



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)
Memorandum

Date: December 17, 2004



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

Subject: GUINEA WORM WRAP-UP #149

To: Addressees

MALI REPORTS – 57% FEWER CASES; 66% CONTAINMENT

During January – November 2004, Mali has reported 344 indigenous cases of dracunculiasis, which is a reduction of -57% from the 801 indigenous cases reported during the same eleven months of 2003. At the same time, the number of villages reporting one or more cases decreased from 188 to 113. However, only 19 of the 113 localities that reported cases so far in 2004 reported 5 or more cases each. Those 19 localities reported 181 cases or 53% of all cases in January – November 2004 (13 localities in Ansongo District, 3 in Gao District, and 3 in Gourma Rharous District). A majority of the 19 localities were located in an area of insecurity in 2003. In the 14 localities that reported cases in both 2003 and 2004, however, the number of cases reported was only reduced from 141 in 2003 to 127 in 2004 – a reduction of only 10%. 93% of all Mali's cases of dracunculiasis thus far in 2004 were reported from three contiguous districts in southeastern Mali: Gao, Ansongo and Gourma Rharous. 80% of the cases were reported to have occurred in Black Tuaregs. 66% (258) of the cases were reportedly contained.

A small focus of infection has also persisted in Douentza District of Mopti Region in southeastern Mali, on the border with Burkina Faso. The Malian village of Niangassadjou is located right on the border with Burkina Faso's Djibo District (see Map 1). Niangassadjou reported 23 cases in 2003 and 4 cases during January – October 2004. In September 2004, the Burkinabe village of Gninata, which had reported only 2 cases of disease in 2003, reported 7 cases of dracunculiasis among ethnic Dogon, of which 5 were contained. All of the cases in Gninata denied having traveled to Niangassadjou, despite allegations that they had attended a wedding or other religious ceremonies there the previous year. None of the more than one thousand other inhabitants of Gninata, who are mostly not Dogon and who drink from the same local sources of water as the patients, have had dracunculiasis this year. Burkina Faso's Guinea Worm Eradication Program (GWEP) became aware of the continued problem in Gninata (it already knew Gninata had disease in 2003) when Mali's GWEP reported a case that appeared to have been imported into Mali from Gninata in August 2004. Burkina's GWEP immediately sent a team to investigate the situation in Gninata, and both national programs held a cross-border meeting to discuss the situation in October. UNICEF has repaired three of the broken handpumps in Niangassadjou in August 2004, after years of disrepair. *This episode illustrates the importance of rapid cross-notification of apparent imported cases, of rapid investigation in response to such cross-notified reports, and of focusing on where transmission is occurring or occurred, rather than on the nationality of the case(s).*

FROM 100 CASES TO ZERO IN 1 OR 2 YEARS: HOW LOW CAN YOU GO?

Table 1 summarizes the progression from more than 100 indigenous cases of dracunculiasis reported in one year to zero indigenous cases, for the seven countries that have achieved that status so far (except Kenya and Central African Republic, for which comparable data are not available). Four of the countries (Chad, India, Pakistan, and Senegal) attained zero cases after 3 years, two countries (Uganda, Yemen) after 4 years, and Cameroon after 6 years. In the last year before they reported zero cases, those seven countries reported 3,9,2,4,13,7 and 1 indigenous case respectively. In their last year of reporting about or more than 100 cases, they reported 127, 371, 94, 195, 316, 106, and 127 cases respectively.

Table 1

Reductions in Indigenous Cases of Dracunculiasis - From Circa 100 Cases to Zero Cases

country	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004*
Pakistan	106	23	2	0	0	0								
India				371	60	9	0	0	0					
Yemen				94	82	62	7	0	0	0				
Cameroon		127	72	22	8	8	1	0	0	0				
Senegal				195	76	19	4	0	0	0				
Chad						127	25	3	0	0	0			
Uganda									316	92	51	6	13	0

■ Indicates year last indigenous case reported.

