

Date: July 15, 2011



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

Subject: GUINEA WORM WRAP-UP #206

To: Addressees

Number of uncontained cases in January-June 2011
South Sudan: 183 Mali: 2 Ethiopia: 1 Chad: 1

SOUTH SUDAN: INDEPENDENCE FROM GUINEA WORM IS COMING SOON



We congratulate the people of South Sudan On their political independence, and look forward to their winning independence from Guinea worm disease soon! With the political independence of South Sudan, we have acquired another Guinea worm-free country, namely Sudan, the former northern states that interrupted indigenous transmission of the disease in 2002.

As of July 9, 2011, 793, or 98% of the 806 cases of Guinea worm disease reported worldwide in January-June 2011 were reported from the new Republic of South Sudan by the South Sudan Guinea Worm Eradication Program (SSGWEP) (Figure 1, Table 1). This is a 6% increase from the 745 cases that were reported from the same area, the ten Southern states of Sudan, in the same period of 2010 (Figure 2). All of the increase in South Sudan is in Eastern Equatoria State, which has 27% more cases than last year and where 53% of the world's cases are reported from only three *payams* (sub-districts) in Kapoeta East County: Mogos (181), Kauto West (173), and Karukomuge (72).

South Sudan's other two foci in Warrap and Lakes States, where transmission is just entering their peak transmission season, have reported 72% fewer cases so far this year: 56 cases versus 197 cases (Figure 3). In June, South Sudan's overall number of cases began to fall below last year's cases for the first time this year (Figure 4). The case containment rates so far this year in the three foci are 82% (540/661) in Eastern Equatoria, 78% (29/37) in Warrap, and 69% (18/26) in Lakes. (An assault that was said to be revenge for an earlier cattle raid disrupted program operations and displaced local residents of Akop payam in Tonj North County of Warrap State on June 13.) South Sudan's containment rate so far this year is 77%, versus 72% in January-June 2010 (Table 2). Although only 227 endemic villages remain in South Sudan, the SSGWEP currently maintains active surveillance in nearly 6,000 villages that have reported an indigenous or imported case in the past three years, or are considered high-risk villages in 18 counties of Eastern Equatoria, Lakes, Warrap and Jonglei States. Former Carter Center representative Mr. Steven Becknell provided technical assistance to endemic areas of Eastern Equatoria in May.

The SSGWEP held Task Force meetings on May 31 and June 28. At the latter meeting, Dr. Gautam Biswas of WHO headquarters reported on his recent visit to selected Guinea worm-free areas under passive surveillance, where he found the county surveillance officers to be not adequately trained or supervised for detecting cases of Guinea worm disease, and Integrated Disease Surveillance and Reporting (IDSR) materials not well understood.

