DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Date: November 12, 2007

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

Subject: GUINEA WORM WRAP-UP #177

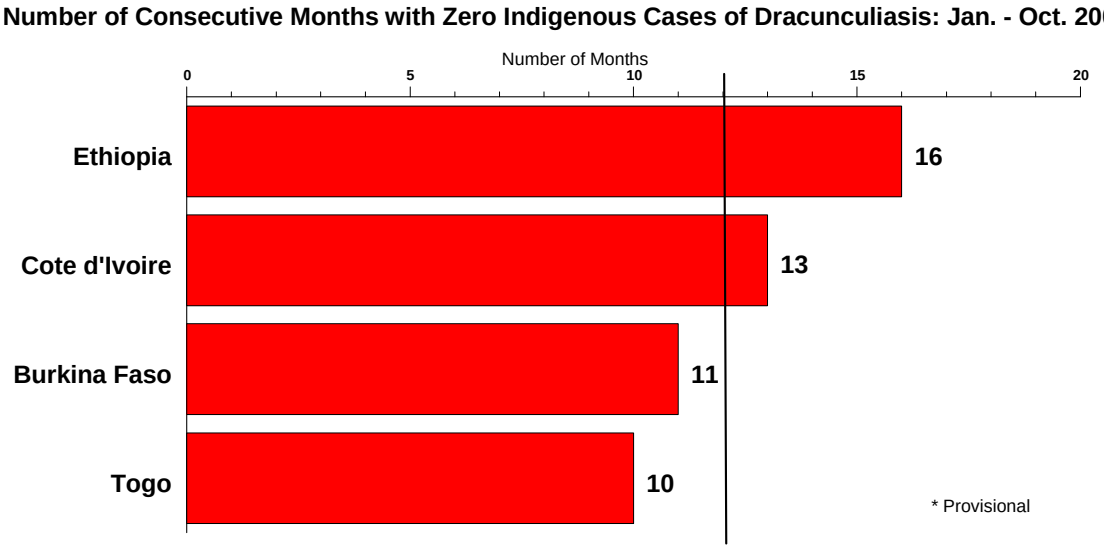
To: Addressees

"GUINEA WORM ANYWHERE IS GUINEA WORM EVERYWHERE"
Alhaji Dr. Mohammed Bin Ibrahim, Regional Director of Health Services, Brong Ahafo Region, Ghana

ETHIOPIA & COTE D'IVOIRE STOP GWD, BEGIN PRE-CERTIFICATION!!

After months of suspense, there is increasing evidence and confidence that both Ethiopia and Cote d'Ivoire have interrupted indigenous transmission of dracunculiasis (Guinea worm disease). As of end October 2007, Ethiopia had reported no indigenous cases for 16 consecutive months and Cote d'Ivoire for 13 consecutive months (Figure 1). Thus thirteen of the original twenty endemic countries are now free of indigenous dracunculiasis, (Figure 2) and it is possible that Burkina Faso and Togo, with 11 and 10 consecutive zero case months respectively, may also have already recorded their last cases of Guinea worm disease. The 348 cases reported from all endemic countries during September 2007 (Table 1, Figure 4) represents the lowest number of cases of dracunculiasis reported during any month since the global program began.

