



Date: October 6, 2008



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

Subject: GUINEA WORM WRAP-UP #184

To: Addressees

*Number of uncontained cases of dracunculiasis outside Sudan in 2008:
69 in Ghana, 42 in Mali, 8 in Ethiopia, and 0 in Nigeria and Niger.*

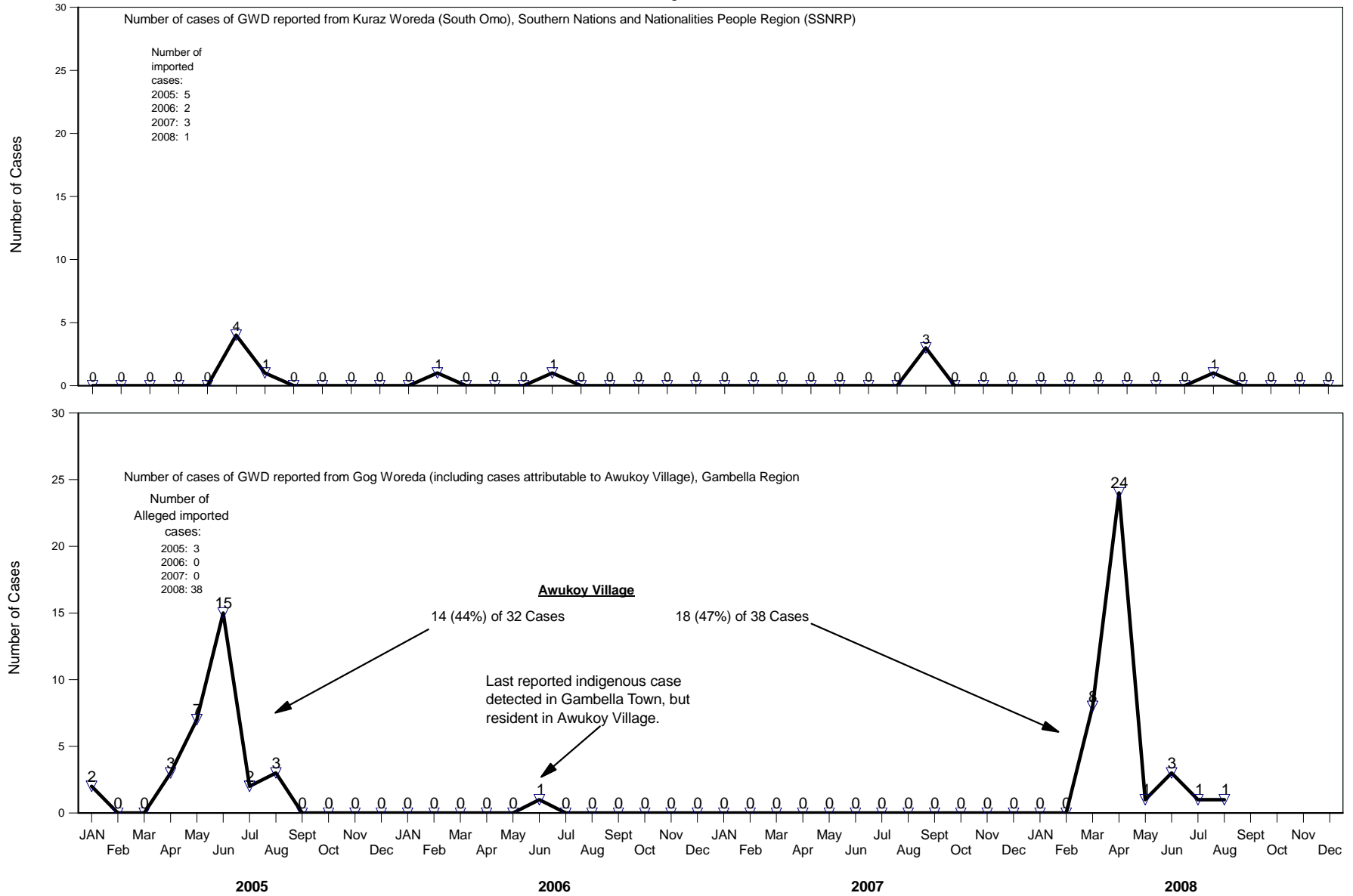
ETHIOPIA: MISSED CASE IN 2007 → ENDEMICITY IN GAMBELLA IN 2008?

The Ethiopian Dracunculiasis Eradication Program (EDEP) has reported two more cases of dracunculiasis from Awukoy village of Gambella Region in July and August 2008. The EDEP has now reported a total of 38 known cases of dracunculiasis in Ethiopian citizens in Gambella Region, 18 of which are resident of or linked to Awukoy village, between March and August 2008. According to the EDEP, all 38 cases gave a history of travel to southern Sudan (mostly adjacent Pochalla County) last year and are assumed by the EDEP to have been infected in Sudan. These 38 patients are the only cases of dracunculiasis reported from Gambella Region since the EDEP reported Ethiopia's last known indigenous case, who was also a resident of Awukoy, in June 2006. The epidemic curve of these allegedly imported cases associated with Awukoy village and surrounding areas in 2008 is similar to that of the 32 indigenous cases reported from the region in January-August 2005 (Figure 1), and strongly resembles a classic outbreak of disease resulting from nearly simultaneous exposure to a common source of infection.

