




Date: January 10, 2000

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

Subject: GUINEA WORM WRAP-UP # 97

To: Addressees

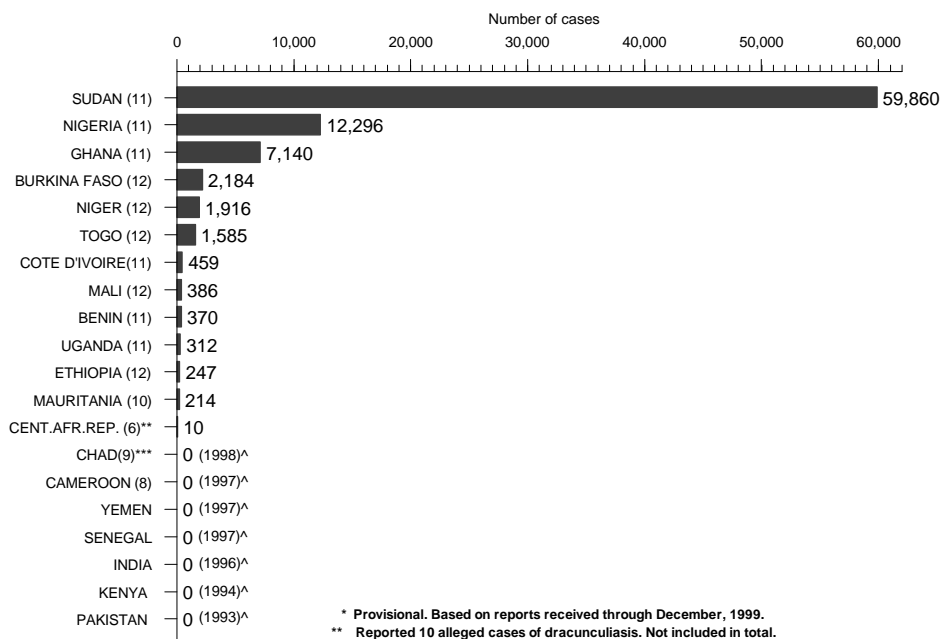
“A Guinea Worm Eradication Program needs two eyes: one (surveillance) to see where the Guinea worms are, and the other (line-listing, monthly reporting) to see where its own interventions are.”
Don Hopkins

“If you don’t know where you’re going, any road will get you there.” Lewis Carroll

37% FEWER CASES OUTSIDE OF SUDAN, NIGERIA AND GHANA IN 1999

Analysis of provisional reports for most of calendar year 1999 show that the endemic countries remaining outside of Sudan, Nigeria and Ghana have reduced their numbers of cases by about –37% since 1998. The overall number of cases outside of Sudan was reduced by only –5% (due mainly to a 54% increase in cases detected in Ghana), but the number of endemic villages outside of Sudan is expected to decrease by about –20%, from 3,267 to ~2,700 villages (Figures 1&2, Table 1). Chad was confirmed to have broken transmission in 1998, apparently detecting no cases at all for a full calendar year for the first time in 1999. Cameroon, meanwhile, recorded a significant reduction in imported cases from Nigeria: 8 in January-August 1999, vs. 19 in the same period of 1998 (Table 3).

Figure 1 **Dracunculiasis Eradication Campaign**
Distribution of 86,969 Indigenous Cases of Dracunculiasis Reported
During January - December 1999* by Country



* Provisional. Based on reports received through December, 1999.
** Reported 10 alleged cases of dracunculiasis. Not included in total.
(11) Denotes number of months for which reports were received, e.g., Jan. - Nov., 1999.
^ Year last indigenous case reported.