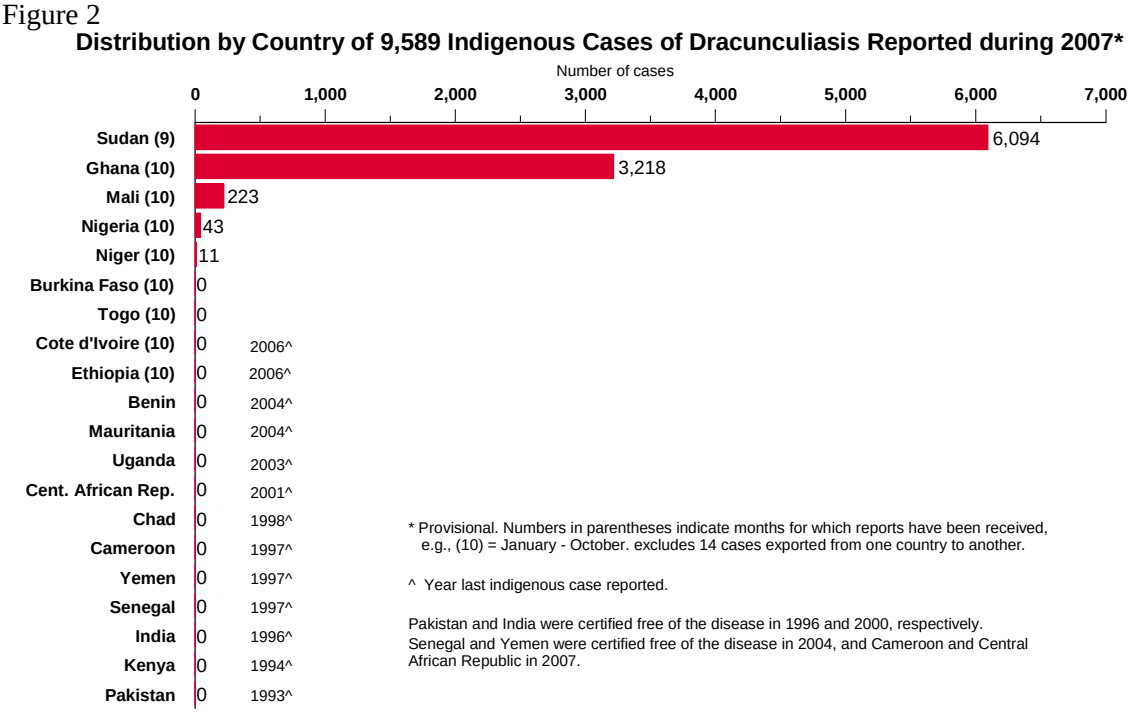
Figure 1



The national Guinea Worm Eradication Programs of Cote d'Ivoire and Ethiopia both had to work hard to stop transmission of dracunculiasis despite significant insecurity in their most recent endemic areas: ethnic clashes in parts of Gambella Region, Ethiopia, and civil war in Cote d'Ivoire. Fortunately, in Cote d'Ivoire, a strong push by MAP International, UNICEF, Health and Development International and The Carter Center to intensify interventions in the remaining endemic area just months before the civil war erupted in September 2002 helped prevent a potentially disastrous setback. By focusing its efforts to repair existing hand pumps, drill and equip new borehole wells, and help villagers construct bio-sand filters using local materials in the endemic districts of M'bahiakro, Tanda, Bondoukou and Bouna, MAP

International helped improve access to safe water and reduce the rate of broken hand pumps in endemic and at-risk villages from 72% to 15%. Both bio-sand filters and hand pump sources were used in Dodoassue' village (Tanda District), which reported 80% of all cases in the country in 2001, because the local population continued to use water from the river due to their strong relationship with the spirit of the river. Lendoukro village in M'bahiakro District recorded all 5 of Cote d'Ivoire's final indigenous cases in 2006. Earlier uncertainty about whether Ethiopia had eliminated indigenous transmission derived from questions about the provenance of 3 cases recorded along Ethiopia's border with southern Sudan, which is still highly endemic (see *Guinea Worm Wrap-Up #175*). Cote d'Ivoire hosted a WHO-sponsored meeting of Francophone countries (Benin, Chad, Cote d'Ivoire, Mauritania, Guinea) in the pre-certification phase of dracunculiasis eradication at Abidjan on September 4-5, 2007. Ethiopia hosted a WHO-sponsored meeting for Anglophone countries and areas (Ethiopia, Kenya, northern Sudan, Uganda) in the pre-certification phase at Addis Ababa on October 30-31, 2007.

Figure 2



NIGER REDUCES CASES BY -87%, ESTABLISHES NATIONAL CERTIFICATION COMMITTEE

On October 5, Niger's Minister of Public Health, Mr. Issa LAMINE, issued a decree establishing the National Commission for Certification of Dracunculiasis Eradication in Niger (*Commission Nationale de la Certification de l'Eradication de la Dracunculose au Niger-CNCED*). The commission will help mobilize resources, strengthen activities of the national Guinea Worm Eradication Program (GWEP), and submit reports to the International Commission for the Certification of Dracunculiasis Eradication (ICCDE). Commission members include the head of the department of public health in the Faculty of Health Sciences at Abdou Moumouni Dioffo University of Niamey (president), the director general in the ministry of public health (vice-president), the national coordinator of the GWEP, as well as five other members of the government, plus local representatives of WHO, UNICEF, and The Carter Center. This welcome step comes as Niger has recorded only 12 cases of Dracunculiasis in January-October 2007 (11 contained)(Table 1), including one imported case, compared to 91 cases during the same period of 2006, a reduction of –87% (Figures 3 and 5). The Niger GWEP also held a Worm Week in Niger's last remaining endemic region (Tillaberi) on October 24-30.

Table 1

Number of Cases Contained and Number Reported by Month during 2007*
(Countries arranged in descending order of cases in 2006)

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	38 / 161	49 / 190	102 / 271	304 / 586	673 / 1339	661 / 1473	497 / 1206	348 / 612	158 / 258	/	/	/	2830 / 6096	46
GHANA	812 / 1005	631 / 732	442 / 478	248 / 293	233 / 272	185 / 241	91 / 111	38 / 41	15 / 19	/ 27	/	/	2695 / 3219	84
MALI	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	5 / 7	29 / 120	35 / 68	15 / 26	/	/	86 / 223	39
NIGER	3 / 3	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	0 / 0	2 / 3	4 / 4	/	/	11 / 12	92
NIGERIA	7 / 32	9 / 9	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	/	/	17 / 43	40
TOGO	0 / 0	1 / 1	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	1 / 2	50
BURKINA FASO	2 / 2	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	2 / 2	100
COTE D'IVOIRE	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	0 / 0	0
ETHIOPIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	3 / 3	0 / 0	0 / 0	0 / 0	0 / 0	/	/	3 / 3	0
UGANDA	0 / 0	0 / 0	1 / 1	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	/	/	3 / 3	100
TOTAL*	862 / 1203	690 / 932	547 / 752	552 / 880	908 / 1613	850 / 1718	594 / 1325	416 / 774	210 / 348	19 / 58	0 / 0	0 / 0	5648 / 9603	59
% CONTAINED	72	74	73	63	56	49	45	54	60	33			59	
% CONT. OUTSIDE SUDAN	79	86	93	84	86	77	82	42	58	33			80	