Figure 1

Distribution of 804 Indigenous Cases of Dracunculiasis Reported during 2011*

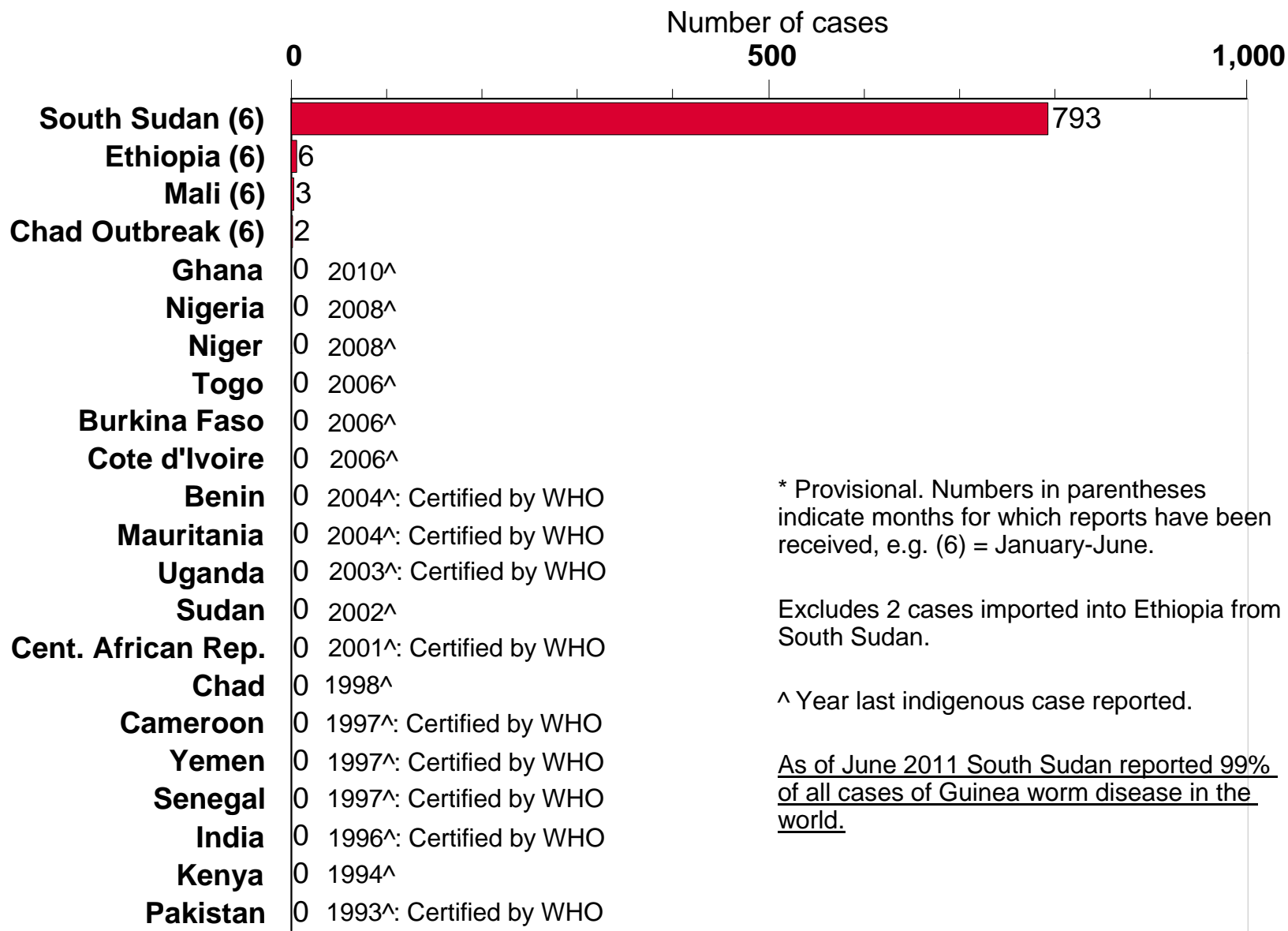


Table 1

Number of Cases Contained and Number Reported by Month during 2011* (Countries arranged in descending order of cases in 2010)

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	5 / 6	48 / 60	104 / 137	142 / 178	186 / 247	125 / 165	/	/	/	/	/	/	610 / 793	77
MALI	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 3	/	/	/	/	/	/	1 / 3	33
ETHIOPIA [^]	0 / 0	0 / 0	1 / 2	1 / 1	4 / 4	1 / 1	/	/	/	/	/	/	7 / 8	88
CHAD	0 / 0	1 / 1	0 / 0	0 / 1	0 / 0	0 / 0	/	/	/	/	/	/	1 / 2	50
GHANA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0
TOTAL*	5 / 6	49 / 61	105 / 139	143 / 180	190 / 251	127 / 169	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	619 / 806	77
% CONTAINED	83	80	76	79	76	75							77	
% CONT. OUTSIDE SUDAN	0	100	50	50	100	50							69	

* provisional

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

[^] one case of GWD (not contained) was imported into Ethiopia from South Sudan during March.

Number of Cases Contained and Number Reported by Month during 2010 (Countries arranged in descending order of cases in 2009)