All or most of the 38 cases reported from Gambella in 2008 were either exposed to a common source of dracunculiasis in southern Sudan in 2007, or they were exposed to a common source in Ethiopia in 2007, potentially in the village of Awukoy. It is still not clear which scenario occurred to cause the current outbreak in Gambella, but it does appear that 1) there has been no confirmed case of dracunculiasis in Pochalla County, Sudan for many years, although there are still many cases elsewhere in southern Sudan, 2) Awukoy village was the last known focus of endemic dracunculiasis in Ethiopia, and 3) there is increasing evidence of inadequacies in all aspects of the EDEP in Gambella Region, including poor surveillance. Based on the evidence at hand so far, it seems increasingly possible that at least some, and perhaps most or all, of this year's dracunculiasis patients in Gambella may have been exposed to infection from an unknown patient in or near Awukoy whose illness was not detected by the EDEP in 2007. The fact that most patients reportedly visited southern Sudan in 2007, even if true, does not necessarily mean that they were infected there, especially since such travel by local populations back and forth across the border is common. The EDEP claims many of the patients implicated Adongol Village Pochalla County as the likely place of infection. Unlike the sharp outbreak of many cases reported in Gambella this year, the graph of cases imported into Kuraz Woreda (South Omo) over the same four years displays the typical sporadic pattern of a few cases imported from time to time (Figure 1).

Figure 1

Ethiopian Dracunculiasis Eradication Program
 Cases of dracunculiasis reported from Kuraz Woreda (South Omo), SSNRP
 and Gog Woreda (including cases attributable to Awukoy Village), Gambella Region
 during 2005-2008*



During the Dracunculiasis Eradication Conference in Abuja in April 2008 the EDEP described active surveillance in all former endemic villages in Gambella Region, thorough investigation of all rumored cases of dracunculiasis, an active case search of the entire region which found no evidence of dracunculiasis in July 2007, distribution of 7,000 cloth filters and conduct of 3,450 health education sessions in 81 formerly endemic villages of Gambella. Hence, it is difficult to reconcile the report in given in Abuja about the status of the EDEP during 2007 with the events that ensued in Gambella beginning in March 2008.

WHO is preparing a new mission to visit Gambella in order to help clarify exactly how and where the EDEP operates in Gambella Region and to ascertain its capacity for detection of cases and containment of transmission of dracunculiasis. This is a welcome and urgent development, in our view. *The EDEP in Gambella appears to require much more attention than it has received by Ethiopian political and public health authorities, in order to interrupt or prevent further transmission of dracunculiasis in Gambella Region from any indigenous or imported cases, including, but not limited to, attention by Ethiopian authorities to local security issues.*

The Ethiopian Federal Ministry of Health has just appointed a new national coordinator, Mr. Gole Ejeta.

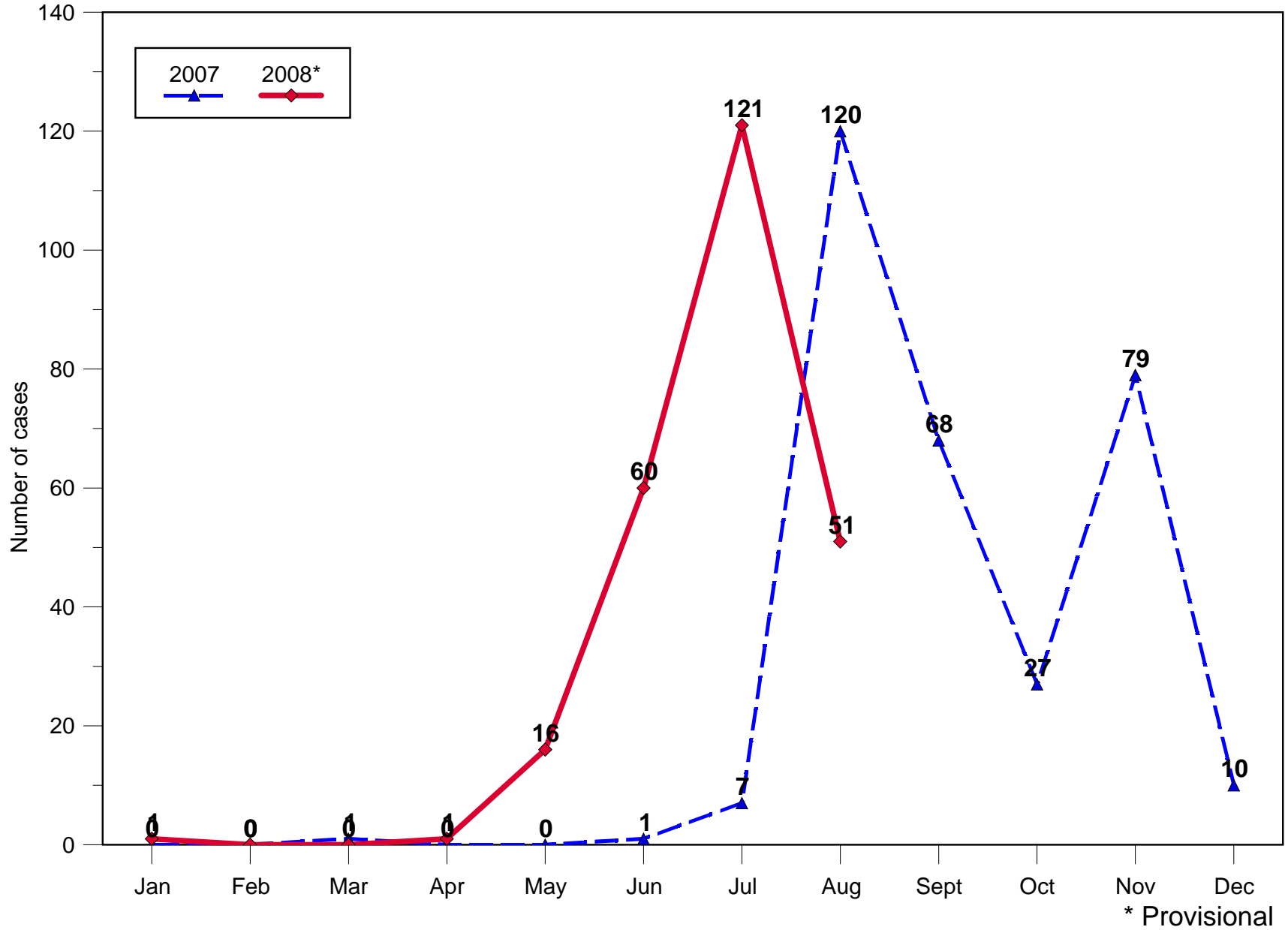
WHO, CARTER CENTER TEAM VISIT MALI'S GWEP

