



Date: September 30, 2009



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

Subject: GUINEA WORM WRAP-UP #192

To: Addressees

**“Detect Every Case, Contain Every Worm”**

**Months since last indigenous case of dracunculiasis:**

**Niger: 10 months, Nigeria: 9 months**

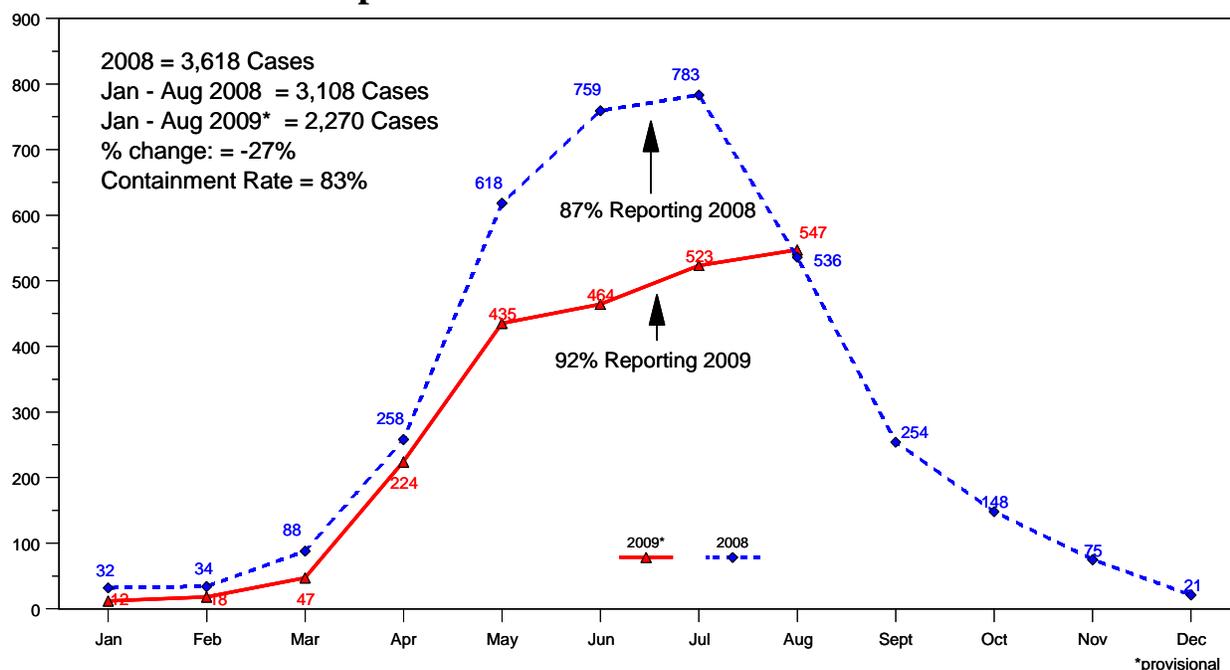
**Number of uncontained cases so far in 2009:**

**Sudan: 391, Mali: 18, Ghana: 15, Niger: 2, Ethiopia: 1, Nigeria: 0**

**SUDAN: RACING AGAINST TIME**

The Southern Sudan Guinea Worm Eradication Program (SSGWEP) continues to work mightily to eliminate the remaining foci of dracunculiasis as soon as possible. During January-August 2009, the SSGWEP has reported a provisional total of 2,270 cases, compared to 3,108 cases during the same period in 2009, a decrease of -27% (Figure 5, Table 2). The case containment rate during this period is 83%. The dramatic improvement in case containment compared to previous reports (49% in 2008) is due to the decision of the SSGWEP to declare all cases contained if all standards for case containment have been met by the end of the reporting month, Figure 1

**Number of Reported Cases of Dracunculiasis: Sudan 2008 - 2009\***



including for some cases pending complete removal of the worm, the status of which are to be updated in the next monthly report, and partly because the majority of cases in Kapoeta North and South Counties are now being isolated voluntarily in Case Containment Centers. The rate of monthly reporting from endemic villages through August 2009 is 92%, compared to 87% during 2008. As of January - August, 73% of endemic villages are being educated to prevent Guinea worm disease, 91% have cloth filters in all households, 46% have received pipe filters, and water sources in 43% are being treated monthly with ABATE® Larvicide, but only 15% have at least one source of safe drinking water. Figure 2 indicates the four Focal areas in Southern Sudan and the villages reporting cases of Guinea worm disease (GWD) in January-August 2009, and Figures 3 and 4 show the payams reporting 10+ cases during January – August, 2009, grouped according to the four Focal Areas shown in Figure 2.