Table 1

**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	1365 / 2894	1658 / 3290	1517 / 2946	1631 / 3189	3599 / 6573	4614 / 9279	4604 / 9869	4224 / 9721	3353 / 7994	1907 / 2821	904 / 1284	/	29376 / 59860	49
NIGERIA	585 / 1372	755 / 1435	945 / 1175	874 / 1112	1148 / 1437	1137 / 1488	780 / 1584	495 / 892	330 / 516	333 / 506	524 / 780	/	7906 / 12297	64
GHANA	921 / 1140	616 / 1139	546 / 1000	450 / 771	378 / 650	231 / 412	124 / 214	54 / 83	88 / 131	385 / 501	571 / 1115	/	4364 / 7156	61
NIGER	2 / 2	3 / 3	2 / 2	6 / 6	35 / 45	156 / 300	215 / 480	197 / 486	161 / 332	87 / 157	32 / 63	20 / 44	916 / 1920	48
BURKINA FASO	1 / 1	1 / 5	46 / 65	19 / 74	160 / 338	243 / 657	201 / 462	156 / 313	131 / 204	11 / 18	32 / 40	0 / 7	1001 / 2184	46
TOGO	87 / 102	57 / 84	20 / 32	33 / 35	48 / 71	60 / 73	53 / 101	53 / 122	101 / 148	159 / 334	188 / 330	113 / 157	972 / 1589	61
COTE D'IVOIRE	40 / 55	27 / 43	32 / 38	29 / 45	37 / 55	58 / 83	33 / 40	17 / 22	18 / 20	22 / 29	24 / 34	/	337 / 464	73
UGANDA	3 / 6	7 / 7	7 / 7	20 / 21	66 / 70	99 / 102	36 / 39	31 / 32	15 / 15	9 / 10	6 / 8	/	299 / 317	94
BENIN	84 / 89	22 / 27	14 / 15	9 / 10	11 / 12	2 / 3	4 / 6	3 / 4	8 / 9	66 / 89	103 / 125	/	326 / 389	84
MALI	1 / 2	2 / 2	3 / 3	2 / 2	11 / 14	44 / 72	62 / 89	42 / 70	45 / 58	32 / 62	2 / 18	0 / 1	246 / 393	63
MAURITANIA	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	2 / 2	9 / 31	36 / 63	35 / 85	14 / 31	/	/	98 / 214	46
ETHIOPIA	0 / 0	0 / 0	5 / 5	14 / 15	38 / 42	68 / 68	56 / 56	40 / 40	10 / 13	1 / 1	3 / 3	3 / 4	238 / 247	96
CHAD**	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	/	/	/	/	1 / 1	
CAMEROON***	1 / 1	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	3 / 3	2 / 2	/	/	/	/	8 / 8	100
C.A.R. ****	0 / 1	2 / 3	3 / 5	0 / 0	0 / 1	0 / 0	/	/	/	/	/	/	5 / 10	50
TOTAL*	3090 / 5664	3148 / 6035	3137 / 5288	3089 / 5282	5532 / 9308	6715 / 12540	6177 / 12974	5349 / 11851	4295 / 9525	3026 / 4559	2389 / 3800	136 / 213	46083 / 87039	53
% CONTAINED	55	52	59	58	59	54	48	45	45	66	63	64	53	