A team composed of Dr. Ernesto Ruiz-Tiben of The Carter Center, and Drs. Gautam Biswas and Alhousseini Maiga of the World Health Organization visited the Malian Guinea Worm Eradication Program on August 17-28. The main aims of the mission were to assess and advise on current operations, and to assist preparations for improving surveillance in formerly endemic and non-endemic areas of the country. The team held discussions with Malian authorities and partners of the program, and visited the districts of Ansongo, Gao, Douentza and Mopti. Insecurity continues to persist in the Region of Kidal, and is now a serious issue in Ansongo District also.

Mali has reported 258 cases of dracunculiasis in January-August 2008, which is an increase of 100% over the 129 indigenous cases reported during the same period of 2007 (the period of peak transmission in Mali is August-November) (Figure 2). Kidal Region, which experienced a surprise outbreak discovered in August 2007, has reported 226 cases in Tissalit (166) and Kidal (60) Districts in January-August 2008, compared to 86 cases reported as of the same period in 2007, although the 35 cases reported by the district in August 2008 alone was a reduction of -59% from the 86 cases reported there in August 2007. Gao Region has reported 29 cases (15 in Gao District, 13 in Ansongo, 1 in Menaka) so far (vs. 25 cases in January-August 2007), Timbuktu Region has reported 2 cases (vs. 8 same time last year), and Mopti has reported zero cases so far in 2008 (vs. 10 same time last year). The reported containment rates for the regions so far this year are: 97% in Kidal (220/226), 66% in Gao (19/29) and 50% (1/2) in Timbuktu. Outside of the region of Kidal, 27 out of 32 cases since January 2008 were isolated in a Case Containment Center. As of August 2008 all 45 endemic sites had received health education, 100% had cloth filters in all households, 73% (33) had water sources treated with ABATE® Larvicide, and 19% had at least one source of safe drinking water.

Figure 2

Mali Guinea Worm Eradication Program Number of Reported Cases of Dracunculiasis: 2007 - 2008*



On August 26, 2008, President Amadou Toumani Toure issued a decree appointing a former governor of Segou, Mr. Bouram Diallo, as president of the Intersectorial Committee for Guinea Worm Eradication.

PUBLIC SERVICE COMMUNICATIONS VIA RADIO IN SOUTHERN SUDAN

The Government of Southern Sudan (GOSS) and the National Democratic Institute for International Affairs (NDI) are collaborating to increase the availability of and access to independent public information (including public health messages) to citizens in Southern Sudan. A grant from NDI to The Carter Center is making possible the distribution of 54,184 *Freeplay* radios and the formation of village-based radio clubs in villages with endemic Guinea worm disease (GWD) and trachoma, using the infrastructure which now supports the Southern Sudan GWEP (SSGWEP). The objective is to disseminate targeted health education messages, program, and public service announcements via radio to each of the major tribal groups in Southern Sudan in their local languages, specifically targeting GWD eradication and trachoma control. In collaboration with Sudan Radio Services project partners are developing programs that use interviews, music, and drama skits to increase knowledge of GWD, its prevention, and to model behavior change. Radio programs will be broadcast starting in November 2008 in five languages: Toposa, Dinka, Nuer, Bari/Mundari, and Arabic. Each program will consist of four 15-minute segments, one for each language, and will have the general title “Let’s Fight Disease”; 8 programs will be developed for GWD and 7 for trachoma. In some areas, like parts of Eastern Equatoria, this effort will be community members’ first experience listening to radio programs in their local dialect. Pre-testing of several episodes has shown that individuals are interested in listening to the ‘real message given by people really living (in the village).’

To date 85% of the radios have been distributed in a mass distribution to 33,688 caretakers in Northern and Western Bhar al Ghazal States, who have also been oriented to the “Let’s Talk” and Let’s Fight Disease” programming, and how to form/conduct radio listening groups. In addition, 13% of 20,489 village volunteers and program staff in the seven states supported by SSGWEP have attended half-day radio trainings. The remainder of the SSGWEP distributions and trainings are taking place in October in anticipation of the “Let’s Fight Disease” Program that airs on November 7th.