* Provisional

Most of the above mentioned countries suffered surprises in the last year or two of indigenous transmission, usually in the form of outbreaks in previously known but inadequately controlled endemic villages where the program thought it had interrupted transmission of the disease. All four of the endemic African countries in this group of seven countries also had to detect and contain cases imported from neighboring endemic countries for one or more years after interrupting indigenous transmission. Of the still endemic countries with the fewest numbers of cases remaining, Ethiopia has already had five years with less than 100 cases, and Mauritania has had four years. Benin and Cote d'Ivoire have each had two years with less than 100 cases, meaning that if they have interrupted transmission in 2004 and report zero indigenous cases in 2005, they will have gone from over 100 to zero cases in three years, which equals the best record so far. If Burkina Faso, which reported 178 indigenous cases in 2003 and 46 indigenous cases in January – November 2004, has interrupted transmission of dracunculiasis in 2004, it would be the first country to go from over 100 to zero cases in less than three years. In theory, every endemic country should be able to go from ~100 to zero cases of dracunculiasis in one or two years, but no country has yet done so. **Will anyone break this record?** Benin, Burkina Faso, Cote d'Ivoire, Ethiopia and Mauritania in particular need to be ready to detect, investigate and contain all suspected and confirmed cases immediately during 2005.

GHANA REDUCED OVERALL CASES BY -43% IN NOVEMBER; 60% CASE CONTAINMENT; NEW OUTBREAK IN UPPER WEST REGION

As indicated in Table 2 below, Ghana continued to report significantly fewer cases during the last consecutive six months than in the same months of 2003. This welcome trend began in June 2004, and reached -43% in November, for an overall reduction in cases of -8% during January – November 2004. Although 20 endemic districts in Ghana have reported 98% of the 6,742 cases so far, the combined

reduction in cases in 15 of those districts during January-November 2004 is –31%, compared to the same period in 2003, but those decreases have been mitigated by unanticipated outbreaks in five other districts: Kete Krachi District of Volta Region during January – April; in Tolon-Kumbungu District of Northern Region during January-November (this district has reported 1,147 cases so far this year); Savelugu-Nanton District, Northern Region during January – July, in East Gonja District of Northern Region, during October; and in Wa District, Upper West Region, where more than 68 cases of dracunculiasis were reported in November 2004, but it is now known that additional undocumented and unreported cases of GWD occurred in previous months this year. As in the previous larger outbreaks in other districts in 2003, the outbreak in Wa District underscores again Ghana’s vulnerability as a result of inadequate surveillance in formerly and non-endemic areas, and subsequent failures of key persons to report and contain cases properly. Remedial measures are being taken to address this new surprise. As of the end of October, 1,921 (86%) of 2,242 villages are currently under active surveillance, 905 villages have reported one or more cases of dracunculiasis so far this year, and 625 of those villages had indigenous transmission. Only 60% of cases so far this year have reportedly been contained.

Table 2

Year	Ghana Guinea Worm Eradication Program - Number of Cases of Dracunculiasis Reported												
	Jan	Feb	Mar	Apr	May	June	Jul	Aug	Sept	Oct	Nov	Dec	Total
2003	903	1339	944	940	785	558	474	203	158	278	712		7294
2004	1224	1133	991	907	905	518	257	115	37	227	428		6742
% Change	+36	-15%	5%	-4%	15%	-7%	-46%	-43%	-77%	-18%	-40%		-8%

The National Program Coordinator, Dr. Andrew Seidu-Korkor, reports that Ghana’s program conducted Worm Weeks with students from the Community Health Nurses Training College on October 25-30 in Yendi, East Gonja, West Gonja, Zabzugu-Tatale, and Nanumba Districts of Northern Region, and in Kete-Krachi and Nkwanta Districts of Volta Region. The participants visited 67 communities and distributed almost 7,500 cloth filters and 867 pipe filters. Worm Weeks were also held in Atebubu District of Brong Ahafo Region on November 1-5, and with the help of the U.S. Peace Corps Volunteers in Tamale, Tolon-Kumbungu, Gushegu-Karaga, and Savelougu-Nanton Districts of Northern Region on November 7-13. Twenty-eight (28) of the 52 successful borehole wells drilled recently in Northern Region have been fitted with hand pumps, although the endemic status of the villages involved is not yet clear. The GWEP also began publishing a version of the “Guinea Worm Race” for Ghana’s top 20 endemic districts in the Daily Graphic newspaper. The first such race appeared in the issue of October 9, 2004. UNICEF provided the program with a new Toyota Hilux Pick Up vehicle in October, for use in supervision.