* Provisional

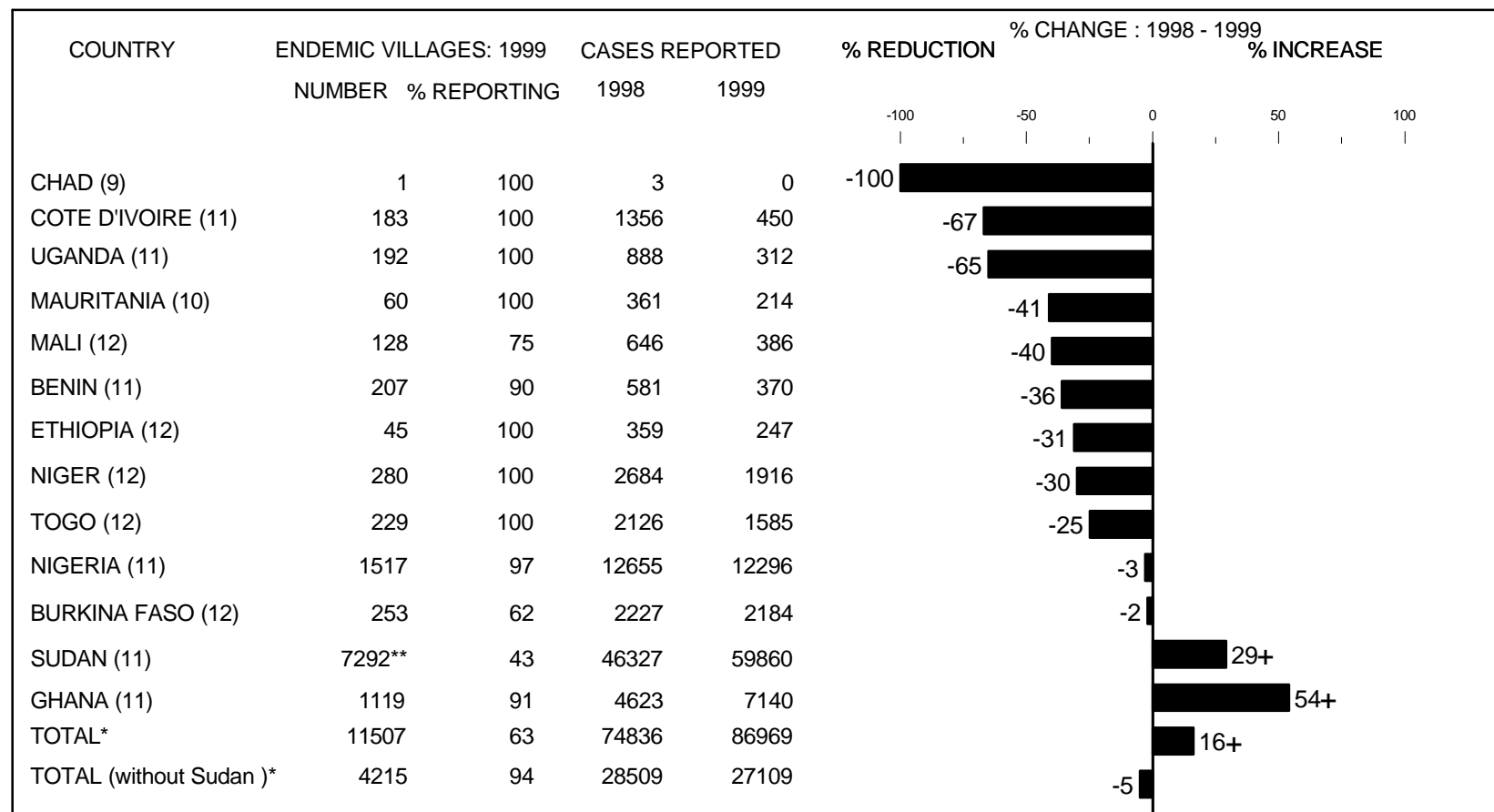
** Reported one case in September imported from Nigeria

*** All 8 cases reported during January - August 1999 were imported from Nigeria.

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

Figure 2

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 2,026 known endemic villages that are not accessible to the program because of insecurity.

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

The relative positions of endemic countries in Guinea Worm Race 1999 are now established. In 1999, Mauritania overtook Ethiopia, Uganda sped past Benin and Mali, and Niger passed Burkina Faso (centerfold). Seven countries have now crossed the finish line, and probably six of the dozen endemic countries remaining will report fewer than 500 cases each in 1999 (Figure 1). Those six countries should have less than 250 cases each to detect and fully contain during 2000 in order to stop all transmission in 2000. Togo, Niger, Burkina Faso, Ghana and Nigeria need to run much harder and smarter this year, and avoid any stumbling or pauses to tie their shoelaces. Who will be winners in Guinea Worm Race 2000? Will Nigeria beat Ghana to the finish?