CASES OF GWD IN SOUTHERN SUDAN DURING 2007-2008

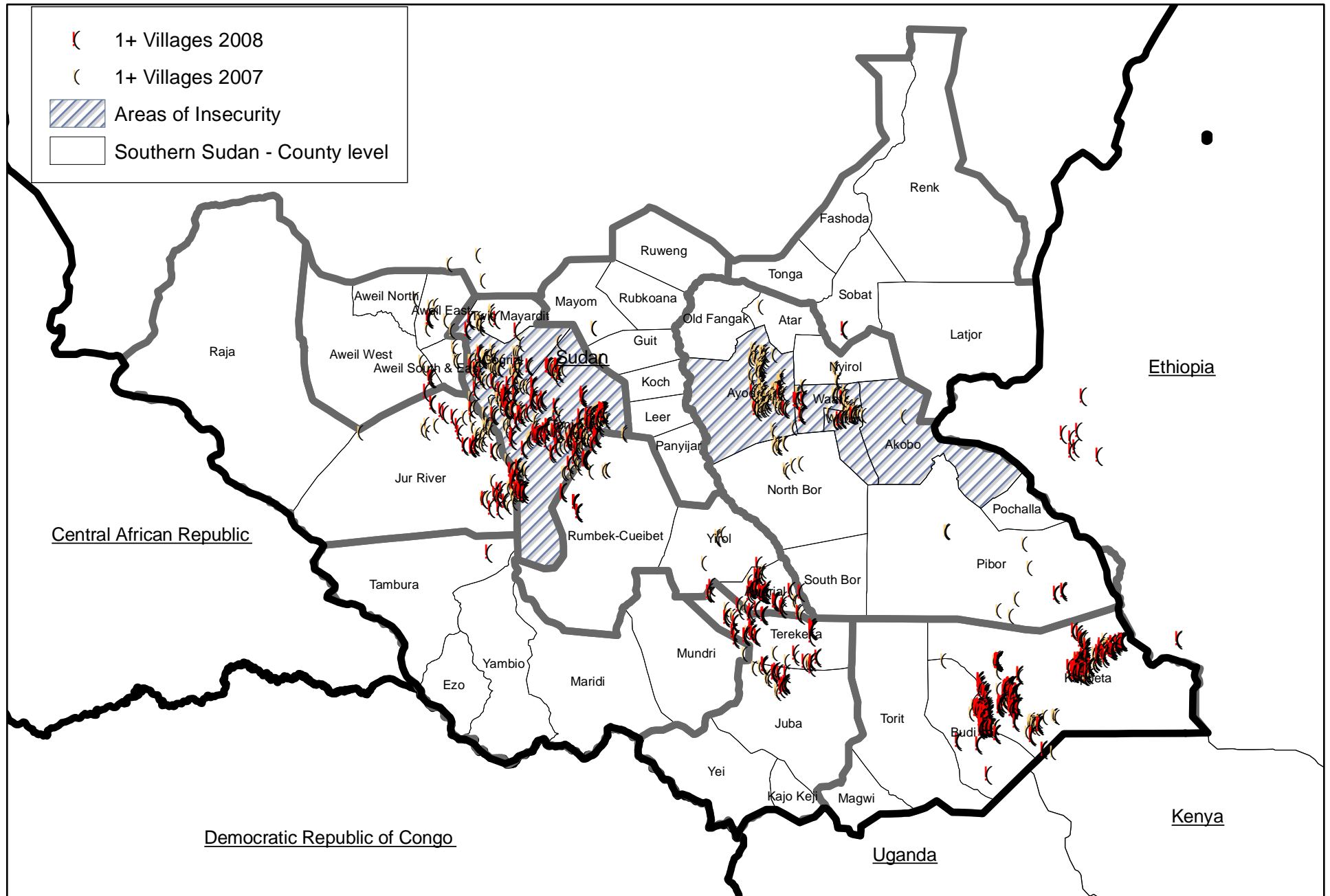
Figure 3 is a map of 1,254 endemic villages (59% of 2,121) in counties and states of Southern Sudan that reported cases of GWD during 2007 and/or during 2008, so far. The map also indicates areas affected by periods of insecurity during 2008 that also affected SSGWEP operations. The number of reported cases of Guinea worm disease by month during 2007 and 2008 is shown in Figure 4.

IN BRIEF:

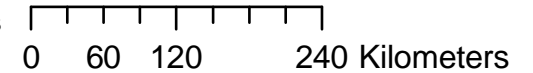
Ghana has reported 459 cases in January-August 2008 (Figure 5), a reduction of -86% compared to the same period of 2007; 85% of this year’s cases have been contained, including 146 (32%) who were contained in a case containment center. As of August, 46 villages had reported indigenous cases in 2008, and 80 villages had reported only imported cases (from other villages in Ghana). 93% of endemic villages had received pipe filters since January 2007, 68% had cloth

FIGURE 3

Distribution of Villages Reporting 1+ Cases of Dracunculiasis, 2008 (Jan-Aug)*



* Jan - Aug 2008 database reflects 1,105 villages reporting a total of 3,102 cases; Villages with geographic coordinates 895 (81%); Cases reported from villages with geographic coordinates 2,472 (80%)



* Jan - Dec 2007 database reflects 1,958 villages reporting a total of 5,815 cases; Villages with geographic coordinates 1,912 (98%); Cases reported from villages with geographic coordinates 5,722 (98%)

Figure 4

Sudan Guinea Worm Eradication Program Number of Reported Cases of Dracunculiasis: 2007 - 2008*