IN BRIEF:

Ghana. Dr. Ahmed Tayeh and Dr. Alhousseini Maiga, from WHO, visited Ghana on 8-21 December 2004 to review Guinea worm surveillance in free areas. They visited Ashanti, Brong-Ahafo and Volta Regions, finding significant improvement in coverage and quality of surveillance compared with their previous visit in mid 2003. WHO has recruited a National Program Officer to be based in Tamale to assist the program.

Table 3

Number of cases contained and number reported by month during 2004*

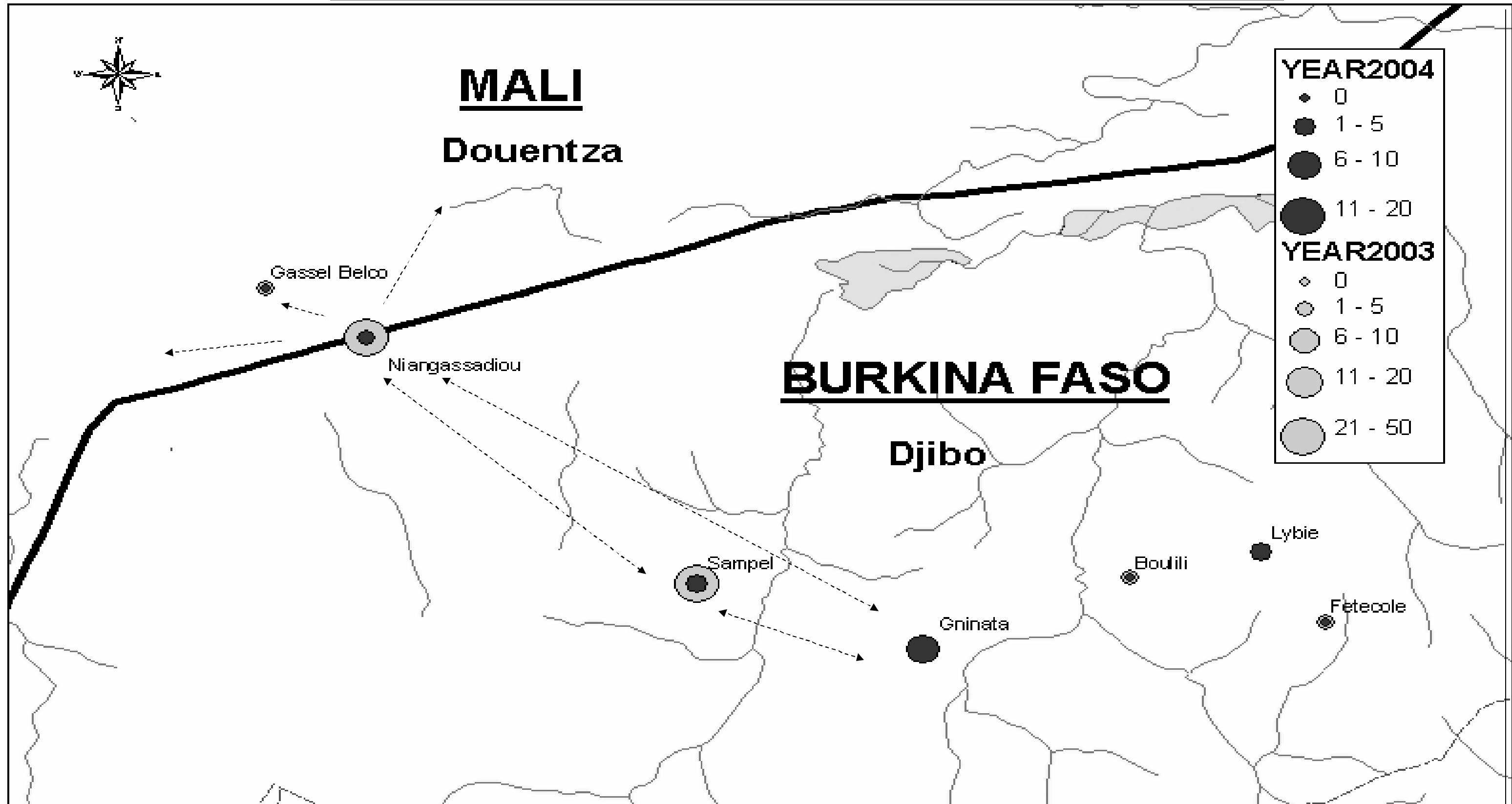
(Countries arranged in descending order of cases in 2003)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*		
SUDAN	34 / 237	46 / 271	31 / 248	62 / 653	158 / 1194	192 / 1324	171 / 1149	91 / 728	35 / 538	6 / 118	/	/	826 / 6460	13	
GHANA	645 / 1224	673 / 1133	623 / 991	581 / 907	678 / 905	372 / 518	131 / 257	85 / 115	20 / 37	126 / 227	129 / 438	/	4063 / 6752	60	
NIGERIA	81 / 102	64 / 73	40 / 48	25 / 31	63 / 69	31 / 37	17 / 23	11 / 12	0 / 0	13 / 15	41 / 45	/	386 / 455	85	
MALI	1 / 1	0 / 1	0 / 1	0 / 0	5 / 5	9 / 12	22 / 27	44 / 62	64 / 111	57 / 73	26 / 54	/	228 / 347	66	