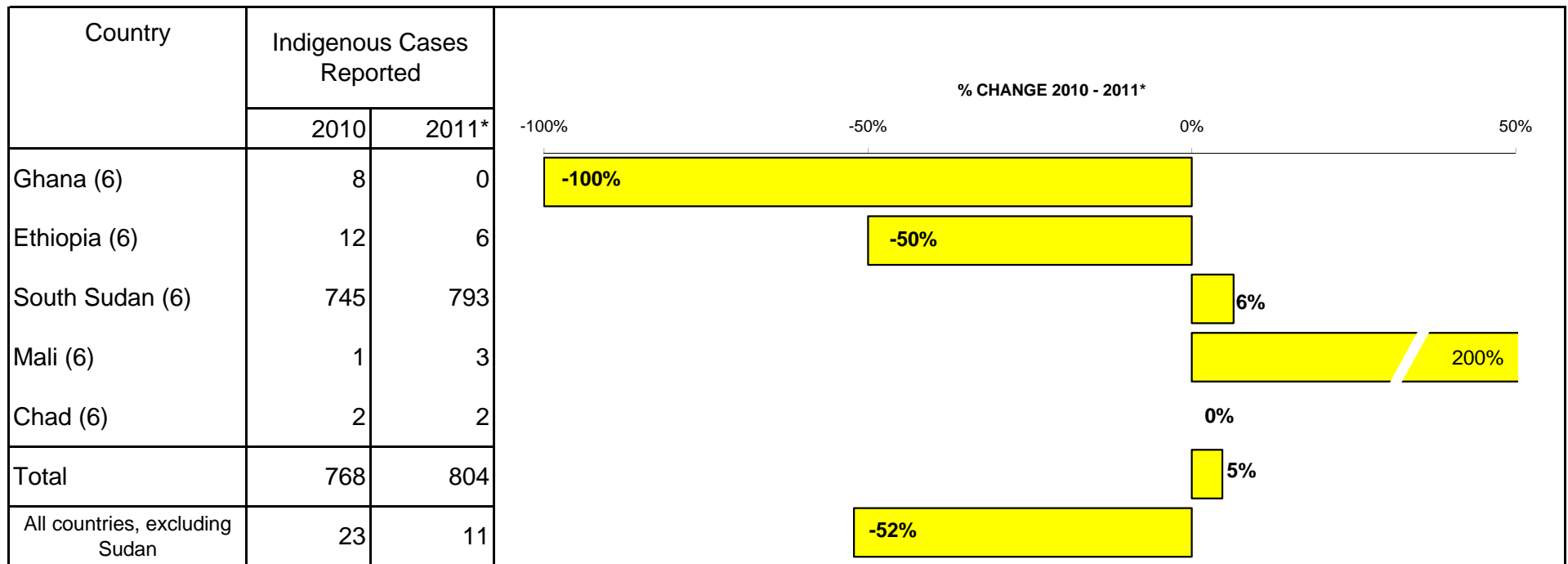
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	5 / 6	21 / 35	78 / 113	119 / 160	144 / 190	173 / 241	273 / 361	226 / 290	118 / 159	71 / 95	31 / 41	5 / 7	1264 / 1698	74
GHANA	2 / 2	3 / 3	1 / 1	1 / 1	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	8 / 8	100
MALI	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	4 / 6	6 / 6	13 / 19	18 / 19	3 / 5	0 / 1	45 / 57	79
ETHIOPIA [^]	0 / 0	1 / 1	2 / 2	6 / 6	1 / 2	1 / 2	1 / 1	2 / 2	1 / 1	1 / 1	2 / 2	1 / 1	19 / 21	90
CHAD	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	0 / 1	0 / 3	0 / 3	0 / 1	0 / 1	0 / 0	0 / 0	0 / 10	0
NIGER [^]	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	0 / 1	0 / 0	2 / 3	67
TOTAL*	7 / 8	25 / 39	81 / 116	126 / 168	147 / 194	174 / 244	278 / 371	234 / 301	132 / 180	92 / 118	36 / 49	6 / 9	1338 / 1797	74
% CONTAINED	88	64	70	75	76	71	75	78	73	78	73	67	74	
% CONT. OUTSIDE SUDAN	100	100	100	88	75	33	50	73	67	91	63	50	75	

[^] Ethiopia reported and imported case from Southern Sudan in June, and Niger reported three imported cases from Mali (2 in October and 1 in November). The origin of cases in Chad is uncertain.