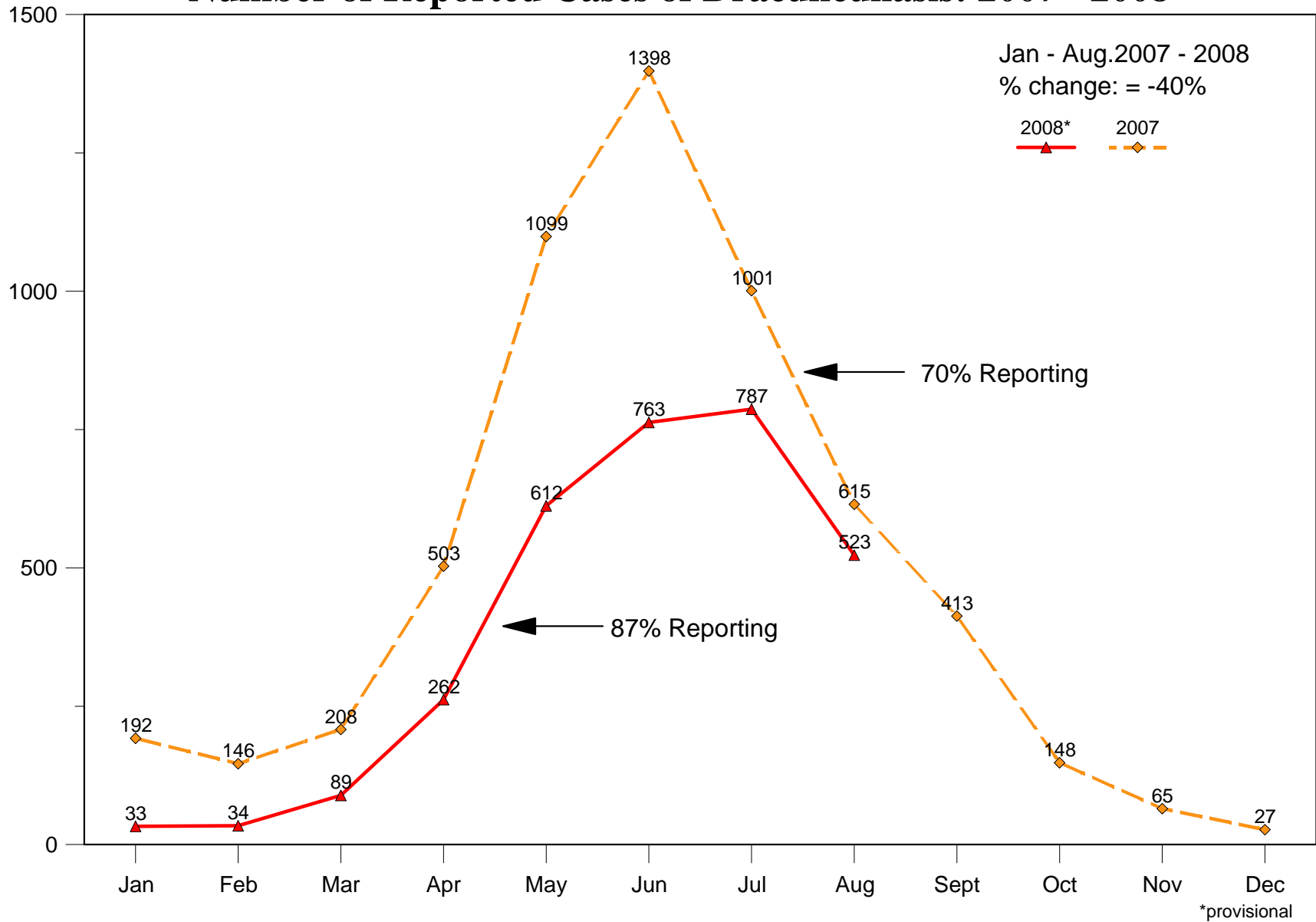
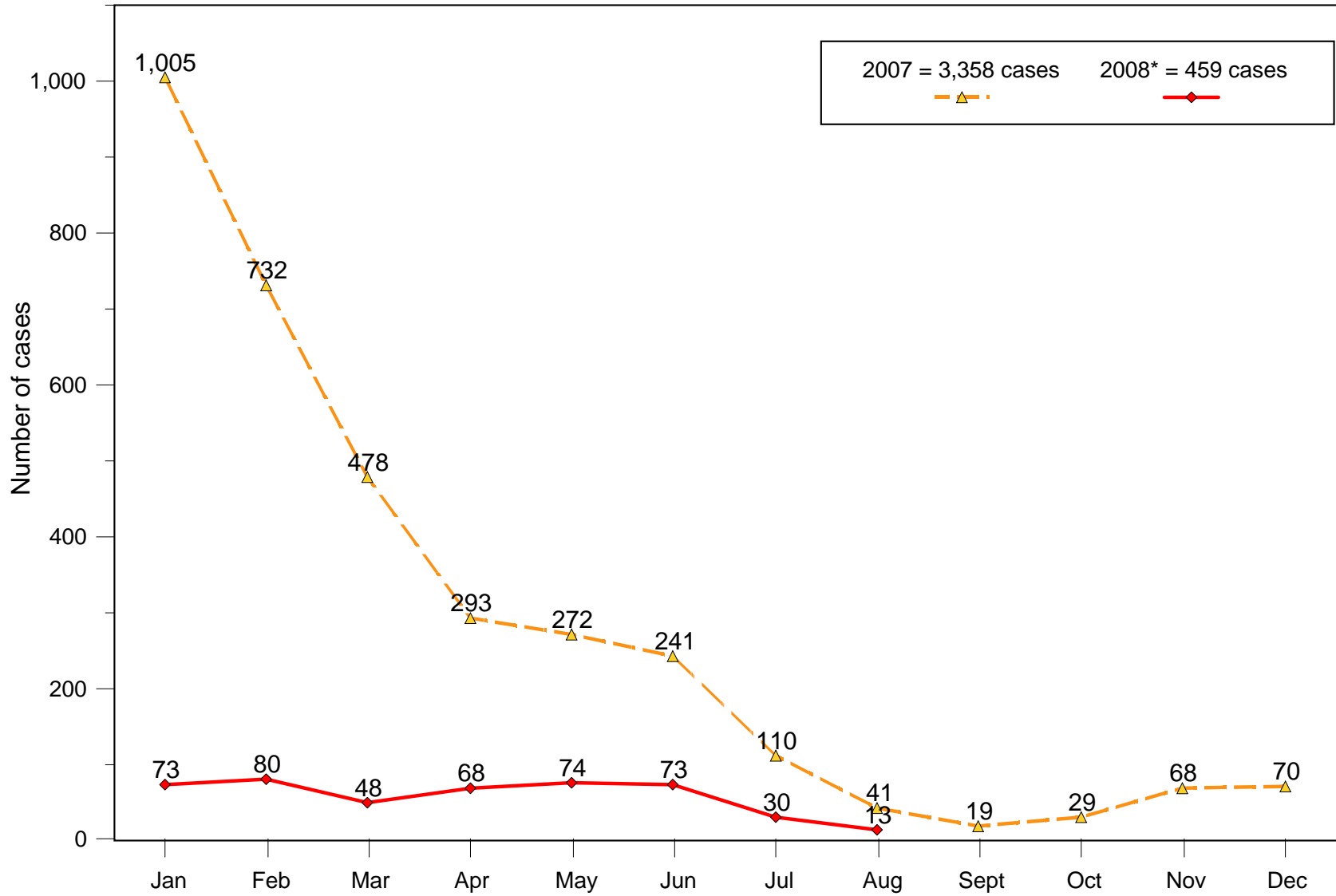