TOGO	35 / 46	20 / 29	18 / 47	12 / 21	17 / 20	16 / 22	4 / 6	1 / 3	9 / 9	19 / 19	27 / 28	/	178 / 250	71	
NIGER	1 / 1	2 / 2	1 / 1	3 / 4	4 / 9	13 / 16	24 / 28	21 / 28	30 / 34	40 / 51	23 / 49	/	162 / 223	73	
BURKINA FASO	1 / 1	1 / 2	0 / 0	2 / 2	5 / 5	3 / 4	7 / 12	5 / 8	10 / 15	4 / 7	1 / 2	/	39 / 58	67	
COTE D'IVOIRE	1 / 2	5 / 5	0 / 5	1 / 4	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 2	/	7 / 21	33	
BENIN	0 / 0	2 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	3 / 3	100	
ETHIOPIA	0 / 0	1 / 1	0 / 0	2 / 2	6 / 6	3 / 5	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	/	14 / 16	88	
UGANDA	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	1 / 1	0 / 0	0 / 0	/	3 / 3	0	
MAURITANIA	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	3 / 3	100	
KENYA	/	/	/	/	1 / 1	2 / 2	/	1 / 1	1 / 1	/	/	/	5 / 5	100	
TOTAL*	800 / 1615	814 / 1519	714 / 1342	688 / 1624	938 / 2216	643 / 1942	378 / 1504	260 / 958	170 / 746	265 / 512	247 / 618	0 / 0	5917 / 14596	41	
% CONTAINED	50	54	53	42	42	33	25	27	23	52	40		41		