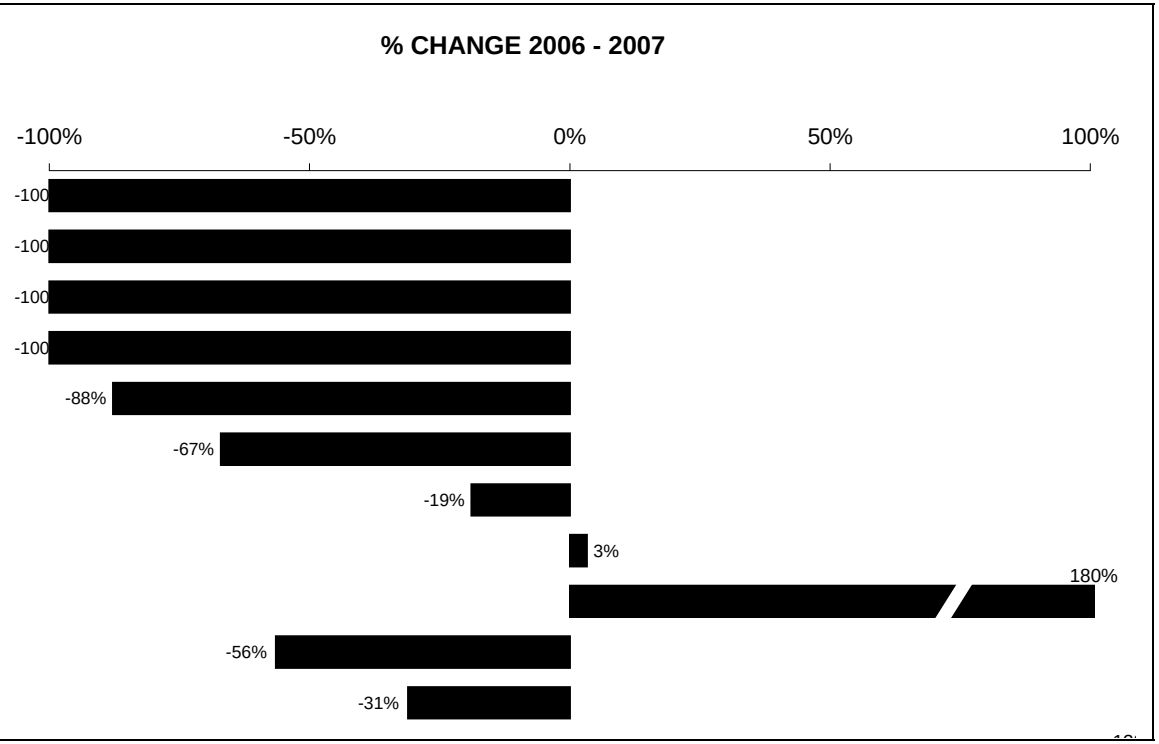
* provisional

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

Figure 3

Number of Indigenous Cases Reported During the Specified Period in 2006 and 2007*, and Percent Change in Cases Reported

Country	Indigenous Cases Reported	
	2006	2007
Togo (10)	15	0
Cote d'Ivoire (10)	5	0
Ethiopia (10)	1	0
Burkina Faso (10)	1	0
Niger (10)	90	11
Sudan (9)	18508	6094
Mali (10)	275	223
Ghana (10)	3115	3218
Nigeria (10)	15	43
Total	22025	9589
All countries, excluding Sudan and Ghana	402	277