Figure 5

Ghana Guinea Worm Eradication Program Number of Reported Cases of Dracunculiasis: 2007 - 2008*



* Provisional

Table 1

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	11 / 34	36 / 89	115 / 262	251 / 612	395 / 763	392 / 787	312 / 523	/	/	/	/	1520 / 3102	
GHANA	66 / 73	64 / 80	39 / 48	61 / 68	68 / 74	56 / 73	27 / 30	10 / 13	/	/	/	/	391 / 459	85
MALI	1 / 1	0 / 0	0 / 0	1 / 1	16 / 16	59 / 60	112 / 120	51 / 60	/	/	/	/	240 / 258	93
NIGERIA	28 / 28	8 / 8	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	37 / 37	100
NIGER	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	1 / 1	100
ETHIOPIA**	0 / 0	0 / 0	5 / 8	22 / 25	1 / 1	3 / 3	0 / 1	0 / 1	/	/	/	/	31 / 39	79
BURKINA FASO	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	/	/	/	/	1 / 1	100
TOTAL*	103 / 134	84 / 123	81 / 146	200 / 357	336 / 703	513 / 899	531 / 938	373 / 597	/	/	/	/	2221 / 3897	57
% CONTAINED	77	68	55	56	48	57	57	62					57	
% CONT. OUTSIDE SUDAN	93	82	79	89	93	87	92	82					88	

* provisional

** The origin of infection of 38 alleged cases imported from Southern Sudan is under investigation. One other case imported from Southern Sudan into South Omo Region in March is not in dispute.

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

Figure 6

Distribution by Country of 3,897 Indigenous Cases of Dracunculiasis Reported: 2008*