Unfortunately, increasing insecurity, drought, disputed census results, and impending political milestones in 2010 and 2011 are grave threats or potential risks to the stability that is required for eradicating Guinea worm disease and polio on southern Sudan. A list of the 27 insecurity incidents affecting the SSGWEP so far this year is given in Table 1. The total number of dracunculiasis cases reported in 2008 by these affected areas was 1,931, or 53% of all cases reported from Sudan last year.

*“Guinea worm anywhere is Guinea worm everywhere”* Alhaji Dr. Mohammed Bin Ibrahim

#### **GHANA: TAKING NO PRISONERS**

Ghana has reported 236 cases, of which 221 (94%) were contained, during January-August 2009 (Table 2). This is a decrease of -49% from the 459 cases that were reported during the same period of 2008 (Figure 5). Only one case was reported nationwide in August 2009. Fully 180, or 76%, of the cases were detected before or within 24 hours of emergence of the worm and contained in a Case Containment Center. Only 18 villages have reported indigenous transmission in January-August 2009. Eighty six percent of endemic villages have cloth filters in all households, 88% have received pipe filters, all are receiving health education about Guinea worm disease, 47% have been treated with ABATE® Larvicide, and 65% have at least one source of safe drinking water.

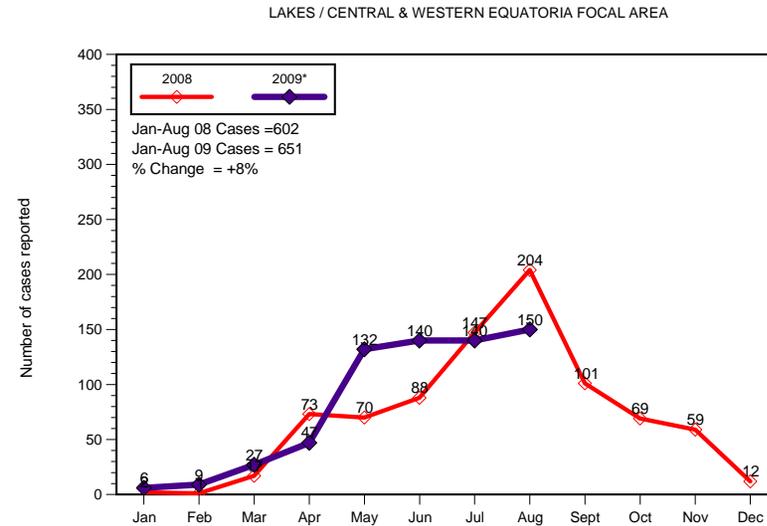
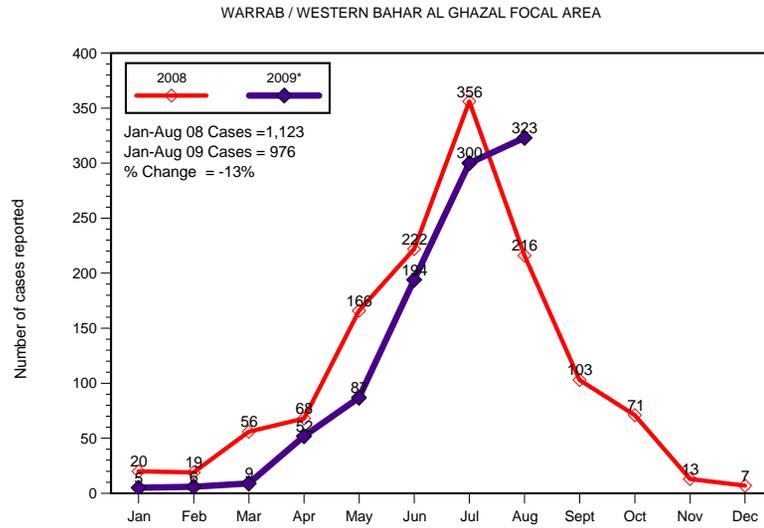
#### **MALI: COMBATTING THE WORM**

Mali reported 74 indigenous cases during January-August 2009, of which 56, or 76% were contained (Table 2). This is a reduction of -71% compared to the same period of 2008 (Figure 5). During January-August 2009, 18 villages have reported one or more cases. This program is tracking the locations of all cases that occurred in 2008, including informing programs in other countries that a former case from 2008 is now residing in their country and should be monitored this year. An important modification of the reward system this year is that patients must agree to be hospitalized in one of the nine Case Containment Centers in order to be eligible for the reward. The security situation in Kidal remains a concern. Mr. Philip Downs, assistant director of The Carter Center’s Guinea Worm Eradication Program, made a supervisory visit to the Mali program on August 2-13, 2009.