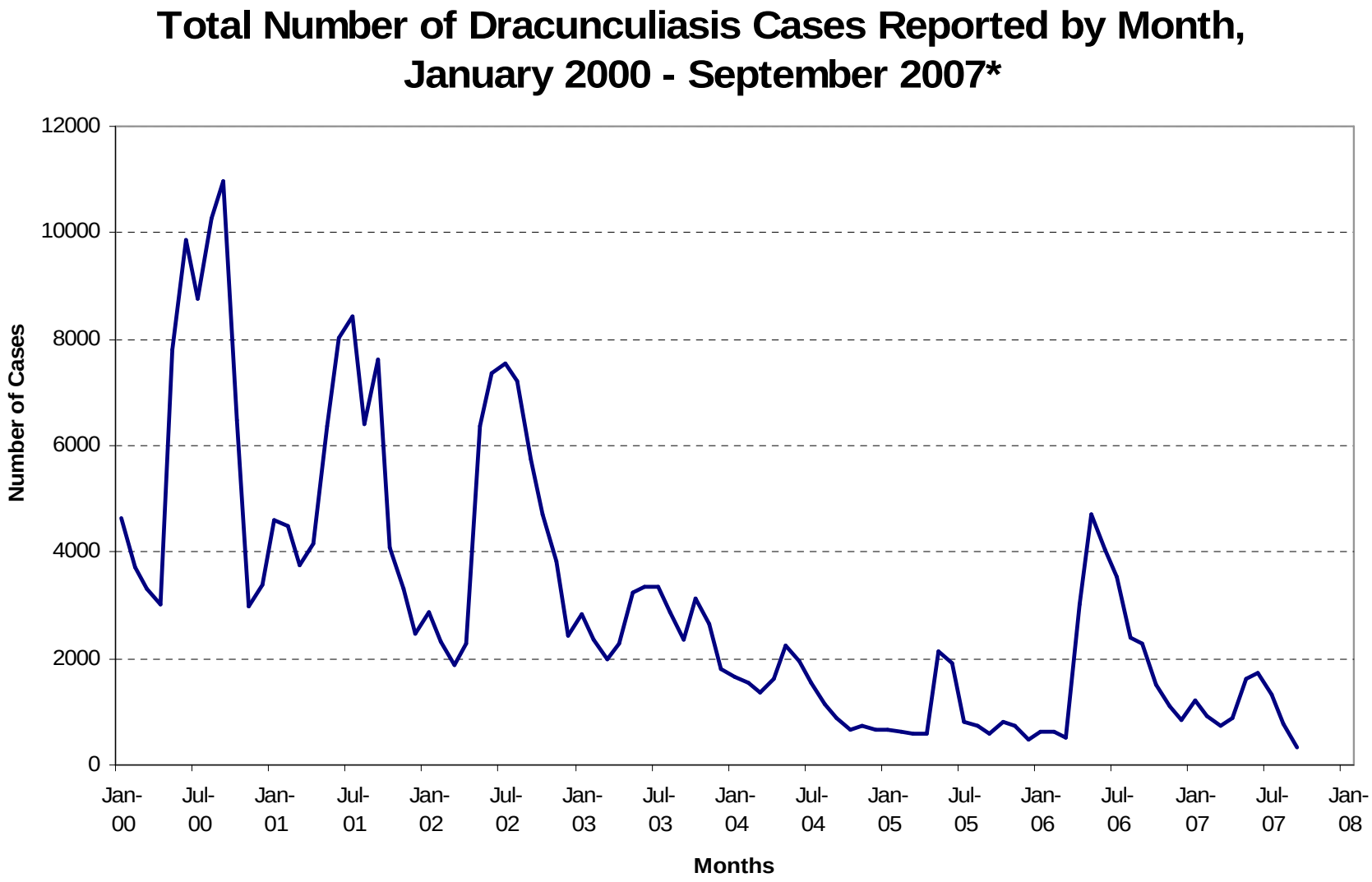


Overall % change outside of Sudan = 1%

(10) Indicates months for which reports were received, i.e., Jan. -Oct.

* Provisional

Figure 4

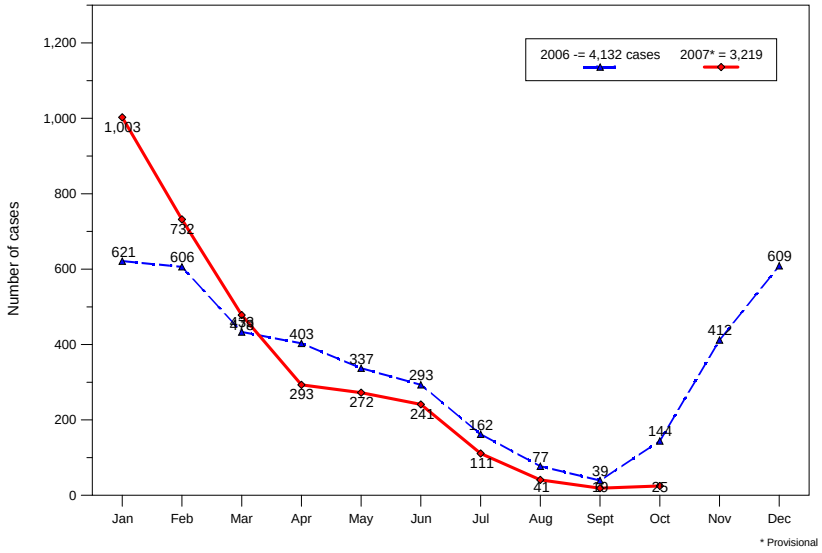


* September 2007 recorded the fewest monthly total of cases since the global GWEP began.