* PROVISIONAL

Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

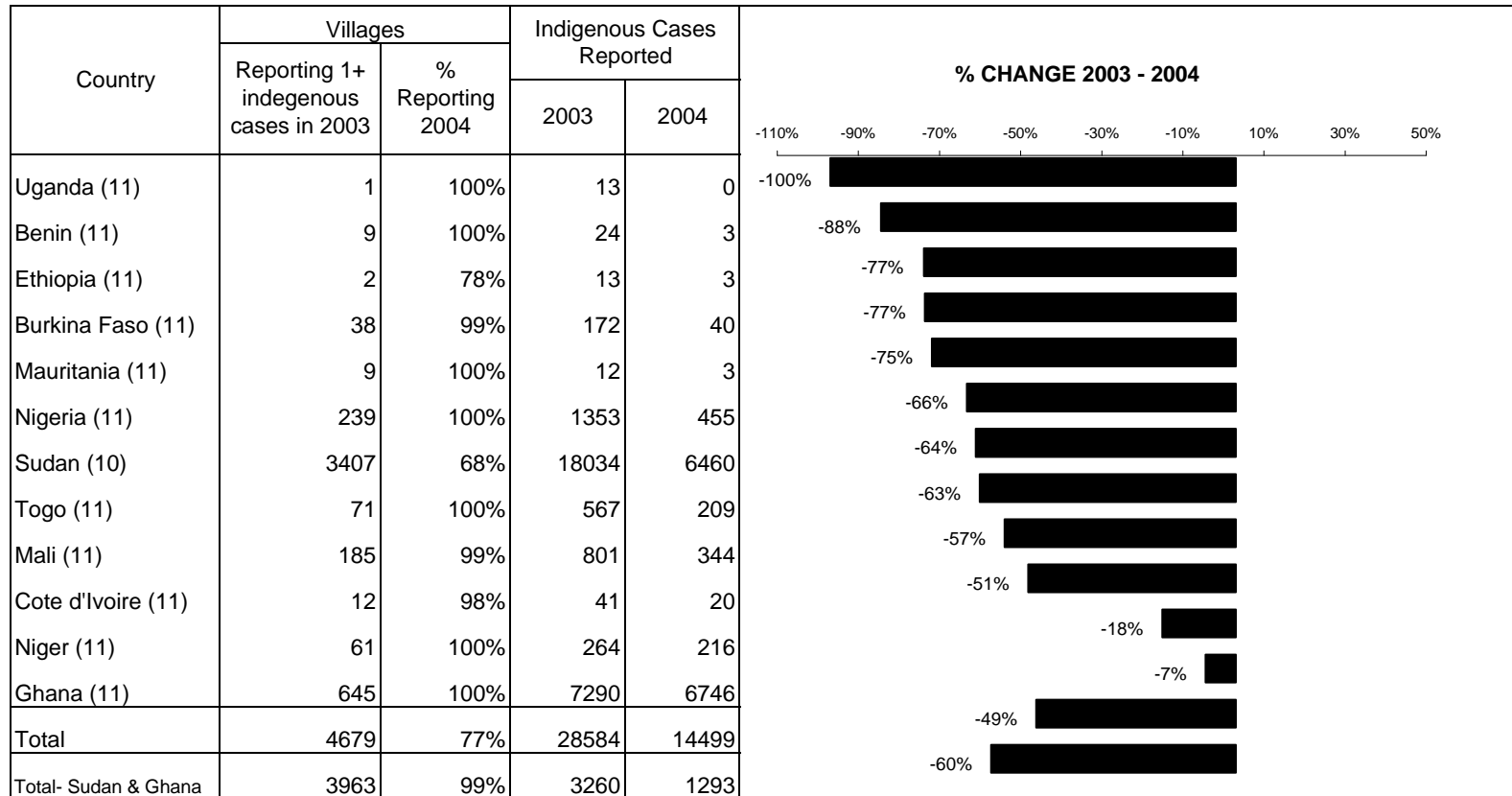
**Partial Distribution of Cases Along the Burkina Faso / Mali Border
January - October 2004**



0 3.5 7 14 21 28 Kilometers

Figure 1

Number of Villages/Localities Reporting Cases of Dracunculiasis in 2003, Percentage of Endemic Villages Reporting in 2004*, Number of Indigenous Cases Reported During the Specified Period in 2003 and 2004*, and Percent Change in Cases Reported