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

Figure 2

Number of Indigenous Cases Reported During the Specified Period in 2010 and 2011*, and Percent Change in Cases Reported

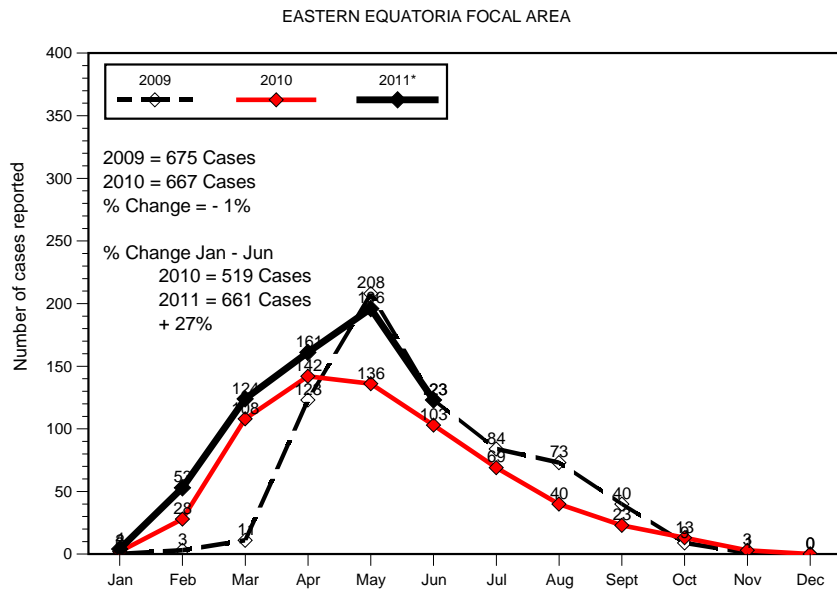
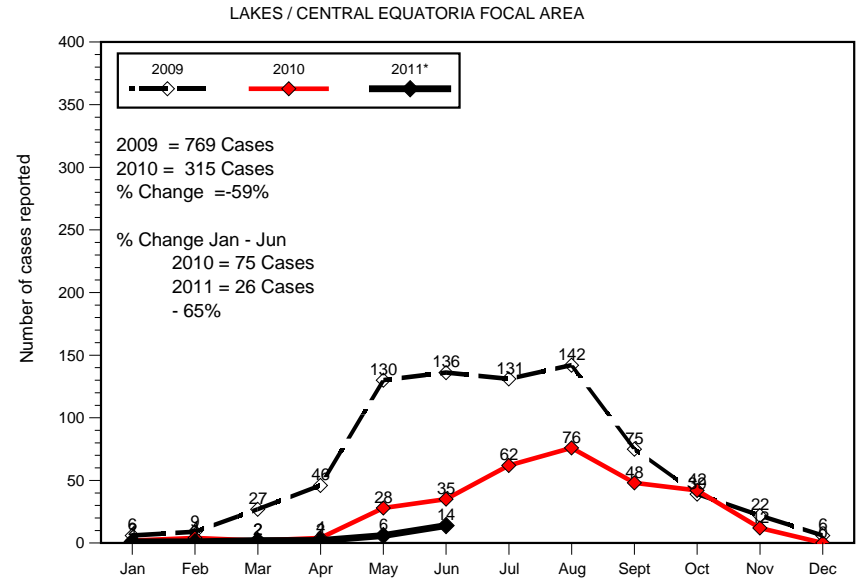
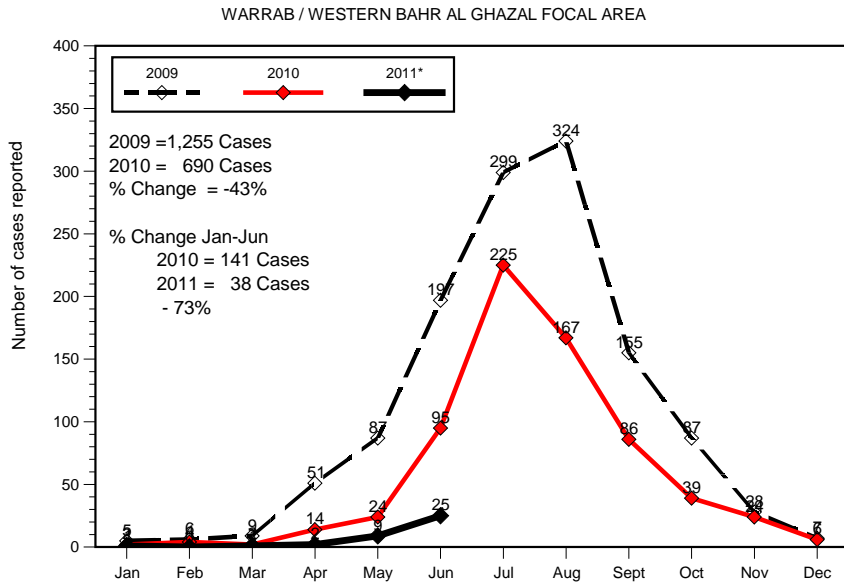


* Provisional. Excludes one case imported into Ethiopia from South Sudan in March.