Figure 3

SOUTHERN SUDAN GUINEA WORM ERADICATION PROGRAM  
 NUMBER OF REPORTED CASES OF DRACUNCULIASIS: 2008 AND JAN-AUG 2009\*



\* Provisional

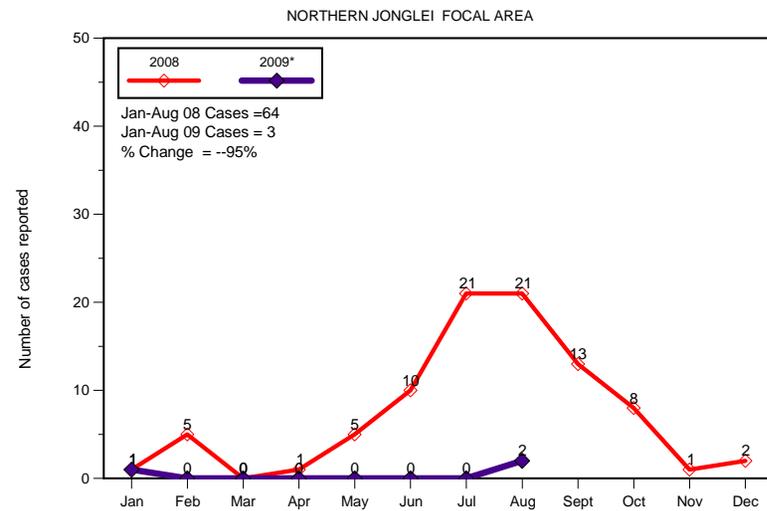
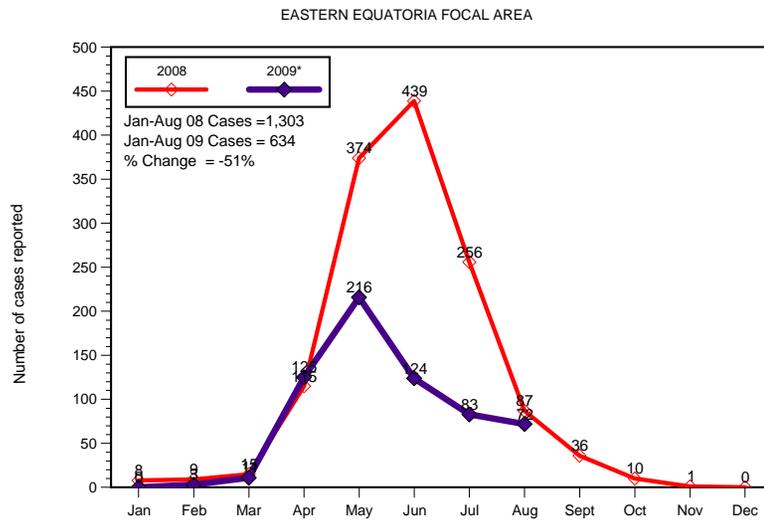
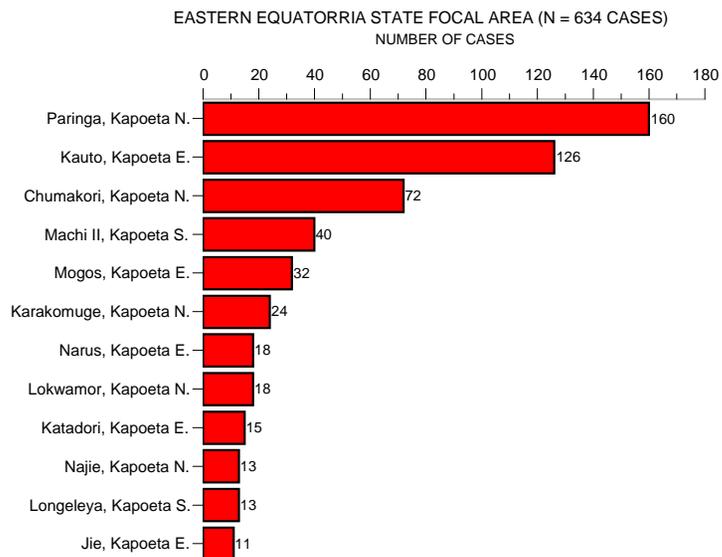
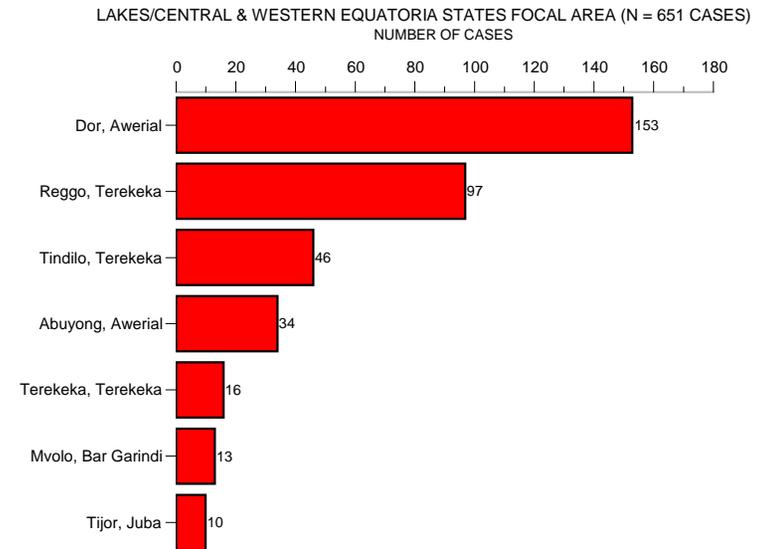
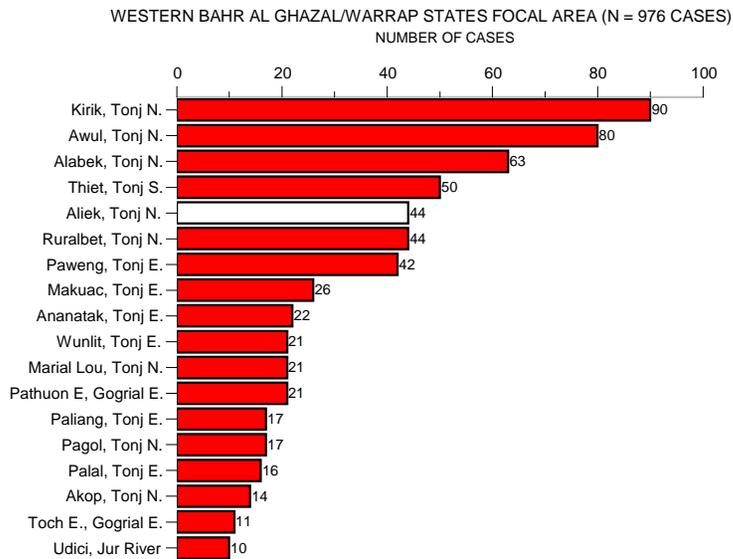