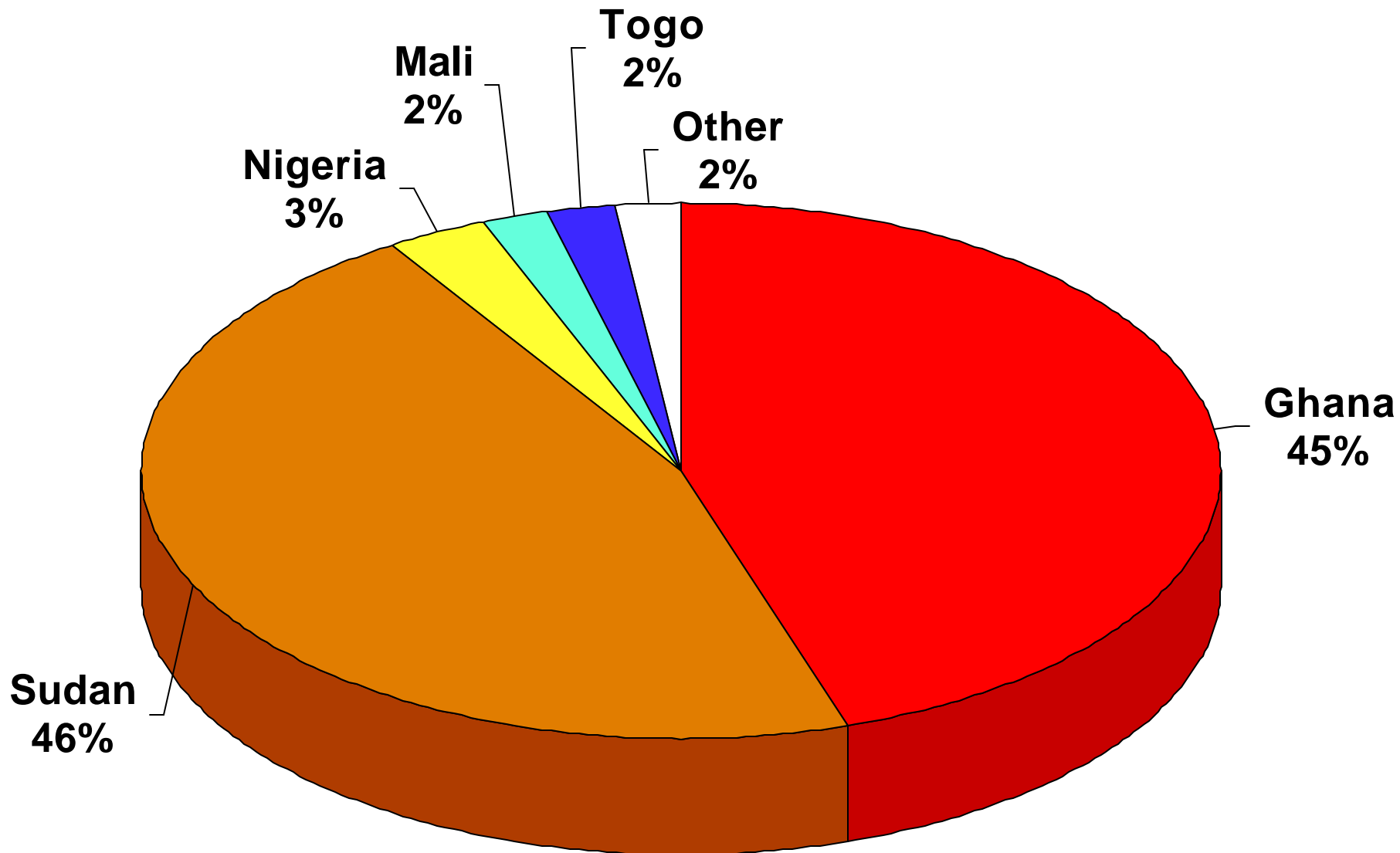


(11) Indicates month for which reports were received, e.g., Jan. - Nov. 2004

* Provisional

Figure 2

Distribution of 13,890 Cases of Dracunculiasis Reported During 2004*



* provisional: January - October

Togo. TV Togo, the country's national television station, broadcast a special 45-minute long program on Guinea worm eradication on December 6 & 9, during peak evening viewing hours. The program included a tape of the Prime Minister visiting an endemic village earlier this year and his reading of a message from the President of Togo, footage from President Carter's visit last February, the video message from UN Secretary General Kofi Annan, and also footage of a Worm Week, ABATE® larvicide treatments, filter distribution and a Case Containment Center.

Niger. This program held its annual National Program Review in Maradi on 26-28 September 2004. Dr. Alhousseini Maiga of WHO/AFRO participated. The United States ambassador to Niger conducted a field visit to endemic and formerly endemic villages of Zinder Region during the week of December 6. Mr. Harou Oumarou, National Coordinator, Niger GWEP, Mr. M Salissou Kane of The Carter Center, and other US Embassy staff accompanied her. The Ambassador was briefed on the status of the GWEP in Niger, including about Tillabery Region from where 209 (94%) of the 223 cases of dracunculiasis detected in Niger during January – November 2004 have been reported, and was encouraged to visit Tillabery and to continue to advocate for the provision of safe sources of drinking water in that region. The Ambassador graciously agreed to continue her advocacy for the eradication of dracunculiasis from Niger.

Sudan and Ghana. We note that Sudan, with 6,460 (46%) cases, and Ghana, with 6,308 (45%) cases of dracunculiasis, together account for 91% of the 13,890 indigenous cases of dracunculiasis reported during January – October 2004 (Figure 2).