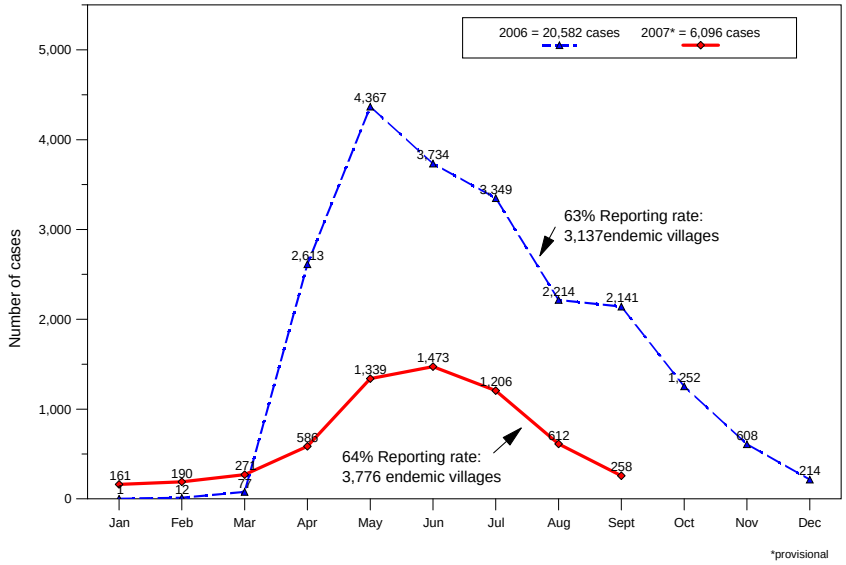
Figure 5

NUMBER OF REPORTED CASES OF DRACUNCULIASIS: 2006 AND 2007*

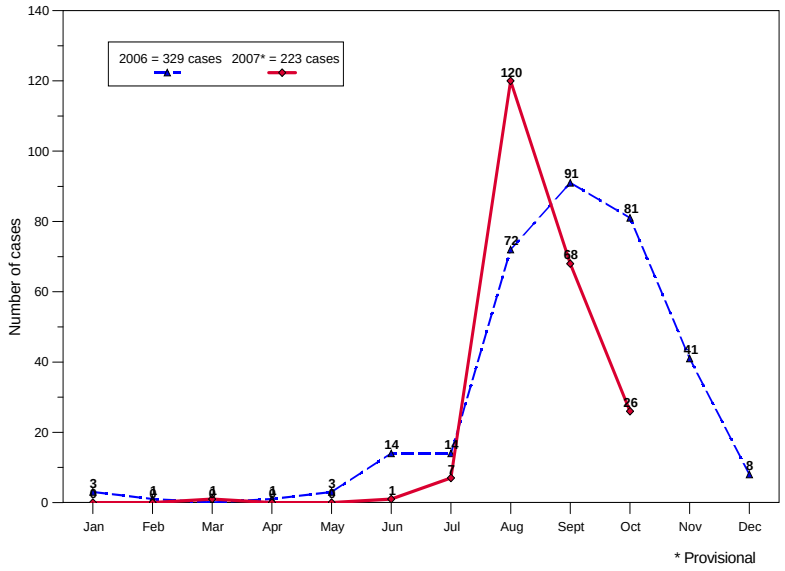
GHANA



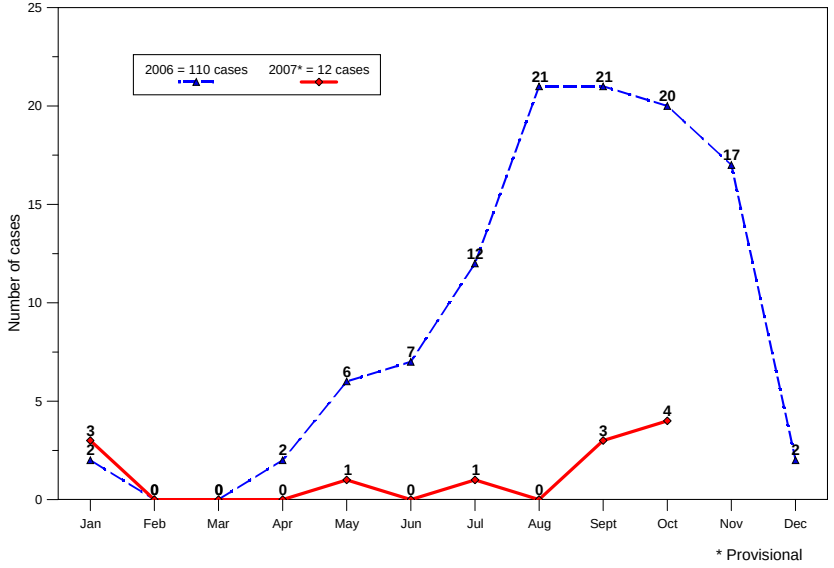
SUDAN



MALI



NIGER



GHANA REPORTS SIXTH CONSECUTIVE MONTH OF FEWER CASES

Ghana has reported a total of 27 cases in October, for a cumulative total of 3,219 cases(Table 1, Figures 2 and 5), of which 84% were reportedly contained, so far in 2007. This is an increase of 3% in cases from the same period of 2006 (Figure 3). The monthly rate of reduction in cases has increased from –27% in April to –81% in October. The number of cases reported in September and October 2007 are the lowest ever reported for those months since the program began. Outside of Savelugu-Nanton District, Ghana's other remaining endemic districts have reduced cases by –52% in January-September 2007. Intervention indices as of September 2007 were: 98% of endemic villages with health education, 84% with cloth filters in all households, 55% of endemic villages received pipe filters since January 2006, 47% had at least one safe source of drinking water, and 6% of endemic villages treated with ABATE® Larvicide in September. Five regions of Ghana are free of endemic transmission of dracunculiasis, three reported less than 100 cases, and two more than 100 cases in 2006 (Table 2). National coordinator Dr. Andrew Seidu-Korkor briefed key majority and minority parliamentary committee members on the status of Ghana's GWEP on October 27.

