dr. K.A. Ojodu. Dr. Ernesto Ruiz-Tiben, the technical director for Dracunculiasis Eradication Program, Global 2000 / The Carter Center, participated in the meeting, as did the chief of UNICEF/ Nigeria's Water and Environmental Sanitation Section, Mr. Mansoor M. Ali, and Global 2000 country representative Dr. Emmanuel S. Miri, and the four zonal facilitators. The group reviewed plans and control measures being taken during the peak transmission season in Southeast and Southwest Zones. Key concerns are the need for improving execution of interventions and active surveillance in endemic villages of those two zones. Inadequate transport for field supervisors is still a major constraint, and Guinea worm vehicles that are being used primarily or exclusively for other purposes in Benue, Cross River and Enugu States need to be returned to the Guinea worm program. UNICEF / Nigeria offered to provide plastic funnels and Global 2000 the nylon cloth needed to fabricate 20,000 funnel filters for distribution mostly in the SE and SW Zones. The latest shipments of Abate and filter material have been cleared from the port. At the steering committee meeting, NIGEP began distributing two Nigerian versions of "Guinea Worm Cloth", the pattern of which is reproduced here. Global 2000 provided \$10,000 to support development of the pattern and purchase of the first 10,000 meters of the new cloth, and the Federal Ministry of Health plans to purchase an additional equal amount. NIGEP will observe National Guinea Worm Eradication Week this year on March 21 – 25.

Provisional reports show a total of 1,358 cases in Nigeria in January 1999, of which 596 (44%) were contained. This represents a reduction of 12% from the 1,549 cases reported in January 1998. The low rate of case containment is mainly due to more accurate reporting of case containment rates in Southeast Zone, which reported 1,020 of the cases, and containment of 353 (35%). Ebonyi (662), Benue (208) and Oyo (158) States reported 1,028 (76%) of the cases in January.

Figure 4

Distribution by Country of 75,564* Cases of Dracunculiasis Reported During 1998**



* Includes 13 cases imported into Benin, 23 cases into Cameroon, 4 into Cote d'Ivoire, 6 into Ethiopia, 16 into Ghana, 7 into Kenya, 4 into Mali, 16 into Niger, 1 into Nigeria, 162 into Uganda, and 2 into Togo.

** Provisional. Based on reports received through January 27, 1998.

*** Unconfirmed cases reported during Jan.- Sept. 1998: not included in provisional total.

^ Year last indigenous case reported.

Figure 5

Number of cases contained and number reported by month during 1998*
(Countries arranged in descending order of cases in 1997)