All countries. Figure 3 summarizes the annual number of zero case months reported by the 12 remaining endemic countries since 2000. This is another way of measuring the impact of national Guinea Worm Eradication Programs on transmission of dracunculiasis and the acceleration of that impact over time.

HILTON FOUNDATION GRANT TO HEALTH & DEVELOPMENT INTERNATIONAL

The Conrad N. Hilton Foundation has awarded Health & Development International (HDI) a grant of \$300,000 over 2005-2007, to help HDI assist the Guinea Worm Eradication Programs of Niger and Mali. Activities to be supported under this grant will be closely coordinated with support provided to Mali and Niger by other major partners, especially The Carter Center, UNICEF and WHO, in addition to the two national programs themselves. This is the second grant that the Hilton Foundation has provided to HDI for Guinea worm eradication. The first grant, which also was for a total of \$300,000, was awarded for the period 2002-2004.

CDC ANNOUNCES EPIDEMIOLOGIST POSITION FOR SUDAN

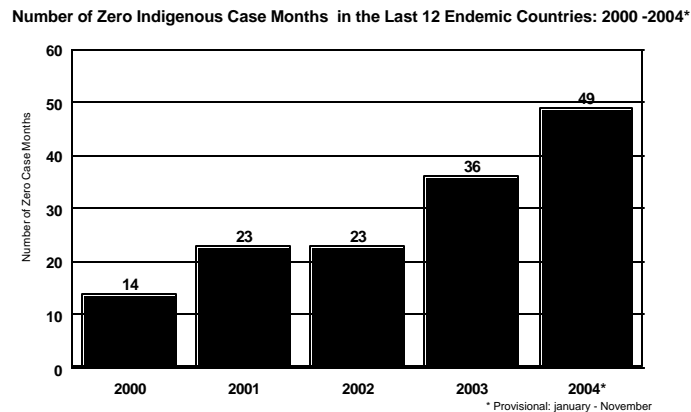
The Division of International Health, Office of Global Health, Centers for Disease Control and Prevention (CDC), is collaborating with the United States Agency for International Development and the Secretariat of Health (SOH) for South Sudan to recruit and epidemiologist to help establish a 2-year on-the-job training program in field epidemiology, focusing on surveillance and outbreak response, for 20 county medical officers. The epidemiologist will also assist the SOH in establishing a communicable disease surveillance system, and will be expected to lead outbreak response activities throughout southern Sudan. CDC is soliciting expressions of interest from experienced field epidemiologists to fill a 2-year contract position, with the possibility of an extension, to work as the resident advisor for this program. If you have any interest in this position, or would like to learn more about it, please contact Andy Weathers e-

mail: aqw5@cdc.gov or 404-498-6146, Dr. Peter Nsubuga e-mail: pnsbuga@cdc.gov or 404.498.6134 or Dr. Douglas Klaucke e-mail: dklaucke@cdc.gov or 404.498.6127.

NEW CARTER CENTER REPRESENTATIVE IN NAIROBI

Effective October 1, 2004, Ms. Glenna Snider has replaced Mr. Mark Pelletier as the Carter Center representative in Nairobi for the Operation Lifeline Sudan Southern Sector part of Sudan's Guinea Worm Eradication Program. Ms. Snider has worked for The Carter Center in Kenya and Sudan since January 2002, when she was appointed Field Coordinator, based in Lokichikio, Kenya. WELCOME, Glenna! Mr. Mark Pelletier returned to the Centers for Disease Control and Prevention (CDC) at the end of September. THANK YOU Mark!

Figure 3



MEETINGS

The dates proposed for the next meeting of Program Managers of GWEPs are April 4-6, 2005. The Government of Ghana has agreed to host this important meeting in Accra and is now considering these proposed dates.

The next annual National Program Review for Mali's Guinea Worm Eradication Program will be held in Bamako on January 13 – 15, 2005.

WHO/AFRO will sponsor the 9th Cross-border meeting between Burkina Faso, Mali, and Niger, in Dori, Burkina Faso, during January 24-26, 2005.

*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. James H. Maguire, 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: 770-488-7761. The GW Wrap-Up web location is <http://www.cdc.gov/ncidod/dpd/parasites/guineaworm/default.htm>.



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