Table 2

Ghana Guinea Worm Eradication Program

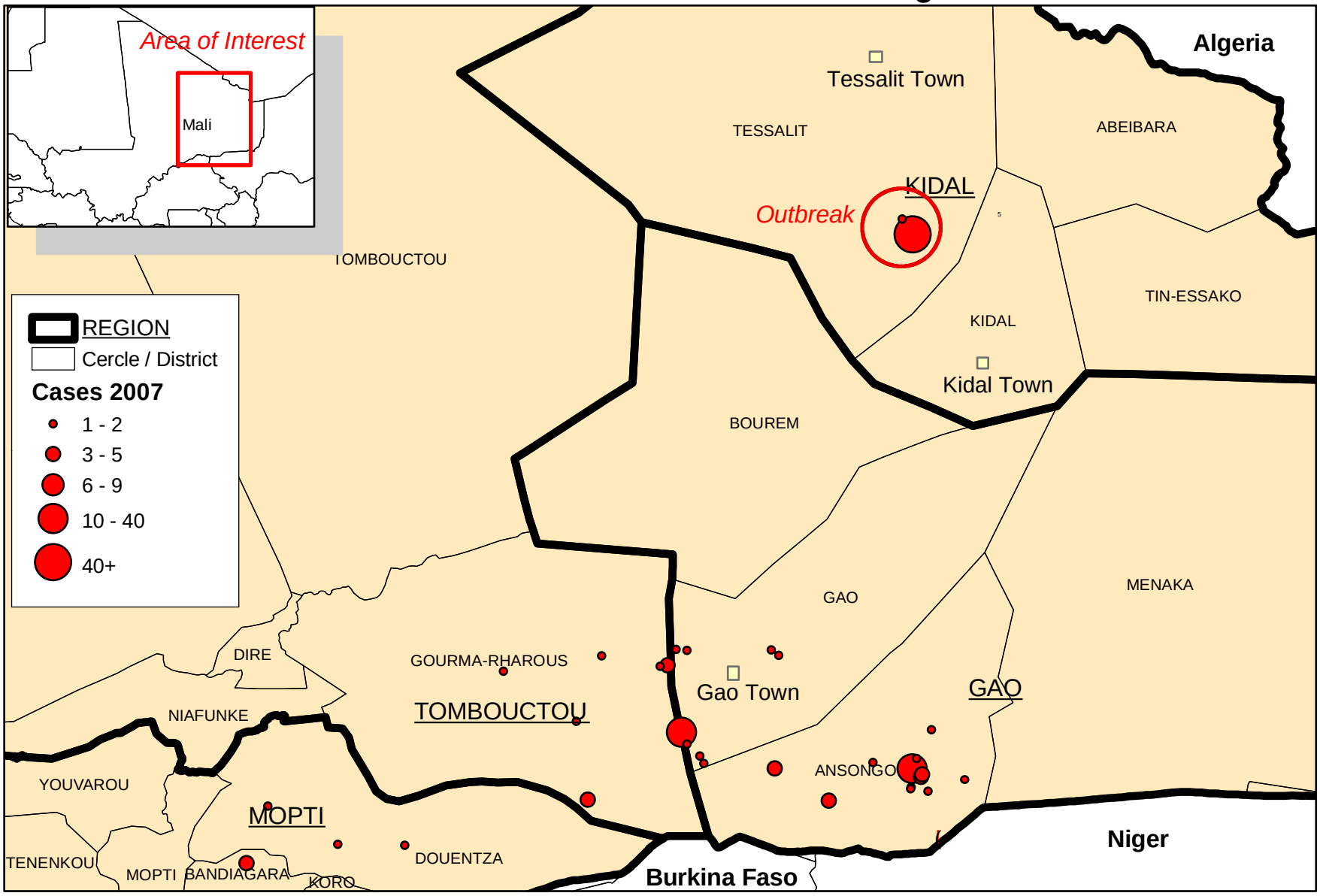
Year	Years with no indigenous cases and remaining indigenous cases in 2006, by region									
	Greater Accra	Upper East	Western	Central	Eastern	Ashanti	Upper West	Volta	Brong Ahafo	Northern
1995	X	X								
1996	X	X								
1997	X	X								
1998	X	X	X			X				
1999	X									
2000	X	X	X							
2001	X	X	X							
2002	X	X	X			X				
2003	X	X		X	X	X				
2004	X	X	X	X						
2005	X	X	X	X	X					
2006	X	X	X	X	X	31	66	84	204	3679