(6) Indicates months for which reports were received, i.e., January - June

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
NUMBER OF CASES OF DRACUNCULIASIS REPORTED FROM THREE FOCAL AREAS
DURING 2009, 2010 and 2011*

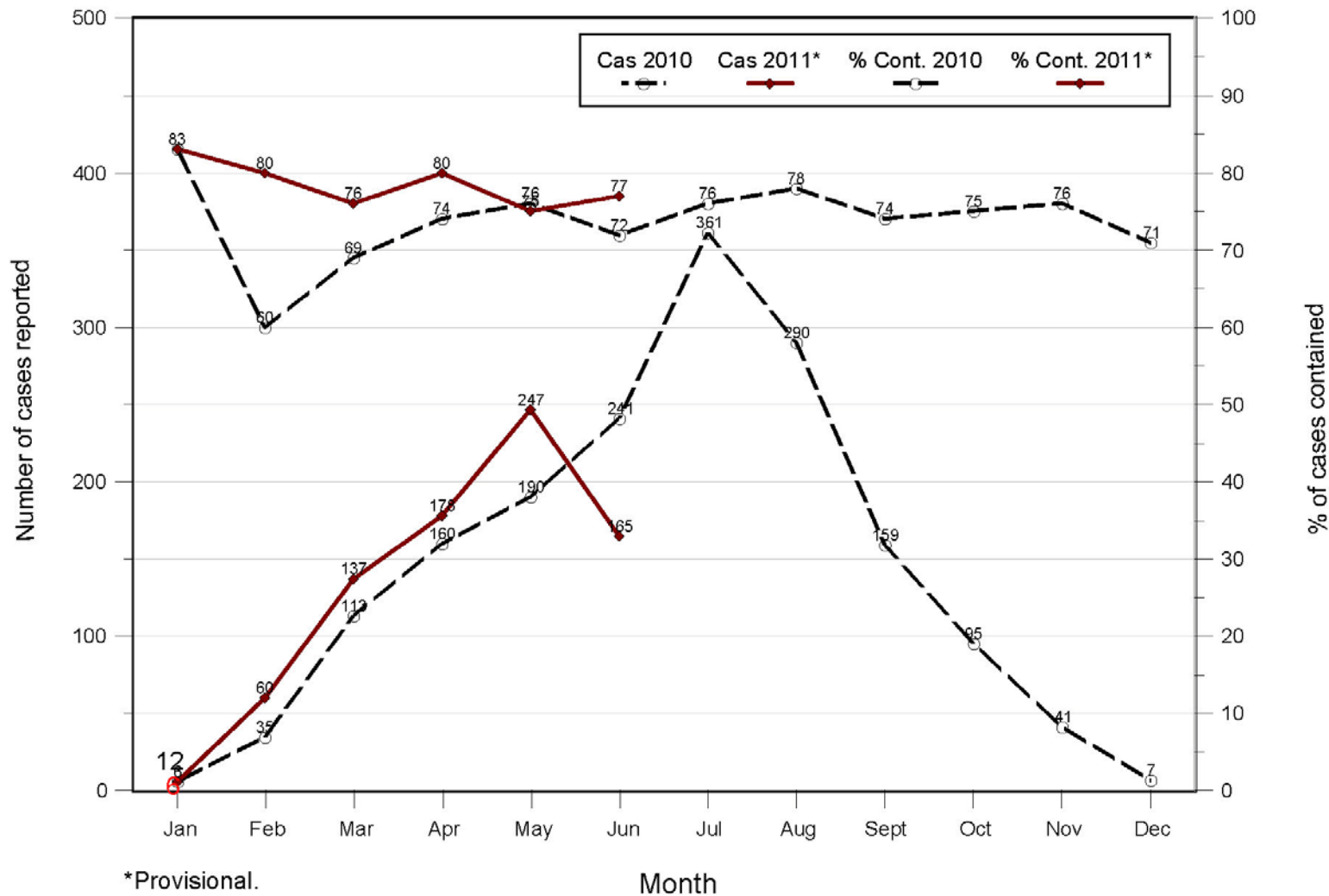
Figure 3



* Provisional: January-June.
 Excludes 68 cases reported from
 Pibor County, Jonglei State.