Figure 4

## SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM PAYAMS REPORTING 10+ CASES OF DRACUNCULIASIS DURING JANUARY-AUGUST 2009\*



JONGLEI STATE STATE FOCAL AREA (N = 3 CASES)

\*PROVISIONAL  
Change to 37 payams represent 2261 (99%) of 2,270 cases reported during Jan. - Aug. 2009. Excludes Jonglei State Focal Area

Table 1

## Southern Sudan Security Incidents 2009

#	Date	Location	2008 cases by Payam	2009 cases by Payam**	Payam	County	State	Incident	Outcome
1	6-Feb	Nyambor	0	0	Nyambor	Nyirok	Jonglei	Area fighting - staff accosted and accused	Insecurity level 3: staff confined - no GW and TC activity (MDA suspended)
2	7-Feb	Alabek and Akop	205	77	Alabek and Akop	Tonj North	Warrap	Armed bandits attacked staff	Insecurity level 3: disrupted GW activity
3	8-Feb	Alabek and Akop	see #2		Alabek and Akop	Tonj North	Warrap	Clan/ethnic clashes and staff threatened	Insecurity level 4: staff evacuated - no GW activity
4	21-Feb	Pieri	2	0	Pieri	Wuror	Jonglei	Cattle raiding	Insecurity level 3: staff confined - no GW and TC activity
5	24-Feb	Pieri	see #4		Pieri	Wuror	Jonglei	Cattle raiding	Insecurity level 4: staff evacuated - no GW and TC activity
6	27-Feb	Kaldo	see #7		Narus	Kapoeta East	East Equatoria	Armed bandits	Insecurity level 3: staff confined - no GW and TC activity
7	19-Mar	Kapoeta	1,348	338	Greater Kapoeta	Greater Kapoeta	East Equatoria	Disabled veterans protest	Insecurity level 3: staff confined - no GW and TC activity
8	Apr	Makuac	64	21	Makuac	Tonj East	Warrap	Fighting (clan/ethnic clashes?)	Disrupted GW activities
9	15-Apr	Namoropus	see #7		Kaouto	Kapoeta East	East Equatoria	Fired driver threatened staff	Disrupted GW activities
10	21-Apr	Wulu	*	*	*		Lakes	State officials beat and jailed drivers	Disrupted GW activities
11	10-May	Kirik	see #2		Kirik	Tonj North	Warrap	Community clashes with police	Insecurity level 3: staff confined - no GW activity
12	19-May	Northern Bari	*	*	Northern Bari	Juba	Central Equatoria	SPLA abducted and beat staff member	Disrupted GW activities
13	19-May	Rualbet, Kirik, Kyanyiel, Pagol	197	87	Rualbet, Kirik, Pagol	Tonj North	Warrap	Cattle raiding	Insecurity level 4: staff moved to Wau and Warrap town - no GW activity
14	26-May	Akobo East	*	0	*		Jonglei	Clan/ethnic clashes	Insecurity level 4: staff evacuated - no GW and TC activity
15	May	Juba	115	10		Juba	Central Equatoria	Vehicles attacks: movement hindered	Disrupted GW and TC activities
16	May	Tijor	114	10	Tijor	Juba	Central Equatoria	Clan/ethnic clashes	Insecurity level 4: staff evacuated - no GW activity
17	26-May	Juba	see #15			Juba	Central Equatoria	Area fighting and cattle raiding: staff beaten by SPLA - hospitalized	Disrupted GW activities
18	4-Jun	Akop	see #2		Akop	Tonj North	Warrap	Fighting (clan/ethnic clashes?)	Insecurity level 4: staff evacuated - no GW activity
19	8-Jun	Alabek	see #2		Alabek	Tonj North	Warrap	Motorcycle theft, local official interfere	17 days without supervision in June, peak transmission season.