“What gets measured, gets done.” DuPont Corporation

GHANA’S SAVELUGU TOWN GETS SAFE WATER SUPPLY



On Wednesday morning, December 15, 1999, the long-suffering inhabitants of Savelugu (population >18,000), the capital of Savelugu-Nanton District in Ghana’s Northern Region, were the happy recipients of a safe water supply. The joyous occasion occurred exactly two years after representatives from The Carter Center discussed the town’s desperate plight with officials from the Hilton Foundation and World Vision International in New York on December 16, 1997. Savelugu is the capital of Savelugu-Nanton District, which was the third highest endemic district in Ghana last year, reporting 694 cases in January-November 1999. Until last month, the only source of drinking water for the entire town was a large dam located over one-half mile (~1 km) away that had been built to provide water for cattle. The dam began to be treated with Abate in February 1997 in order to reduce the explosive incidence of dracunculiasis in the town’s population, as well as among the many people from surrounding communities who drank the contaminated water while visiting the district capital. Previous repeated attempts to provide safe water to the town were abandoned after several unsuccessful drillings. Following the meeting in December 1997, numerous consultations were held in Ghana among the local offices of World Vision, Global 2000, UNICEF, the Savelugu-Nanton District Assembly, the Ministry of Health (Northern Region), Ghana Water and Sewerage Corporation (GWSC), and others. With support provided by the Hilton Foundation, World Vision surveyed the town late in 1998, began drilling in February 1999, and struck four successful bore holes by the end of March. A second high-yield well was struck in April. The three low-yield wells were fitted with hand pumps. UNICEF built an overhead tank and supported construction for connecting the tank to the main system of Ghana Water and Sewerage Corporation (via a line from Tamale), and for distributing the water to standpipes throughout the town. This UNICEF-supported GWSC system is now providing 150,000 gallons of clean water per day to Savelugu. The high-yield wells drilled by World Vision will soon be connected to the same system.

Ghana’s program is taking other innovative steps to reverse last year’s dramatic increase in cases of dracunculiasis. In collaboration with Global 2000, the Northern Region has developed a theater skit with a local troupe who have a very popular weekly radio show. The script “dispels the myths and preconceived notions surrounding the origin of Guinea worm and the realistic consequences of not taking responsibility for one’s actions.” According to a report by Northern Region Guinea Worm Coordinator Mr. Patrick Apanya, the popular drama (which was written by Global 2000 resident technical advisor Mr. Emmanuel Puplampu) has been performed in over 33 villages in four of the seven most endemic districts in the Northern Region so far, with over 30,000 people in attendance. Meanwhile, a report from Brong-Ahafo Region’s Atebubu District reveals that “*We have made a change in our education approach on the*

village level..... we are entering into contracts with chiefs, elders and villagers in the use of filters and commitment to containment. The change is significant in that this is not merely another government handout program. We are requiring a *quid pro quo* from the villagers in exchange for filters, free medical support, assistance in obtaining safe water, etc. We make them understand that they have an active role in the eradication program. In the past, we were seen as bringing gifts..... The sense of our mission is much clearer in the minds of the people we serve, and their role is established. The entire village is engaged in keeping their water free of Guinea worm. The immediate response from the villagers is wholly positive. They are treated as partners..... To the question, 'Do we have a deal?', people respond enthusiastically with hand clapping and a buzz of talking."

NIGERIA: NORTHEAST ZONE LEADS THE WAY

After three consecutive months of substantial declines, Nigeria reported 780 cases of dracunculiasis in November 1999, an increase of 6% over the 737 cases reported in November 1998 (Figure 3). The increases in November were almost entirely due to increases in cases in Southeast (330 cases) and Southwest (229 cases) Zones, which are now in their peak transmission season. Northeast Zone reported 165 cases in November, a reduction of -39%. (Borno State in Northeast Zone reported -73% fewer cases in November.) For January-November 1999, Northeast Zone achieved an overall reduction of -33%, Southwest Zone reduced its cases by -6%, and Southeast Zone by -1%, while Northwest Zone's cases increased by 36%.

Bama Local Government Area (LGA) of Borno State, which has been the source of most cases imported into Cameroon in recent years, reported 701 cases in January-November 1999 (-51%), compared to 1,443 cases during the same period of 1998 (figure 4). Analysis of 255 uncontained cases in Bama LGA in July-September found that most were uncontained because the patient was not discovered by the village-based health worker in time (within 24 hours of worm emergence), and/or because the supervisor did not verify the case within 7 days. Guinea worm workers in the state have also conducted random sampling of households in endemic villages, to check for missed cases, whether filters are being used properly, and to ascertain whether key health education messages have been understood. When the head of the most endemic village in another of Borno's LGAs was implored to take strong measures, he made a widely publicized decree that no one with Guinea worm would be allowed to enter any water. All inhabitants of the village were then made to swear on the Holy Koran that they would abide by the decree.