Figure 4

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
 NUMBER OF REPORTED CASES OF DRACUNCULIASIS AND
 PERCENT OF CASES CONTAINED : 2010 - 2011*



*Provisional.

SOUTHERN SUDAN GUINEA WORM ERADICATION PROGRAM
CASES REPORTED AND CONTAINED DURING 2011* BY STATE, COUNTY AND MONTH

Table 2

State	County	Cases Contained / Cases Reported												% Contained	
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec		Total
Eastern Equatoria	Kapoeta East	3 / 4	30 / 39	78 / 96	100 / 115	133 / 154	75 / 95	/	/	/	/	/	/	419 / 503	83%
	Kapoeta North	0 / 0	12 / 14	18 / 27	30 / 35	26 / 31	16 / 20	/	/	/	/	/	/	102 / 127	80%
	Kapoeta South	0 / 0	0 / 0	0 / 1	6 / 11	10 / 11	3 / 8	/	/	/	/	/	/	19 / 31	61%
	Torit	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
STATE TOTAL		3 / 4	42 / 53	96 / 124	136 / 161	169 / 196	94 / 123	/	/	/	/	/	/	540 / 661	82%
Warrab	Tonj North	1 / 1	0 / 0	1 / 1	2 / 2	3 / 3	9 / 14	/	/	/	/	/	/	16 / 21	76%
	Tonj East	0 / 0	0 / 0	0 / 0	0 / 0	3 / 4	8 / 10	/	/	/	/	/	/	11 / 14	79%
	Tonj South	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	/	/	/	/	/	/	2 / 2	100%
	Gogrial East	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Gogrial West	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Twic Mayardit	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
STATE TOTAL		1 / 1	0 / 0	1 / 1	2 / 2	7 / 8	18 / 25	/	/	/	/	/	/	29 / 37	78%
Lakes	Awerial	0 / 0	0 / 0	1 / 1	2 / 2	1 / 4	10 / 12	/	/	/	/	/	/	14 / 19	74%
	Cuibet	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Yirol E.	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Yirol W.	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Maper	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Rumbek Centre	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Rumbek East	0 / 0	0 / 0	0 /	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
STATE TOTAL		0 / 0	0 / 0	1 / 1	2 / 2	1 / 4	10 / 12	/	/	/	/	/	/	14 / 19	74%
Central Equatoria	Terekeka	1 / 1	1 / 1	1 / 1	0 / 0	1 / 2	0 / 2	/	/	/	/	/	/	4 / 7	57%
	Juba	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	TOTAL	1 / 1	1 / 1	1 / 1	0 / 0	1 / 2	0 / 2	/	/	/	/	/	/	4 / 7	57%
Jonglei	Pibor	0 / 0	5 / 6	5 / 10	2 / 13	7 / 36	3 / 3	/	/	/	/	/	/	22 / 68	32%
	Ayod	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
	Wuror	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	0 / 0	0%
TOTAL		0 / 0	5 / 6	5 / 10	2 / 13	7 / 36	3 / 3	/	/	/	/	/	/	22 / 68	32%
Western Bahr Al Ghazal	Jur River	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	1 / 1	100%
	TOTAL	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	1 / 1	100%
SOUTHERN SUDAN TOTAL		5 / 6	48 / 60	104 / 137	142 / 178	186 / 247	125 / 165	/	/	/	/	/	/	610 / 793	77%
% CONTAINED		83%	80%	76%	80%	75%	76%							77%	

*Provisional

Only 13 cases of dracunculiasis have been reported outside of South Sudan in the first half of this year.

ETHIOPIA has reported 6 indigenous cases, plus 2 cases imported from South Sudan, in January-June 2011. This is a reduction of 50% from the 12 indigenous cases reported during the same period of 2010. 88% (7/8) of all cases were contained, versus 85% (11/13) of all cases reported in January-June 2010. All of this year's indigenous cases have been traced to a known source case or village in Ethiopia last year. Pond guards have been established in the four main affected villages and along two main walking paths in Gog District (Gambella Region), where all indigenous cases are located. We commend a ministry of health staff member who recently urged that reports from former endemic woredas (Abobo, Itang, Gambella Zurial, Lare, etc.) be provided soon, as the ministry did not know what was happening in those Guinea worm-free woredas of Gambella Region regarding GWD. The eyes of a GWEP are its surveillance system and without timely reports the program is blind. The new Carter Center Country Representative Dr. Zerihun Tadesse made his first field visit to the area on July 3-6.