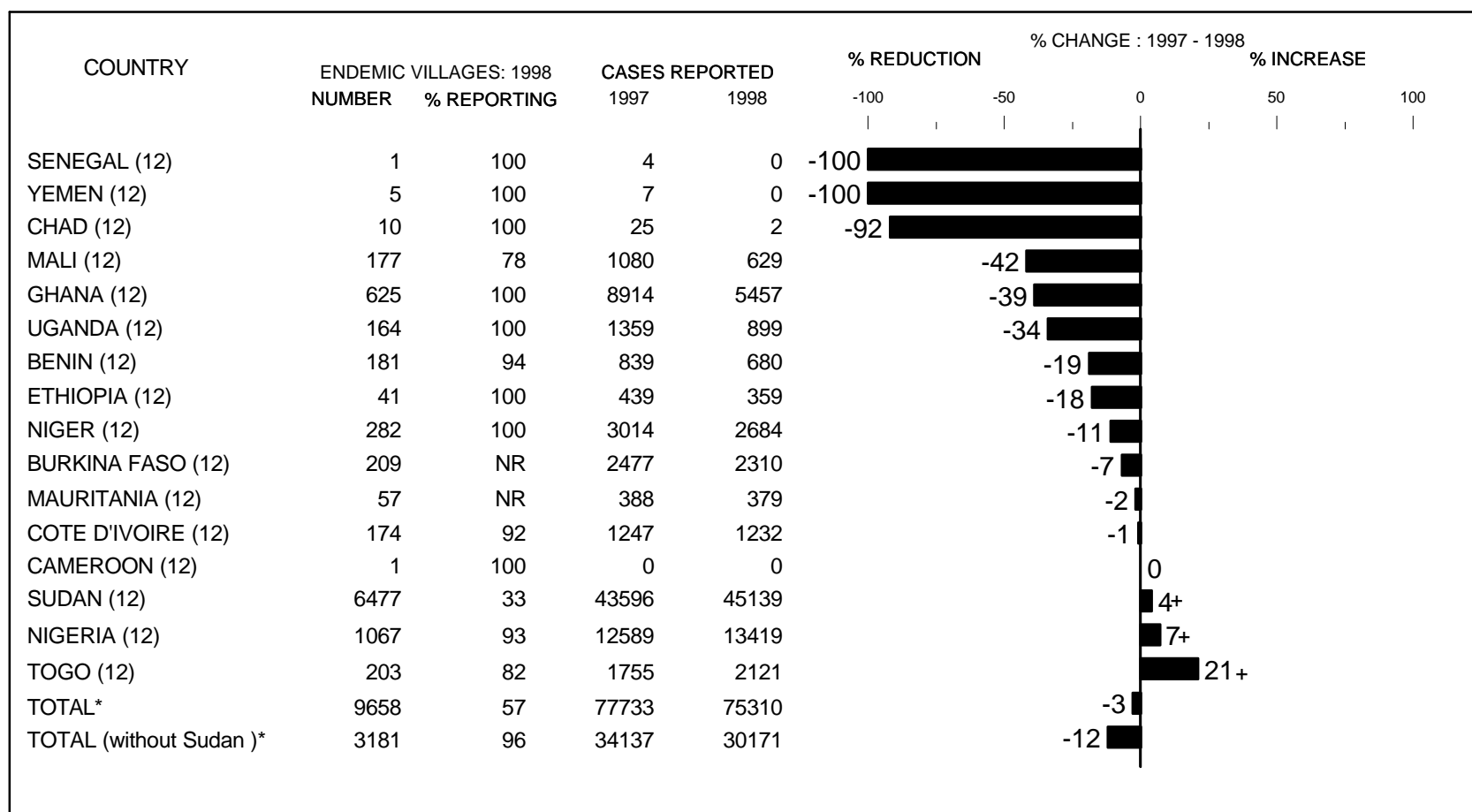
COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*		
SUDAN	465 / 1328	856 / 1254	889 / 1524	1618 / 2627	2135 / 3485	3580 / 6058	3433 / 7432	3374 / 5820	4242 / 6814	2344 / 5500	1111 / 2974	227 / 323	24274 / 45139	54	
NIGERIA	1544 / 1549	1188 / 1259	1199 / 1279	854 / 955	952 / 1234	953 / 1484	954 / 1395	800 / 1197	412 / 659	481 / 907	348 / 738	499 / 764	10184 / 13420	76	
GHANA **	870 / 1278	535 / 709	478 / 554	276 / 382	208 / 263	169 / 226	132 / 178	40 / 58	53 / 67	191 / 214	620 / 710	608 / 834	4180 / 5473	76	
NIGER	7 / 11	4 / 4	5 / 5	42 / 43	129 / 168	277 / 367	411 / 687	378 / 575	315 / 468	153 / 237	71 / 116	11 / 19	1803 / 2700	67	
BURKINA FASO	1 / 1	1 / 6	1 / 17	12 / 160	122 / 295	78 / 514	147 / 744	71 / 212	91 / 299	37 / 54	7 / 8	0 / 0	568 / 2310	25	
TOGO	84 / 277	22 / 109	40 / 87	36 / 49	34 / 47	63 / 83	71 / 130	80 / 131	104 / 255	160 / 345	184 / 407	124 / 203	1002 / 2123	47	
UGANDA ***	7 / 8	3 / 6	24 / 43	164 / 226	209 / 300	154 / 176	116 / 128	58 / 71	45 / 48	31 / 33	10 / 10	12 / 12	833 / 1061	79	
COTE D'IVOIRE	151 / 251	110 / 138	115 / 184	65 / 195	110 / 158	96 / 121	32 / 40	24 / 39	10 / 53	33 / 34	12 / 13	7 / 10	765 / 1236	62	
MALI	9 / 10	2 / 5	0 / 0	18 / 24	4 / 8	21 / 63	41 / 94	93 / 149	76 / 101	41 / 95	31 / 57	7 / 27	343 / 633	54	
BENIN	92 / 103	22 / 37	10 / 10	29 / 30	25 / 26	10 / 10	7 / 7	10 / 10	25 / 41	100 / 105	197 / 212	95 / 104	622 / 695	89	
ETHIOPIA	1 / 1	6 / 6	10 / 11	58 / 60	70 / 73	87 / 89	79 / 84	28 / 28	7 / 7	2 / 2	0 / 0	4 / 4	352 / 365	96	
MAURITANIA	0 / 0	0 / 0	0 / 0	3 / 4	0 / 0	1 / 2	30 / 44	56 / 127	44 / 91	37 / 93	13 / 15	3 / 3	187 / 379	49	
CHAD	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	100	
YEMEN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	-	
SENEGAL	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	-	
CAMEROON ¹	0 / 0	0 / 0	0 / 0	0 / 0	1 / 2	4 / 4	8 / 8	5 / 5	2 / 2	0 / 0	0 / 0	0 / 0	20 / 21	95	
KENYA ²	/	/	/	/	/	3 / 3	3 / 3	1 / 1	/	/	/	/	7 / 7	100	
TOTAL*	3231 / 4817	2751 / 3535	2771 / 3714	3175 / 4755	3999 / 6059	5496 / 9200	5464 / 10974	5018 / 8423	5426 / 8905	3610 / 7619	2604 / 5260	1597 / 2303	45142 / 75564	60	
% CONTAINED	67	78	75	67	66	60	50	60	61	47	50	69	60		