"Our goal at the training was to empower the Field Supervisors to become detectives and epidemiologists, psychologists and sociologists, managers and leaders, and to take their areas by force. It was our aim to give them the tools, supplies, support, training, mobility, motivation, and consistent supervision that they would need to be fully prepared and 100% responsible for the Guinea worm eradication efforts in their locations." From a report to the Northeast Zone.

General (Dr.) Yakubu Gowon made advocacy and mobilization visits to Kebbi and Sokoto States from November 22-26, 1999. During this trip, General Gowon chaired the Cross-Border Guinea Worm Meeting between Nigeria and Niger Republic that was held in Sokoto on November 25th. Remarks made by the general in the Hausa language while he was in Sokoto were broadcast by the British Broadcasting Company (BBC), and heard by the minister of health of Niger in Niamey. During a meeting in Abuja on November 25th, General Gowon presented reports outlining the current status of safe water supply and requirements for adequate coverage of all endemic villages in all four zones of the country to President

Figure 3

**NIGERIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED BY MONTH: 1998 - 1999***

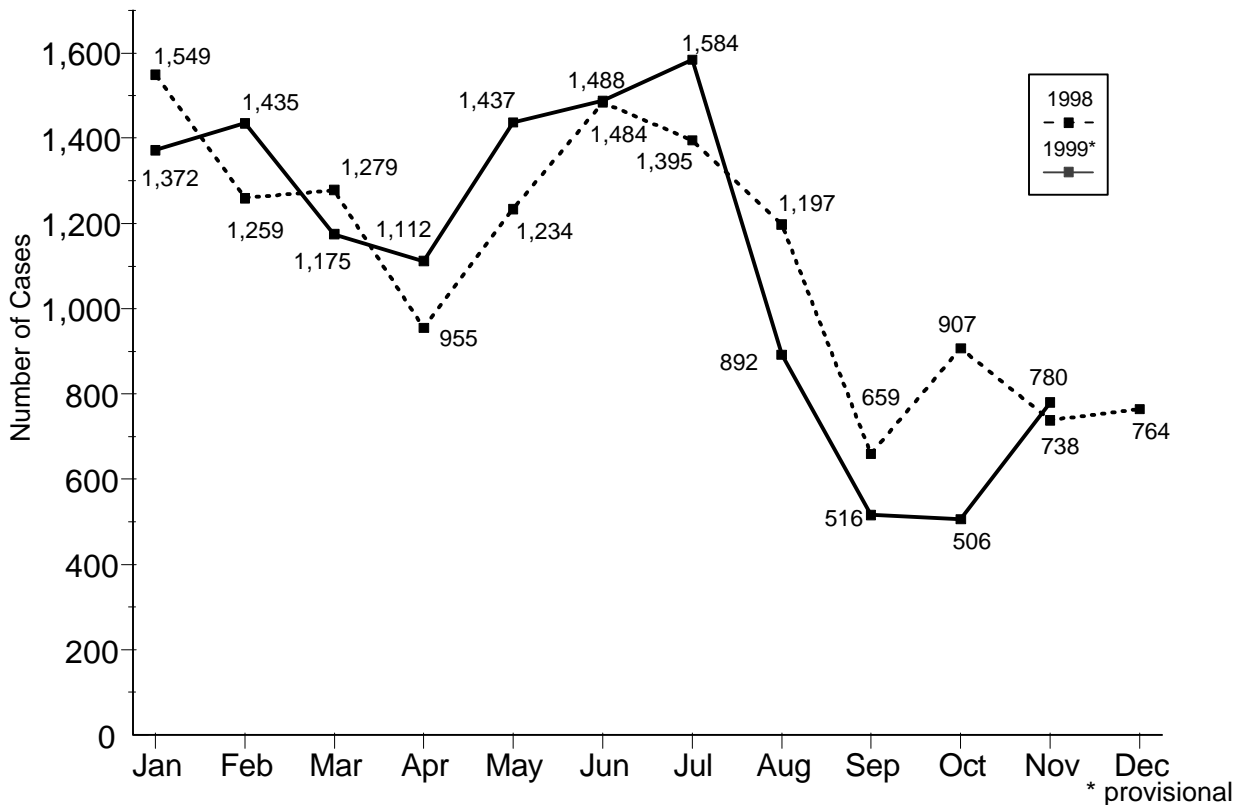
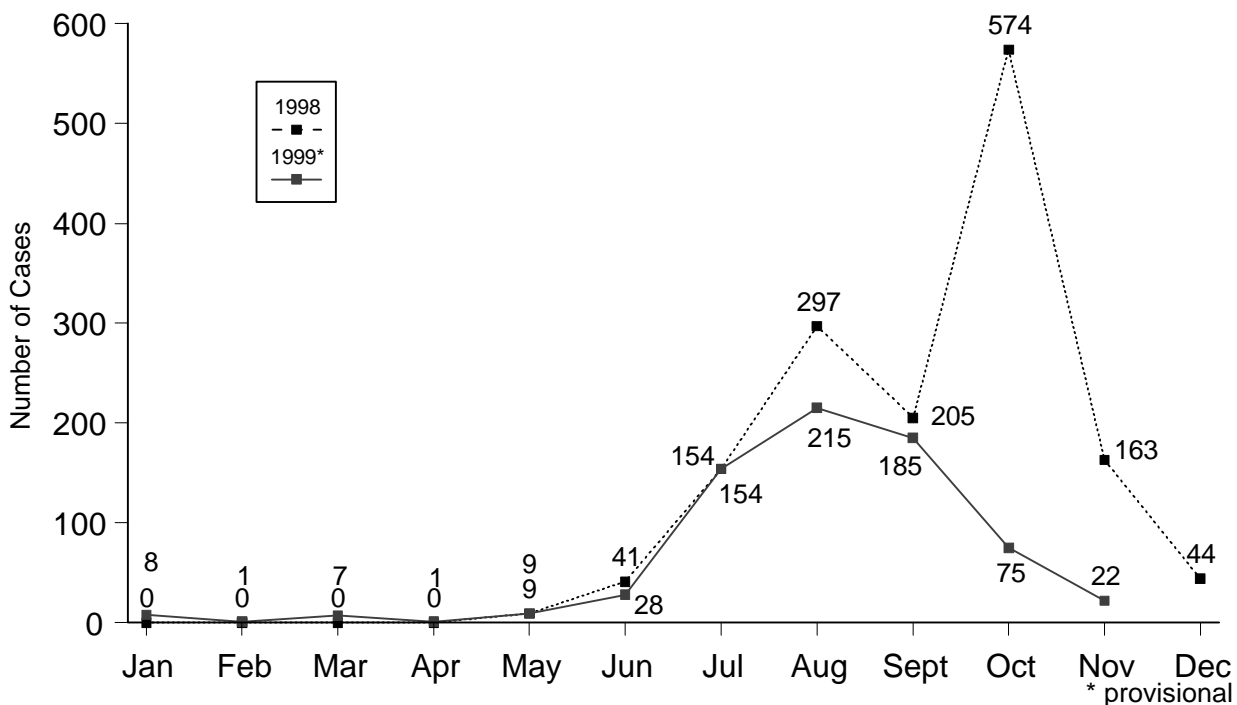


Figure 4

**NIGERIA GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED FROM BAMA LGA,
BORNO STATE: 1998 - 1999***



Olusegun Obasanjo. On November 18th, the Japanese Ambassador to Nigeria visited the SW Zonal Office in Ibadan to commission the materials donated by the Government of Japan towards Guinea worm eradication in that zone.