X = zero indegenous cases reported

MALI: INSECURITY IMPEDES OUTBREAK CONTROL IN KIDAL

Mali has reported 223 cases of dracunculiasis, 86 (39%) of them contained, in 47 villages in January-October 2007 (Figure 5). This is a decrease of -19% from the 275 cases reported during the same period of 2006. 86 of this year's cases are from two villages experiencing the recent outbreak imported in Kidal Region from Gao Region (Figure 6). None of the cases of GWD confirmed in Kidal were contained. After the initial visit to this remote area by GWEP staff, insecurity ensued in Kidal and it has precluded the GWEP from implementing additional interventions. Four of Mali's eight regions (Kayes, Koulikoro, Segou, Sikasso) have eliminated dracunculiasis. Case containment rates so far this year for the other three endemic regions outside Kidal range from 60% (67/112) in Gao; 67% (8/12) in Timbuktu; to 85% (11/13) in Mopti.

Mali Guinea Worm Eradication Program



This map is provisional and is not an authority on boundaries or roads or exact locations. This map was created for the purpose of the Guinea Worm Eradication Program.

WHO & CARTER CENTER REVIEW NIGERIAN ACTIVITIES

From September 17-28, 2007, a team from the World Health Organization visited 16 states, 32 Local Government Areas (LGAs), 48 villages, and 353 households as part of a review of Guinea worm surveillance, management and supervision in Nigeria. As reported by Dr. Cephas Ityonzughul of WHO's Nigeria office, the team concluded that although field activities have improved since the previous external evaluation in June 2004, there was still insufficient training, motivation, and transportation for field staff and village volunteers, lack of written guidelines for pre-certification, inadequate integration of surveillance for dracunculiasis into the Integrated Disease Surveillance and Reporting (IDSR) system, and inadequate funding for program activities by government at all levels. The overall monthly reporting rates for 696 recently endemic villages in 88 LGAs and 17 states (including 12 still officially endemic villages which have reporting rates of 100%), were 30%, 37%, 34%, 34%, 52%, 56%, 49%, and 39% for the first eight months of 2007.

On October 22-24, The Carter Center held a Program Review for all Carter Center-assisted health programs in Nigeria, at the Sheraton Hotel in Abuja. The Opening Ceremony, which was chaired by former Nigerian Head of State General (Dr) Yakubu Gowon, included a passionate "farewell" address by the outgoing ambassador of Japan to Nigeria. Participants at the Review, which covered activities related to dracunculiasis eradication, lymphatic filariasis elimination, and control of schistosomiasis, onchocerciasis and trachoma, included representatives of WHO, UNICEF, CDC, the Bill & Melinda Gates Foundation, the Yakubu Gowon Center, the Nigerian Federal Ministry of Health and several state ministries of health, as well as The Carter Center. The new national coordinator of Nigeria's GWEP, Mrs. Ifeoma Anagbogu, summarized the current state of the national program.

ASSESSMENT OF POSSIBLE LOCAL TRANSMISSION IN TURKANA NORTH DISTRICT, KENYA, ON THE BORDER WITH SUDAN AND ETHIOPIA

A team comprised of 8 officials, 3 from WHO and 5 from the Kenyan Ministry of Health visited Turkana North District from 11 to 15 October, in particular Kibbish area, 5km from the Ethiopian border in the northwest and 60km from the Sudanese border in the northeast. The mission was led by Michelle Gayer, Medical Officer, Disease Control in Humanitarian Emergency in Geneva and Dr. Eric Muchiri, Programme manager, Division of Vector Borne Diseases, Ministry of Health in Kenya.

There is frequent cross-border movement between the three countries, thereby maintaining a risk of cross border transmission of Guinea Worm. The team surveyed the area to investigate rumors of active guinea worm cases. The team concluded that it is unlikely the indigenous transmission of Guinea Worm is occurring or has occurred in that part of Kenya for the last 12 years. Given the nomadic populations and cross border movements, the water situation, the poor surveillance system and lack of knowledge on GW disease prevention among the community, there is a risk of reintroduction of this disease into Kenya from Sudan. Kenya could thus be certified as a GW free country; however, adequate measures must be put into place by June 2008 to achieve certification after which it can apply to the International Certification Committee for Guinea Worm Eradication.

IN BRIEF:

Burkina Faso has appointed another new coordinator for the national Guinea Worm Eradication Program, following the departure of his recent predecessor for study abroad. He is Dr. Laurent NIKIEMA, previously of the Dedougou Sanitary District. Welcome, Dr. Nikiema, and may you have no cases to report during your service!

Table 3

Reported Importations and Exportations of Cases of Dracunculiasis: 2007*

From	To	Month and number of cases imported													Number of caes exported
		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	Total	
Ghana	Burkina Faso	2												2	4
	Togo		1		1									2	
Sudan	Ethiopia						3							3	6
	Uganda			1		1			1					3	
Mali	Niger									1				1	1
Ethiopia	Sudan	2												2	2
Togo	Ghana		1											1	1
Total		4	2	1	1	1	3	0	1	1	0	0	0	14	

* Provisional

MEETINGS

Executive Board of the World Health Organization, week of January 21, 2008; Geneva (Guinea worm eradication to be discussed).