* PROVISIONAL

¹ All cases reported during 1998 were imported from Nigeria.² All cases reported during 1998 were imported from Sudan.

Figure 6

**PERCENTAGE OF ENDEMIC VILLAGES REPORTING
AND PERCENTAGE CHANGE IN NUMBER OF INDIGENOUS CASES OF DRACUNCULIASIS
DURING 1997 AND 1998 *, BY COUNTRY**



* Provisional. Totals do not include imported cases.

(8) Denotes number of months for which reports were received, e.g., Jan. - Aug., 1998

NR Countries with unknown or low rate of reporting.

KENYA: SEVEN CASES IMPORTED FROM SUDAN



According to reports by the International Committee of the Red Cross (ICRC) Hospital in Lopiding, Kenya, seven patients with dracunculiasis who were imported into Kenya from Sudan were seen at that hospital in 1998:

Sex	Age	Village of Origin	Date Worm Emerged
Male	28	Panyagor	1 July 1998
Male	20	Boma	7 July 1998
Male	35	Tonj	June 1998
Female	20	Gogriel	29 June 1998
Male	35	Gogriel	June 1998
Male	17	Rumbeck	12 July 1998
Male	35	Tonj	12 August 1998

IN BRIEF:

Ethiopia. The regional review meeting for South Omo was held on February 9 at Jinka. Participants included regional health officials, staff from the national Dracunculiasis Eradication Program, and in-country representatives of WHO and Global 2000 / The Carter Center. Also attending were Mr. Elvin Hilyer, Global 2000 resident technical advisor in Khartoum; and Dr. Jason Weisfeld, Global 2000 consultant to the program in South Omo. Participants reviewed the recent slow progress of the program, and preparations for the ensuing peak transmission season. The review ended with several recommendations to the program in South Omo. Ethiopia reported zero cases in January 1999, which is the second month in which no cases were reported since the program began (zero cases were reported for the first time in November 1998).