On June 3 Ethiopian Minister of Health Dr. Tedros Adhanom awarded former Carter Center Country Representative Dr. Teshome Gebre a Certificate of Distinction and Gold Medal in tribute and recognition for his work as representative of The Carter Center's health programs in Ethiopia.

MALI reported 3 cases in June, only one (33%) of which was officially contained (two cases were detected after 24 hours). None of the three cases, all of whom were from the same family in Alkitc camp in the known endemic Agabo zone (Kidal District), appear to have contaminated water since they had not entered surface water (rain had not yet begun in the area at the time of the investigation). The patients gave no history of travel outside of the area, and all three were hospitalized in the local health center. They are believed to have been infected from untreated ponds associated with cases that were reported in this zone in July 2010 or from missed cases. Mali's peak transmission season is July-November. Insecurity has increased recently in all of the remaining endemic zones of the country.

CHAD has reported 2 cases (1 of them contained) in January-June 2011, a continuation of the outbreak that was discovered in 2010. None of the 8 villages known to have reported cases in 2010 have reported cases in 2011 so far. Carter Center Senior Technical Advisor Dr. Fernand Toe, Chad's deputy GWEP coordinator, the data manager, a case management officer, two Carter Center Technical Advisors and Dr. Djimrassengar Honore of WHO/Chad visited Bongor, Mandalia, Bere, Sarh, and Melfi Districts in early July to begin district level trainings of health staff on Guinea worm disease. Village case register and reporting forms are being adapted for use in the field. The first monthly report of cases and interventions for the 34 at-risk villages that are associated with cases in 2010 or so far In 2011 was issued in May. Two vehicles provided by The Carter Center were put to use at the end of June.