Program Review for Southern Sudan GWEP January 30-31, 2008, Juba.

African Regional Conference on Dracunculiasis Eradication, April 2-4, 2008.

World Health Assembly, week of May 19, 2008; Geneva. (to receive report on Guinea worm eradication).

SCHEDULE FOR LAST GUINEA WORM CASES*

- **2006 - 2007** Burkina Faso, Cote d'Ivoire, Ethiopia, Mali, Niger, Nigeria, Togo
- **2007 – 2008** Ghana
- **2009** Sudan

*as indicated at May 2004 World Health Assembly

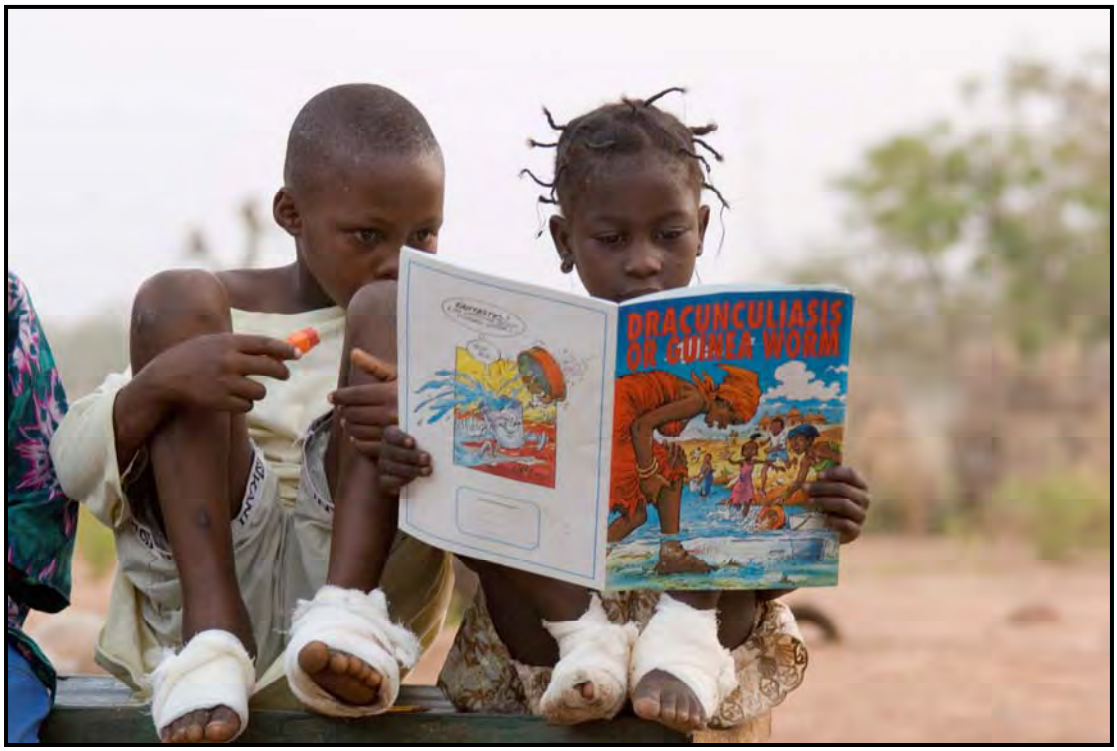
RECENT PUBLICATIONS

Voelker, R, 2007, Persistence pays off in Guinea worm fight. *JAMA* vol:298 iss:16 pg:1856 -7 .

IN MEMORIUM

Dr. Ralph Muller died in England on October 11 after being ill for several months. Most recently an Honorary Senior Lecturer at the London School of Hygiene and Tropical Medicine (LSTMH), he began his long and distinguished career in helminthology at Nigeria's University of Ibadan, and served for many years as the director of the Commonwealth Institute of Parasitology in England as well as a Lecturer and Senior Lecturer at the LSTMH. He was the world's foremost authority on the biology of Dracunculus species. One of the earliest advocates of dracunculiasis eradication, he was a prominent participant in the first international meeting on dracunculiasis, the Workshop on Opportunities for Control of Dracunculiasis, which was held in Washington, D.C. in June 1982. He compiled an exhaustive, invaluable 177-page long Bibliography of Dracunculiasis (with nearly two thousand citations) as part of the published report of that historic meeting. We extend our profound condolences to his family.

Dr. K. A. Ojodu passed away in Nigeria on September 10, less than two weeks before his 60th birthday, and less than three months after his retirement from public service, following a motor accident while en route from Lagos to Abuja ten days earlier. He received his PhD and MPH degrees from Johns Hopkins University, and was a Lecturer at the University of Lagos from 1981 until 1984, when he was posted to the Federal Ministry of Health as assistant chief scientific officer. He served as national coordinator for Nigeria's Onchocerciasis Control Program from 1989 to 1992, and as national coordinator of the Guinea Worm Eradication Program from 1995 to June 2007. We extend our profound condolences to his family.



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