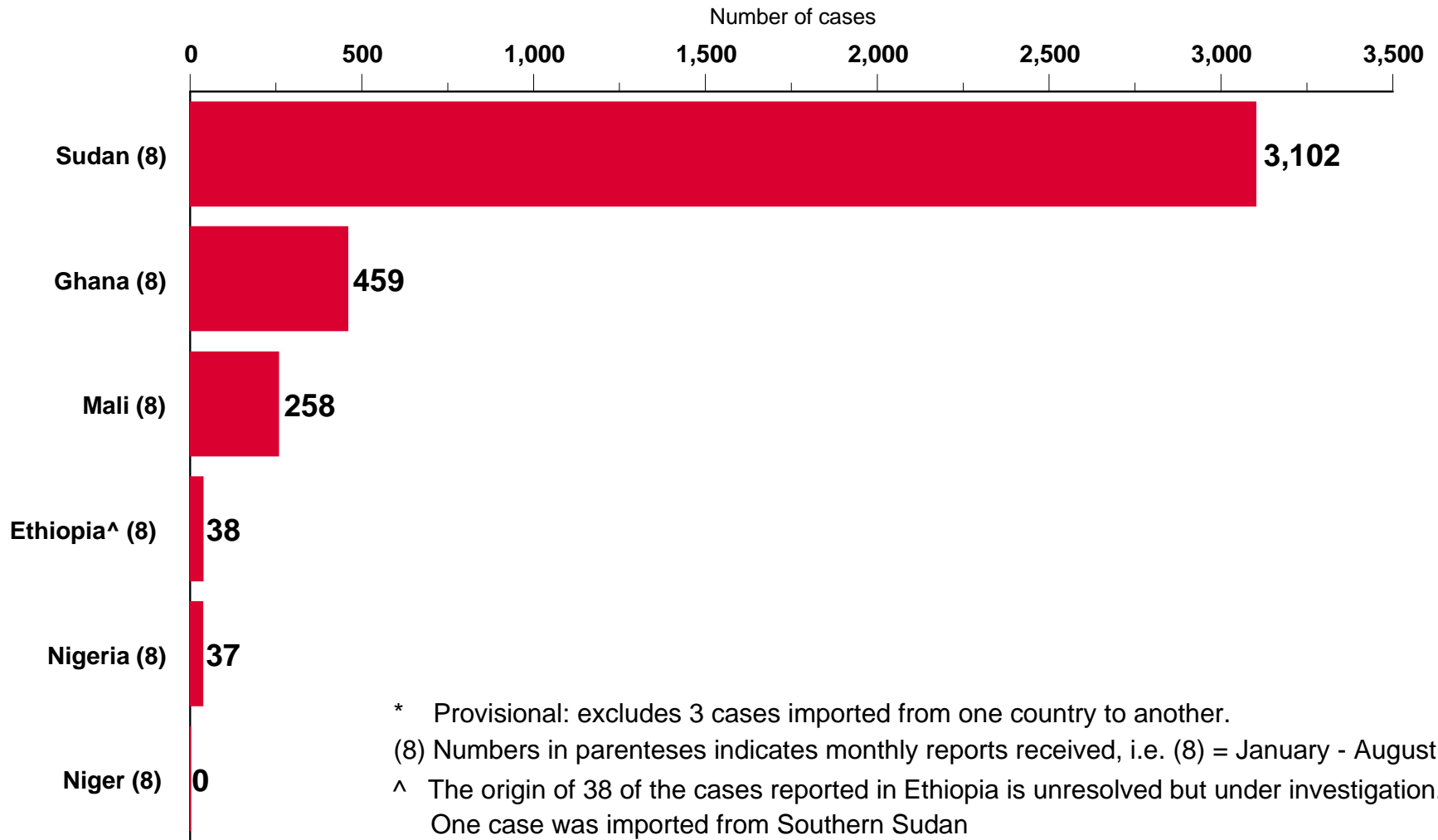


Figure 7

Cumulative Number of Reported Cases of Dracunculiasis in Sudan, Ghana, Mali, Nigeria, and Niger Combined During 2006 - 2008*

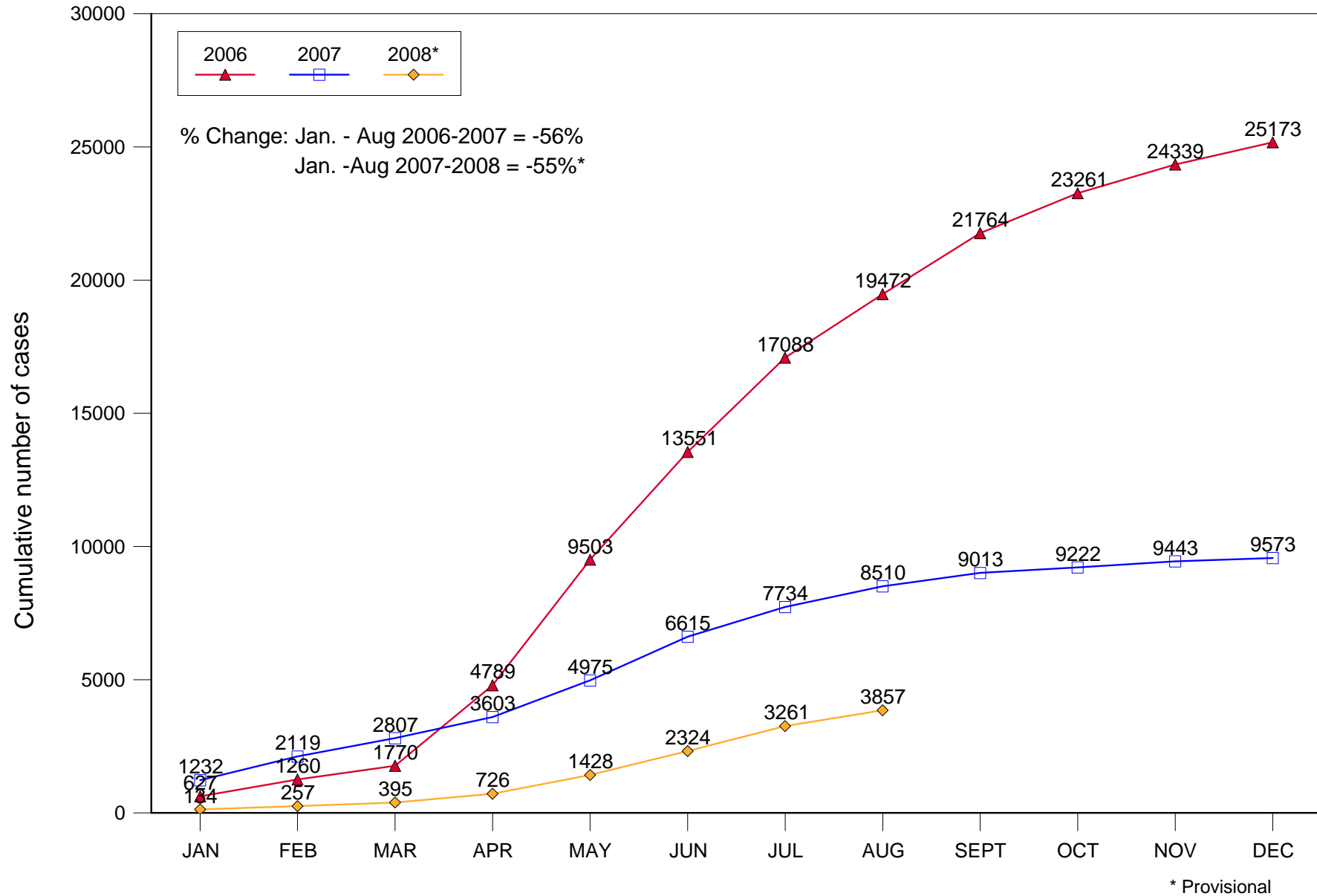
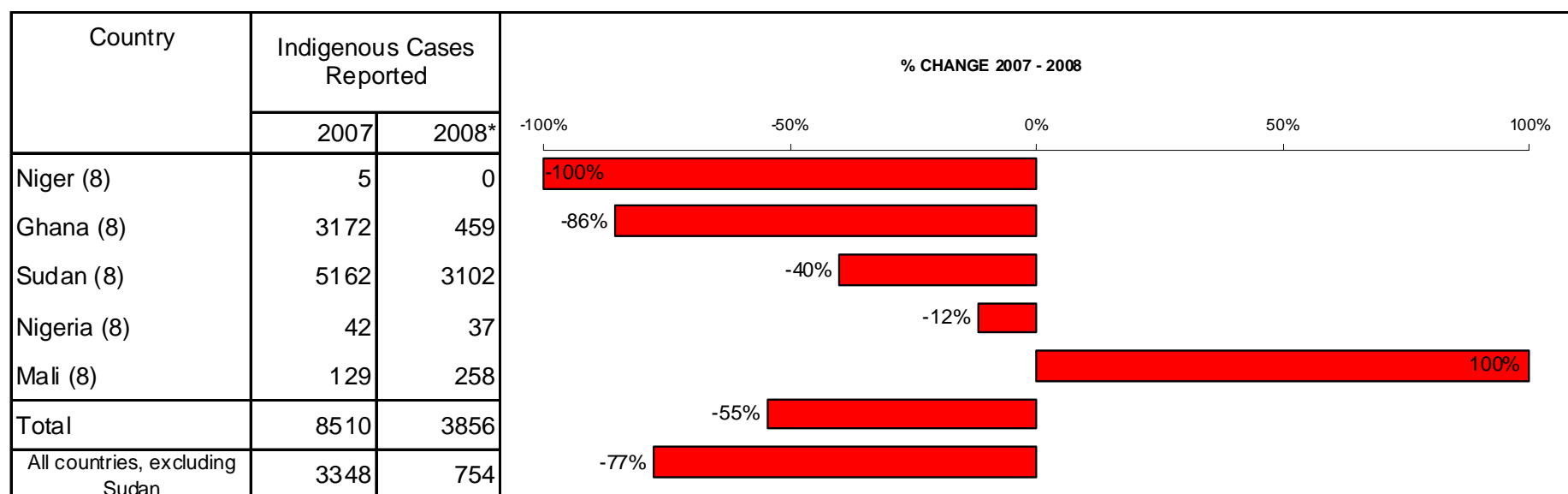