20	18-Jun	Mapel	*	*	*		Lakes	SPLA commandeered TCC lorry	Disrupted GW activities
21	18-Jun	Makuac	64	21	Makuac	Tonj East	Warrap	Entire population has fled - no GW activity	Insecurity level 4: staff evacuated - no GW activity
22	21-Jun	Alabek and Akop	see #2		Alabek and Akop	Tonj North	Warrap	Large scale attacks by Nuer	Insecurity level 4: staff evacuated - no GW activity
23	21-Jun	Akop	see #2		Akop	Tonj North	Warrap	International staff assaulted by national staff after non renewal of contract	Insecurity level 4: staff evacuated - no GW activity in Akop payam due to insecurity incidents
24	6-Jul	Akop	see #2		Akop	Tonj North	Warrap	Staff person assaulted by former staff; local authorities interfere	All Carter Center staff evacuated, no activities since.
25	2-Aug	Pagol						International staff assaulted by national staff regarding bicycles	All Carter Center staff evacuated, no activities since.
25	10-Aug	Tombek and Southern Dor	?	109	Tombek and Southern Dor	Terekeka and Amerial	East Equatoria and Lakes	?	All Carter Center staff evacuated, no activities since.
27	10-Aug	Rualbet***	see #2		Tonj North and East	Tonj North County	Warrap	Inter-clan fighting	Rualbet sub-office destroyed -all Carter Center staff evacuated, no activities since.
<b>TOTAL</b>			<b>1,931</b>	<b>410</b>					

**Note: 410 cases, 58% of total cases, have been affected by insecurity so far in 2009 (410/701)**

Note 2: there are other "security" incidents that take place which may not interrupt activities yet do take considerable time away from programmatic activities for those involved

\*Affected area is a road

\*\*Data is provisional through May 2009

\*\*\*Rualbet location reported 48 new cases in July 2009

GW = Guinea Worm

TC = Trachoma Control

Table 2

## Number of Cases Contained and Number Reported by Month during 2009\* (Countries arranged in descending order of cases in 2008)

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	4 / 12	12 / 18	37 / 47	172 / 224	297 / 435	427 / 464	457 / 523	473 / 547	/	/	/	/	1879 / 2270	83
GHANA	40 / 45	49 / 50	50 / 52	27 / 28	30 / 34	18 / 19	6 / 7	1 / 1	/	/	/	/	221 / 236	94
MALI	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	7 / 7	14 / 23	34 / 43	/	/	/	/	56 / 74	76
ETHIOPIA	0 / 0	0 / 0	1 / 1	7 / 7	5 / 5	7 / 8	2 / 2	1 / 1	/	/	/	/	23 / 24	96
NIGERIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	0 / 0	0
NIGER	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 2	/	/	/	1 / 3	33
TOTAL*	44 / 57	61 / 68	88 / 101	206 / 259	333 / 475	459 / 498	479 / 555	509 / 592	1 / 2	0 / 0	0 / 0	0 / 0	2180 / 2607	84
% CONTAINED	77	90	87	80	70	92	86	86	50				84	
% CONT. OUTSIDE SUDAN	89	98	94	97	90	94	69	80	50				89	

\* provisional

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

## Number of Cases Contained and Number Reported by Month during 2008\* (Countries arranged in descending order of cases in 2007)