BENIN

The village of Allee (in Zou Department), which with 72 cases was the highest endemic village in Benin in 1998, registered a total of only 6 cases in 1999 (-92%). The Department of Oueme, which recorded 110 cases in 1997 and 18 cases in 1998, has recorded zero cases in January-November 1999. Mono Department reported only 35 cases in the first eleven months of 1998, but 107 cases for the same period of 1999 (Figure 4). The national team, led by Dr. Aristide Paraiso, is taking vigorous steps to end the outbreak in Mono, which is confined to two villages. A few additional imported cases were detected in November and December from Togo and from Nigeria. Broadcasts of health education messages in local languages began on November 24th in Savalou Sub-prefecture of Zou Department, with the support of Health and Development International. The sub-prefecture of Djidja in Zou Department, and the outbreak in Mono Department are the two main problem areas.

Table 2 **BENIN GUINEA WORM ERADICATION PROGRAM**
NUMBER OF CASES REPORTED BY DEPARTMENT: 1999

DEPARTMENT	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	TOTAL
Zou ¹	74	22	11	9		2	4	3	4	41	78		258
Mono	4	3	4		2		1	1	3	44	45		107
Borgou	10	2		1			NR	NR	NR				13
Atacora	1					1	1	NR		3			6
Atlantique									2	1	2		5
Oueme													0
TOTAL	89	27	15	10	12	3	6	4	9	89	125	0	389

¹ Zou reported 10 imported cases in May from Togo.

■ Denotes zero indigenous cases reported.

NR No report

WHO REVIEWS KENYA ERADICATION PROGRAM



Following recommendations made to the Kenyan Guinea Worm Eradication Program (KGWEP), during national Guinea Worm Eradication Programme co-ordination meetings, the Ministry of Health of Kenya, with the technical and financial support of the World Health Organization (WHO), organised and conducted from 13 to 24 September 1999 a joint review of all programme activities. The review was conducted in three districts of the Rift Valley Province: Trans-Nzoia, West Pokot and Turkana. No active cases were identif(ied) during the review. The surveillance system was found to be weak and the following recommendations were made:

1. The Ministry of Health of Kenya should declare Dracunculiasis a notifiable disease nation-wide and ensure monthly reporting from the lowest to the highest level including to WHO;
2. The Ministry of Health should, in collaboration with its external partners, provide appropriate support to the districts and to the national co-ordinating programme to ensure adequate implementation of the surveillance system so it will meet the standards for certification of eradication of dracunculiasis;
3. The national programme (KGWEP) should, by the end of 1999, develop or revise and distribute to all Districts appropriate reporting forms and directives related to the implementation of programme

- interventions;
4. The national programme (KGWEP) should strengthen its collaboration with the Environmental Health Division and revitalise the National Committee for Certification of Dracunculiasis Eradication.
 5. The programme should consider using the opportunities given by the National Immunisation Days, markets days (big markets in border areas) and the district disease surveillance team members to inform and (sensitize) people about the disease.
 6. The national co-ordinating programme (KGWEP) should promote inter-districts and cross-border meetings to strengthen local and inter-country exchanges and collaboration;
 7. The districts should intensify the role of the Primary Health Care system in Guinea worm disease surveillance and promote the use of village health committees, assistant chiefs and local NGOs to raise awareness about the disease;
 8. The districts should, with the support of the KGWEP, improve the sensitivity of the surveillance system through integrated training and supervision, and widely (publicize) the reward system. (Rumor) registers should be put in place and adequately used..
 9. The districts should improve the maintenance of archives related to Guinea worm disease surveillance through adequate documentation and proper recording of investigations about any eventual rumor or case of Guinea worm disease and copies of reports should be retained at all levels; village, division, district and central;
 10. The districts should, in collaboration with the divisions, add Guinea worm disease on the existing list of diseases reported monthly (whether officially notifiable or not).

IN BRIEF

Ethiopia The National Review Meeting is scheduled to be held on January 25th.

Togo The National Review Meeting is scheduled to be held on February 7th – 10th.

Mali Provisional reports indicate that only 10 were reported from Kayes Region cases during 1999, compared to 29 cases during 1998 (-64%). All 10 cases were contained. None of the cases in Kayes or the 9 cases reported from Segou are believed to have been imported. Koulikoro continues to report zero cases so far in 1999. The rates of reduction of cases for the three highest endemic regions in 1999 are – 66% (Timbuktu), -37% (Gao), and -27% (Mopti). Six cases were imported into Mopti Region from Burkina Faso between July and September 1999.