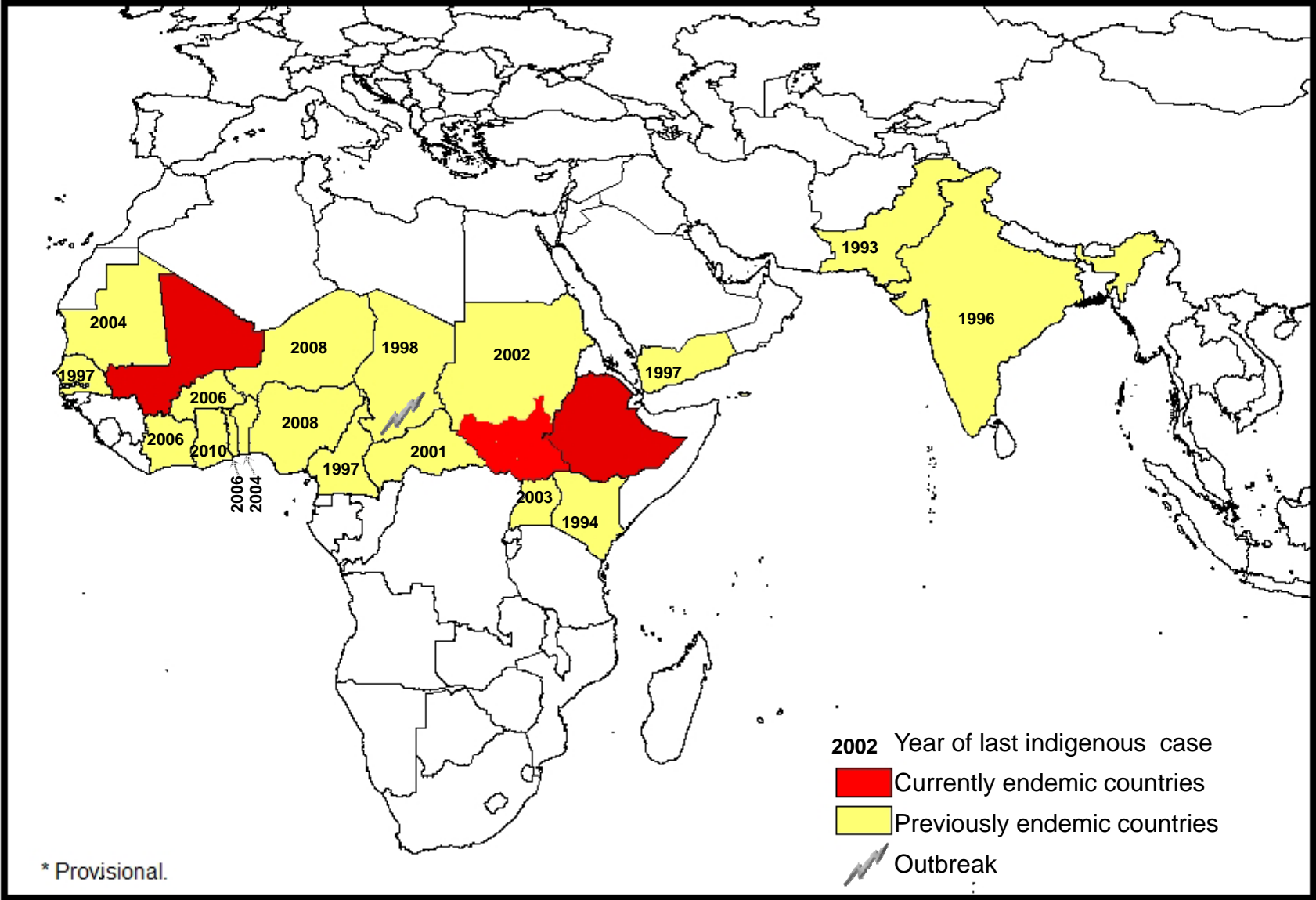
IN BRIEF

A specimen from a suspected case of dracunculiasis that was detected in **Senegal** in June was examined microscopically and by PCR at the WHO Collaborating Center for Research, Training and Eradication of Dracunculiasis at CDC and found not to be *Dracunculus medinensis* .

The resolution on Eradication of Dracunculiasis that was adopted at the World Health Assembly on 24 May 2011 (reported in the previous issue) was resolution number WHA64.16.

Figure 5

Dracunculiasis Eradication Campaign Status of Eradication Efforts: 2011*



MILESTONE: THIRTY YEARS SINCE THE WORKSHOP ON OPPORTUNITIES FOR CONTROL OF DRACUNCULIASIS

The Workshop on Opportunities for Control of Dracunculiasis met in Washington D.C. on June 16-19, 1982. Sponsored by the National Research Council (NRC) of the USA, with funding from US AID, staffed by Ms. Karen Bell of the NRC, and chaired by Dr. Myron Schultz of CDC, this was the first international meeting devoted to dracunculiasis and the first meeting of world experts on this disease.

ERRATA

In *Guinea Worm Wrap-Up* #205, Figure 5, we mistakenly reported the case of GWD imported from South Sudan into Ethiopia in March 2011, was detected in South Omo. Mr. Gole Ejeta, Coordinator of the Ethiopian Dracunculiasis Eradication Program informed us that the imported case was detected in Bench Maji Zone. We regret the error.

RECENT PUBLICATIONS

Djidina MR, Guialoungou H, Dono BB, Padjaina M, Biswas G, Sankara D, Maiga A, Djimrassengar H, Roy SL, El Bcheraoui C, Walldorf JA, 2011. Renewed transmission of dracunculiasis-Chad, 2010. *Morbidity and Mortality Weekly Report* 60:744-748.

Hopkins DR, 2011. Neglected tropical diseases (NTDs) slated for elimination and eradication. In: "The Causes and Impacts of Neglected Tropical and Zoonotic Diseases". Washington, DC: The National Academies Press.

Shute N, 2011. Farewell to Guinea Worm. *National Geographic* July 36 [NGM.COM]

*Inclusion of information in the Guinea Worm Wrap-Up
does not constitute "publication" of that information.
In memory of BOB KAISER*

WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, Center for Global Health (proposed), Centers for Disease Control and Prevention, Mailstop F-22, 4770 Buford Highway NE, Atlanta, GA 30341-3724, USA, email: gwwrapup@cdc.gov, fax: 770-488-7761. The GW Wrap-Up web location is http://www.cdc.gov/ncidod/dpd/parasites/dracunculiasis/moreinfo_dracunculiasis.htm

Back issues are also available on the Carter Center web site English and French are located at http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_english.html. http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_francais.html



**World Health
Organization**

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