Mauritania. According to a report provided to the minister of health and social affairs by UNICEF, Mauritania reduced the number of endemic villages and localities by 36% in 1998, from 87 villages and localities in 1997 to 57 in 1998. A single locality in Hodh Chargui wilaya (district) reported 119, or 33% of all cases in Mauritania in 1998. UNICEF is rehabilitating water sources to provide safe drinking water in that village. Mauritania is aiming to interrupt transmission of dracunculiasis in 1999.

Niger. During a visit to Zinder Department in January, President Ibrahim Mainassara Bare of Niger referred to the progress being made there against Guinea worm disease, meningitis, measles and whooping cough. The president's speech was broadcast on national radio and television. April 25 will be celebrated as National Guinea Worm Eradication Day this year.

Sudan. The Federal State Minister for Health, Dr. Thomas Abwal Chidi, issued a challenge to representatives of the endemic northern states of Sudan, which are aiming to stop transmission of dracunculiasis by the end of 1999: "Elimination of Guinea worm this year will not happen without your full commitment. The worm has been with us for centuries, and it knows how to survive - just get into the drinking water. We have now learned its tricks, and we are smarter than it is. I am calling upon you to demonstrate that intelligence in your state beginning now, and for the remainder of this year."

Togo. The minister of health has sent an official letter to all the Medecin-chefs, stating that Guinea worm disease must be eradicated by December 2000. Mr. Chris Duggar has completed a three month long consultation to this program, with support provided by Global 2000 and Health and Development International.

Uganda. Uganda Guinea Worm Eradication Program held an inter-district meeting of 5 remaining endemic districts from 15 to 16th February 1999 in Kotido town. Addressing a well-attended meeting of about 150 people comprising Local district leaders, sub county guinea worm supervisors, district health teams, water officers and district Administrators from Kotido, Moroto, Kitgum, Gulu and Arua, the Minister of State for Health Dr. P. Byaruhanga appealed to district political leaders and administrators to support field workers to interrupt guinea worm transmission cycle this year. He called upon the Programme to eradicate Guinea worm this year. Accompanying the Minister were representatives of UNICEF and WHO, Mr. Bill Fellows and Dr. Josephine Namboze respectively, who echoed the same call to accomplish eradication as soon as possible.

The objectives of the meeting were to solicit political support and commitment both from central and local governments and to formulate the strategies to lead the program in the final assault to eradication.

Before the meeting started about 3 hours were spent visiting four highly endemic sub-counties of Kotido.

Several recommendations were made. Of particular interest were those made by local leaders who resolved to support the program by committing themselves to do the following:

- For every sub-county to allocate some funds in their budget to Guinea worm eradication.
- To form village committees to look after every water source for maintenance and protection.
- To have a caretaker constantly guarding a water source who should never allow a person with an emerging worm to step in a pond and to ensure that everyone filters water at source.
- To constantly conduct inter-district meetings to address the insecurity problem between the nomadic Karamoja herdsman and neighbouring districts. The first meeting was to be held on 17th February 1999 at the border Kalongo in Kitgum to be attended by district political heads (Local Council-5 Chairman), security secretaries, Guinea worm district co-ordinators, and 4 Guinea worm Sub-county supervisors per district.
- To involve many leaders in verification of Guinea worm cases for reward system that is to be introduced in Karamoja in July this year.

UGWEP's target is to interrupt Guinea Worm transmission cycle this year.

RECENT PUBLICATIONS

Peries H, de Rooy C, Nwe Y., 1998. Monitoring and evaluation of Guinea Worm Eradication. Evaluation & Program Planning. 21(4): 393-408.

*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 Trenton K. Ruebush, MD, 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.