Figure 8

Number of Indigenous Cases Reported During the Specified Period in 2007 and 2008*, 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. 2008

filters in all households, 56% had been protected with ABATE® Larvicide this year, and 44% had at least one source of safe drinking water. The Ghana GWEP has introduced a new concept of “High Alert Villages”, being those villages that reported uncontained cases between October 2007 and August 2008. There are 52 such villages in 20 districts to which special attention is being paid.

Nigeria. The National Certification Committee on Guinea Worm Disease Eradication of Nigeria met on July 9-10 in Calabar, Cross River State. Major issues discussed included nationwide surveillance for dracunculiasis, and improving supplies of safe drinking water to formerly endemic villages.

OVERVIEW OF THE ERADICATION CAMPAIGN

A total of 3,897 cases of dracunculiasis (57% contained) have been reported during January – August 2008 from seven countries (Table 1) and the distribution by country of the 3,897 reported cases during is shown in Figure 6. The trends in cumulative numbers of cases reported in Sudan, Ghana, Mali, Nigeria, and Niger combined during 2006, 2007 and 2008 are shown in Figure 7, which also indicates a 56% reduction in the cases accumulated during January – August 2007 compared to January – August 2006, and similarly, a 55% reduction in cases during January – August 2008 versus the same period in 2007. The percentage change in indigenous cases reported, country by country, during January – August 2008 versus the same period in 2007 is shown in Figure 8: outside of Sudan, countries reduced cases by 77% during January – August 2008, compared to the same period in 2007. Table 2 summarizes available data for 2007 and January – July 2008 for Sudan, Ghana, Mali, Nigeria, and Niger combined: during this period a total of 3,444 villages reported one or more cases, 2,370 of these villages had endemic transmission of GWD, endemic villages reported a total of 2,960 cases of GWD (55% contained), and 87% of endemic villages reported monthly.

Table 2

Percentage of Endemic Villages (EV) Reporting and Percentage of Cases Contained by Endemic Country, 2007 – 2008*

Country	# of villages reporting 1+ cases in 2008*	2007 - # of Evs villages 2007 - 2008*	# of Cases	% of Evs Reporting	% of Cases Contained
Sudan	2905	2121	2275	85%	46%
Ghana	444	195	448	100%	80%
Mali	78	44	199	100%	91%
Nigeria	8	4	37	100%	100%
Niger	9	6	1	100%	100%
Total	3444	2370	2960	87%	55%

Provisional: Jan. – July 2008

RECENT PUBLICATIONS

Jack A, 2008. The worm that turned back. Financial Times Magazine August 23:p14.

Merrill A, 2008. Killing the worm. Good Sept/Oct: 106-114.

Ruiz-Tiben E, Hopkins DR, 2008. Helminthic Diseases: Dracunculiasis. In Heggenhougen and Quah: *International Encyclopedia of Public Health (2008)* vol.3, Academic Press, pp.294-311.

Hopkins DR, Ruiz-Tiben E, Downs P, Withers, Jr. PC, Roy S, 2008. Dracunculiasis Eradication: Neglected No Longer. Am J Trop Med Hyg, 79: 474-479.

*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.