Niger held its National Review Meeting on November 16th-18th in Tahoua. The program decided to focus its efforts on currently endemic villages, to give priority attention to 5 key endemic districts, and to begin implementing a reward system for reporting of cases in non-endemic and lesser endemic areas. The leprosy, diarrheal disease, and trachoma control programs will assume responsibility for reporting any cases of dracunculiasis in formerly endemic villages. A Cross-Border Meeting between Mali and Niger was held in Ayorou, Tillabery District, December 20th-21st.

Sudan The ten northern states have recorded a reduction of more than -73% in cases during the first ten months of 1999 (282 cases, ~96 of them imported from southern areas of the country), compared to the same period of 1998 (847 cases). 79% of the cases in 1999 were contained. Only four of these states reported indigenous cases during January-September 1999: North Darfur (2), West Kordofan (88), Sennar (50) and South Kordofan (18). Abate usage has increased to 81 endemic villages in southern areas served

Table 3

Dracunculiasis Eradication Campaign
Reported Importations of Cases of Dracunculiasis: 1999

From	To	Cases			
		Month	Number	Contained	Notified*
Benin	Togo	January	1	?	1
		February	1	1	1
Burkina Faso	Niger	May	3	?	3
	Cote d'Ivoire	June	1	0	?
	Ghana	June	3	3	?
	Mali	July	1	1	1
		August	1	1	1
		September	4	4	4
Cameroon	Nigeria	July	1	1	1
Cote d'Ivoire	Mali	December	1	0	?
Ghana	Togo	January	2	2	?
	Cote d'Ivoire	January	1	0	1
		February	1	0	1
	Benin	August	1	1	1
Mali	Niger	September	1	0	1
Niger	Cote d'Ivoire	August	2	0	2
Nigeria	Cameroon	January	1	1	1
		May	1	1	1
		June	1	1	1
		July	3	3	3
		August	2	2	2
	Chad	September	1	1	1
Sudan	Uganda	January	1	1	1
		April	1	1	1
		June	1	1	1
		August	2	?	?
	Kenya	August	1	?	1
Togo	Benin	January	1	0	1
		February	1	0	1
		May	10	3	10
		July	1	0	1
		August	1	0	1
		September	1	1	1
		October	3	1	3
	Ghana	April	13	11	?
Total			71	42	49

* Notified to country of origin through WHO.

by Operation Lifeline Sudan (OLS)'s Southern Sector (from 22 villages). UNICEF's Water and Environmental Sanitation Program (WES), and The Carter Center (Global 2000) have combined the two data bases showing the locations of endemic villages and safe water supplies in the OLS area. WES will use the new joint database to prioritize provision of safe water to endemic villages, where possible. The Sudan Guinea Worm Eradication Program held its bimonthly coordination meeting in Khartoum during December 6th – 8th, 1999. Mr. P. Craig Withers Jr., Director of Program Support, represented Global 2000 headquarters in this meeting.

FUNDING



The **United Nations Foundation** has approved an additional grant of \$1.5 million for Guinea worm eradication to UNICEF over the next two years (2000-2001). The award was based on a proposal developed jointly by UNICEF and The Carter Center, who will collaborate in implementing the proposed activities in Ghana, Mali, Niger, Nigeria and Sudan (The Carter Center), and Togo and Uganda (UNICEF).

RECENT PUBLICATIONS

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Sheik-Mohamed, A. Velema, Johan P.. Where health care has no access: the nomadic populations of sub-Saharan Africa. Tropical Medicine & International Health, 4 (10); 695-707 October 1999.

Lucas P. Chippaux JP. Zagaria N. Meert JP. Maiga A. Yameogo D. 1999. Endemic dracunculiasis in new villages: re-emergence of the disease or failure of the surveillance system. Medecine Tropicale. 59(2):141-5.

Ogunniyi TAB. Oni PO. Juba A. Asaolu SO. Kolawole DO. 2000, Jan 5.. Disinfectants/antiseptics in the management of guinea worm ulcers in the rural areas. Acta Tropica. 74(1):33-38.

*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.