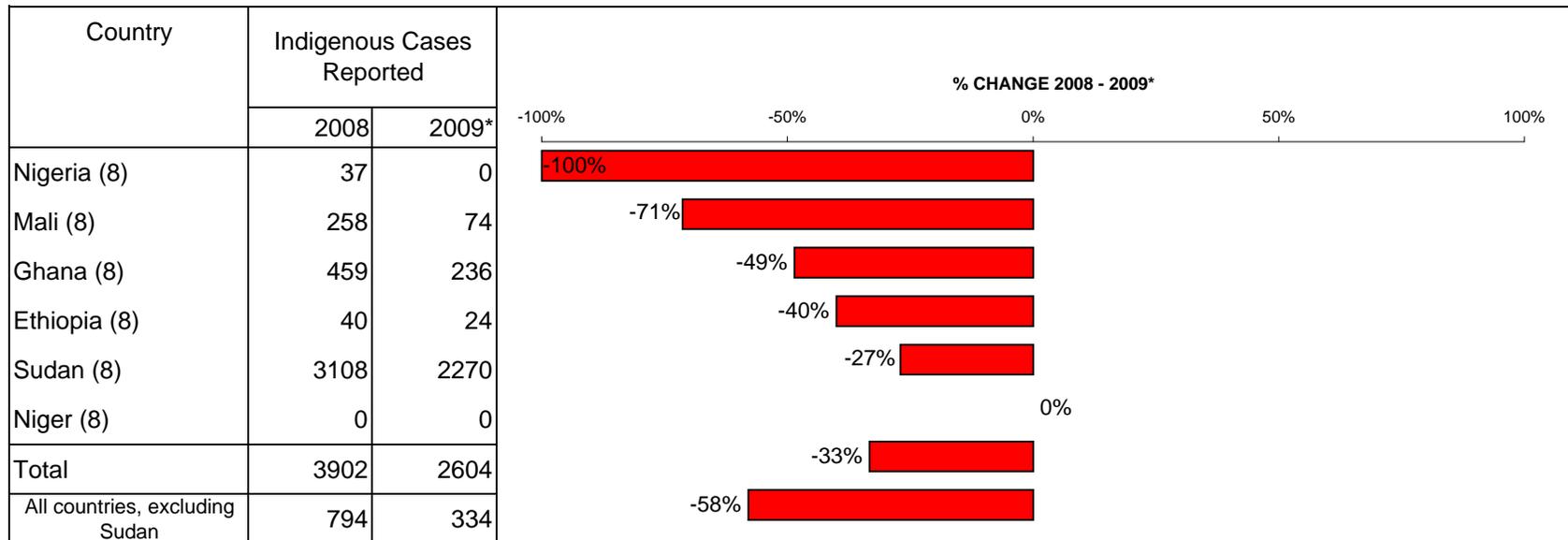
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	8 / 32	13 / 34	39 / 88	112 / 258	259 / 618	394 / 759	399 / 783	313 / 536	126 / 254	94 / 160	16 / 75	8 / 21	1781 / 3618	49
GHANA	66 / 73	62 / 80	38 / 48	61 / 68	70 / 74	57 / 73	26 / 30	12 / 13	4 / 5	8 / 8	12 / 14	12 / 15	428 / 501	85
MALI	1 / 1	0 / 0	0 / 0	1 / 1	16 / 16	59 / 60	111 / 120	50 / 60	48 / 72	44 / 56	20 / 27	4 / 4	354 / 417	85
NIGERIA	28 / 28	8 / 8	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	38 / 38	100
NIGER	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 1	0 / 0	0 / 0	2 / 3	67
ETHIOPIA**	0 / 0	0 / 0	6 / 10	21 / 23	2 / 2	2 / 3	0 / 0	0 / 2	0 / 0	1 / 1	0 / 0	0 / 0	32 / 41	78
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	100
TOTAL*	103 / 134	84 / 123	84 / 147	196 / 351	347 / 710	512 / 895	536 / 933	375 / 611	179 / 332	147 / 226	49 / 117	24 / 40	2636 / 4619	57
% CONTAINED	77	68	57	56	49	57	57	61	54	65	42	60	57	
% CONT. OUTSIDE SUDAN	93	80	76	90	96	87	91	83	68	80	79	84	85	

\* Includes 6 cases of GWS exported from one country to another.

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

Figure 5

Number of Indigenous Cases Reported During the Specified Period in 2008 and 2009\*, and Percent Change in Cases Reported



\* Provisional: excludes cases exported from one country to another

(8) Indicates months for which reports were received, i.e., Jan. - Aug. 2009

## **ETHIOPIA: STRUGGLING FOR SUCCESS**

Ethiopia reported 24 indigenous cases (96% contained) during January-August 2009, for a -40% reduction in cases compared to 40 indigenous cases reported during January-August 2008 (Table 2 and Figure 5). All of the cases in 2009 so far have been reported from Gambella Region. An updated line listing is given in Table 3.

## **IN BRIEF**

**Nigeria.** General (Dr) Yakubu Gowon, former head of state of Nigeria, led an advocacy visit to Ogun and Oyo States between August 31 and September 2, 2009. He thanked the two state governments for their support of Nigeria's Guinea Worm Eradication Program (NIGEP), and urged them to ensure regular publicity to increase public awareness of the need to report any suspected cases of GWD immediately. The General and his entourage, which included the NIGEP national coordinator, the country representative of The Carter Center, as well as representatives of WHO and the state ministries of health, visited a former endemic village in each of the two states.

At a Program Review held in Abuja on September 23-25, NIGEP national coordinator Mrs. Ifeoma Anagbogu reported that NIGEP investigated 169 rumors of GWD in January-July 2009, and that the average rate of monthly reporting from GW-free areas increased from 16% in 2006, to 53% in 2007, 75% in 2008, and 84% so far in 2009.

**Niger.** Niger has reported one case of GWD that was imported from Mali in September (Table 2). The patient was detected by Niger's GWEP 6 days after emergence of the worm, and the patient admitted contaminating two sources of water. However ABATE@Larvicide was applied in both sources of contaminated water the day following detection of the case. The patient was hospitalized in the district hospital at Tillaberi. This is the second case imported to Niger during 2009. The first case was imported from Ghana in March (Table 2). A third case of GWD was also detected in September, but the origin of infection is being investigated at this time, although the patient's travel history includes at least two endemic villages in Mali. Niger's reward system and hospitalization policies have now been harmonized with those of Mali. Niger has reported no indigenous case of GWD since October 2008.

## **WHO REPORTS**



**Kenya.** From 29 June to 3 July 2009, a technical and advocacy WHO mission was conducted to Kenya to support the country in preparation for certification of dracunculiasis eradication. The mission was conducted by Drs Alhousseini Maiga and Mubila Likozo of WHO/AFRO.

**Togo.** From 8 to 14 July 2009, a follow up and technical support mission was conducted to Togo by Dr. Alhousseini Maiga of WHO/AFRO. The main objective of the mission was to advocate for adequate surveillance for Guinea worm disease and for more awareness about the disease, in preparation for certification of eradication.



Table 3 (cont.)

**Ethiopia Dracunculiasis Eradication Program**  
**List of Guinea Worm Cases and Interventions Against Transmission: Ethiopia, January - August, 2009\***

Case #	# Worms	Age	Sex	Ethnic Group	Profession	Village	District	Region	Date				Detected <24 hrs? (Yes / No)	Water Contaminated? (Yes / No)	Date ABATE Applied	Case Contained? (Yes / No)	Admitted to a Case Containment Center? (Yes / No)	Patient had Guinea worm last year? (Yes / No)	Imported Case? (Yes / No)^	Probable Origin of Infection (name of village, zone, or country)
									Suspect Case Identified	Worm Began to Emerge	Village Volunteer, or Case Containment Center, began to contain case	Case Confirmed by a Supervisor								
10.1	1	40	F	Agnua	House lady	Ogagna	Gog	Gambella	9/5/2009	10/5/2009	9/5/2009	10/5/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
11.1	1	25	F	Agnua	House lady	Abawiri	Gog	Gambella	21/05/09	21/05/09	21/05/09	21/05/09	Yes	No	No	Yes	Yes	No	No	Abawiri
12.1	1	12	M	Agnua	Student	PRC	Gog	Gambella	22/05/09	22/05/09	22/05/09	22/05/09	Yes	No	No	Yes	Yes	No	No	Abawiri
13.1	1	30	M	Agnua	Farmer	Abawiri	Gog	Gambella	24/05/09	26/05/09	25/05/09	26/05/09	Yes	No	No	Yes	Yes	No	No	Abawiri
14.1	1	12	M	Agnua	Student	PRC	Gog	Gambella	5/6/2009	6/6/2009	5/6/2009	6/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
15.1	1	14	M	Agnua	Student	Akumed	Gog	Gambella	7/6/2009	8/6/2009	8/6/2009	8/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
16.1	1	29	M	Agnua	Farmer	Abawiri	Gog	Gambella	7/6/2009	7/6/2009	7/6/2009	7/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
17.1	1	6	F	Agnua	Student	PRC	Gog	Gambella	9/6/2009	11/6/2009	9/6/2009	11/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
18.1	1	8	F	Agnua	Student	Perpengo	Abobo	Gambella	7/6/2009	15/6/2009	7/6/2009	15/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
19.1	1	35	F	Agnua	House lady	Elia	Itang	Gambella	4/6/2009	20/6/2009	20/6/2009	20/6/2009	Yes	Yes	30/6/2009	No	Yes	No	No	Elia
20.1	2	26	M	Agnua	Farmer	Abaweri	Gog	Gambella	18/6/2009	19/06/09	18/6/2009	19/06/09	Yes	No	No	Yes	Yes	No	No	Abawiri
20.2										25/6/2009										
21.1	1	10	M	Agnua	Student	Agenga	Gog	Gambella	1/6/2009	2/6/2009	1/6/2009	2/6/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
22.1	1	65	M	Agnua	Farmer	Abawiri	Gog	Gambella	2/7/2009	2/7/2009	2/7/2009	2/7/2009	Yes	No	No	Yes	Yes	No	No	Abawiri
23.1	1	35	F	Agnua	Farmer	Olane	Gog	Gambella	12/7/2009	15/7/09	12/7/2009	15/7/09	Yes	No	No	Yes	Yes	No	No	Olane
24.1	1	15	M	Agnua	Student	Agenga	Gog	Gambella	18/8/2009	18/8/09	18/8/2009	18/8/09	Yes	No	No	Yes	Yes	No	No	Abawiri

Note: The case registered in 19.1 is registered uncontained because when the case saw a worm emerging out from her leg she traveled to Elia Clinic to report herself within 24 hours. But on the way to the clinic she washed her wound in the pond water called Lelakugn. She also confirmed that last year she never traveled out of her village.

\* provisional

^ imported from another country

## **Uganda.**

From 7 to 21 September 2009 an International Certification Team (ICT) mission was conducted to Uganda to assess the status of surveillance for cases of dracunculiasis. The mission team was led by Dr Joel Breman (USA) who was accompanied by Prof Abolhassan Nadim (Iran), Mr Sadi Moussa (Niger), and Dr Joshua Ologe (Nigeria). The Uganda ICT report will be reviewed by the International Commission for Certification of Dracunculiasis Eradication (ICCDE) during their upcoming meeting from 21-23 October in Geneva.

## **DONATIONS**

In December 2008, the Bill & Melinda Gates Foundation announced a grant of \$40 million to The Carter Center that includes an outright contribution of \$8 million and challenges donor organizations and individuals to provide an additional \$32 million, which the Gates Foundation will match one-to-one. Three donors have provided generous new support toward the challenge grant: the United Kingdom Department for International Development (DFID) pledged £10 million to the Guinea Worm Eradication Program and the Kingdom of Saudi Arabia pledged \$2 million; the John P. Hussman Foundation pledged \$1 million to be split evenly between the Trachoma Control and Guinea Worm Eradication Programs in Southern Sudan.

## **TRANSITION**

Mr. Philip Downs has accepted a position with Research Triangle Institute (RTI) as a Manager of their Integrated Vector Management Program based in Washington D.C. beginning in September 2009. During his eight years of service with The Carter Center, Philip was Senior Program Officer, Dracunculiasis Eradication during 2002-2005, Resident Technical Advisor to Ghana's Guinea Worm Eradication Program during 2005 – 2006, and Assistant Director, Dracunculiasis Eradication during 2006 – 2009. Our best wishes to Philip and his family in his new endeavors.

*“Dogs bark, but the caravan moves on.”* Anonymous proverb

## **DEFINITION OF CASE CONTAINMENT**

A case of Guinea worm disease is contained if all of the following conditions are met:

1. The patient is detected before or within 24 hours of worm emergence; **and**
2. The patient has not entered any water source since the worm emerged; **and**
3. The village volunteer has properly managed the case, by cleaning and bandaging until the worm is fully removed, and by giving health education to discourage the patient from contaminating any water source (if two or more emerging worms are present, the case is not contained until the last worm is pulled out); **and**
4. The containment process, including verification that it is a case of Guinea worm disease, is validated by a supervisor within 7 days of the emergence of the worm.

## MEETINGS

The International Commission for Certification of Dracunculiasis Eradication will meet at WHO headquarters in Geneva on October 21-23, 2009.

## RECENT PUBLICATIONS

Afele M, 2009. Countdown to wipe out guinea-worm in Ghana. Bull World Health Organ 87:649-650.

Caplan, A. L. 2009. Is disease eradication ethical? Lancet. Jun 27; 373(9682):2192-3.

Glenshaw MT, Roy S, Ruiz-Tiben E, Downs P, Williamson J, Eberhard M, 2009. Guinea worm disease outcomes in Ghana: determinants of broken worms. Am J Trop Med Hyg 81:305-312.

Hotez, P. J. and Kamath, A. Neglected tropical diseases in sub-saharan Africa: review of their prevalence, distribution, and disease burden. PLoS Negl Trop Dis. 2009. 3(8), e412.

Langlais, L., 2003. Dracunculiasis in a German shepherd dog. Can Vet J , 44:682

World Health Organization, 2009. Monthly report on dracunculiasis cases, January-May 2009. Wkly Epidemiol Rec 84(27): 280-282.

World Health Organization, 2009. Monthly report on dracunculiasis cases, January-July 2009. Wkly Epidemiol Rec 84(36):371-372.

*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>*



---

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