DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Memorandum

Date: January 9, 2012

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

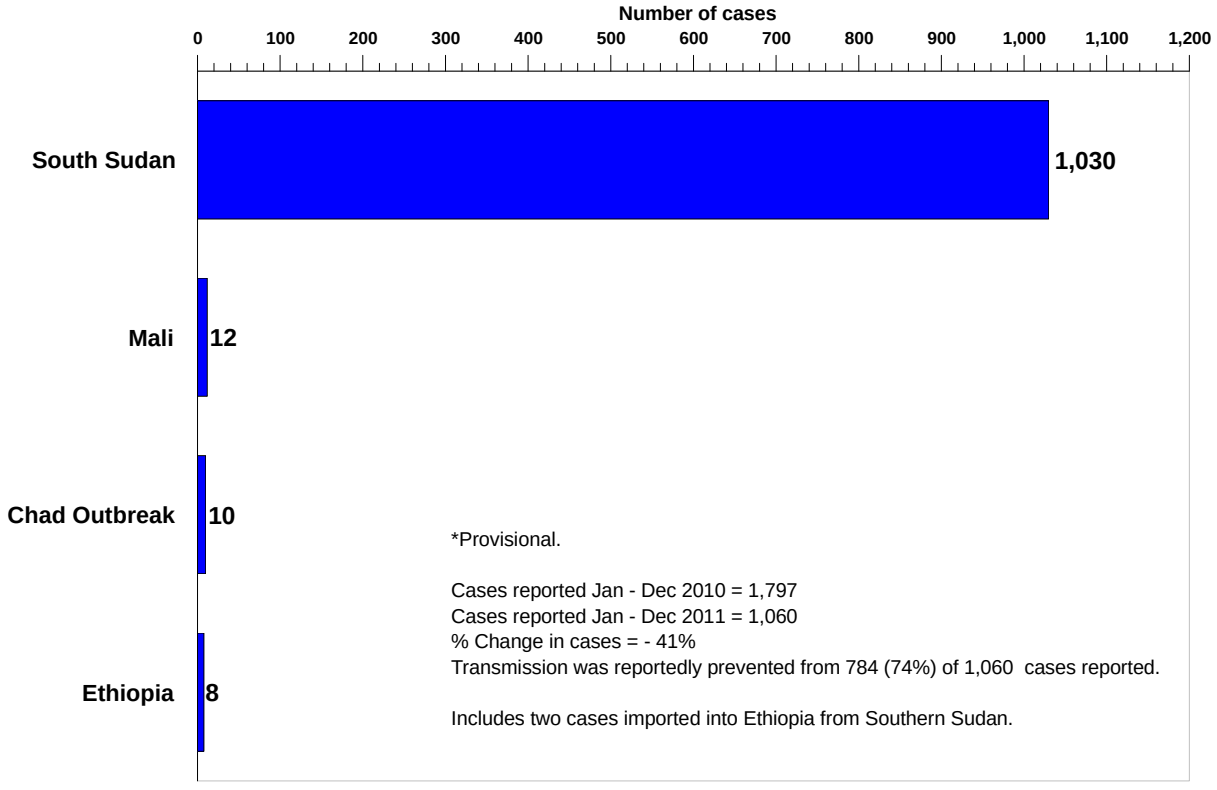
Subject: GUINEA WORM WRAP-UP #209

To: Addressees

2011: 41% FEWER CASES. 2012: GOING FOR THE GOLD

In January-December 2011, a provisional total of 1,060 cases of Guinea worm disease were reported from 483 villages, of which only 142 villages reported indigenous cases. 74% of the cases in 2011 were contained, compared to 75% of cases reportedly contained in 2010. This is an overall reduction of 41% in cases worldwide, compared to 2010. 1,030 (97%) of the cases in 2011 were reported from South Sudan, while Mali reported 12 cases, Chad reported 10 cases, and Ethiopia reported 8 cases (FIGURE 1), for a total of only 30 cases reported worldwide outside of South Sudan.

Figure 1 **Distribution By Country of 1,060 Reported Cases of Dracunculiasis: 2011***



The goal for 2012 is to contain EVERY case of Guinea worm disease, EVERYWHERE.

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													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SOUTH SUDAN	5 / 6	47 / 60	98 / 137	137 / 174	183 / 244	130 / 173	70 / 102	37 / 49	27 / 36	19 / 28	15 / 20	1 / 1	**769 / 1030**	75
MALI	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 3	1 / 3	2 / 3	0 / 1	1 / 1	0 / 1	0 / 0	**5 / 12**	42
ETHIOPIA^	0 / 0	0 / 0	1 / 2	1 / 1	4 / 4	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	**7 / 8**	88
CHAD	0 / 0	1 / 1	0 / 0	0 / 1	0 / 0	0 / 0	1 / 2	1 / 4	0 / 0	0 / 0	0 / 0	1 / 2	**4 / 10**	40
GHANA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	**0 / 0**	0
TOTAL*	5 / 6	48 / 61	99 / 139	138 / 176	187 / 248	132 / 177	72 / 107	40 / 56	27 / 37	20 / 29	15 / 21	2 / 3	**785 / 1060**	74
% CONTAINED	83	79	71	78	75	75	67	71	73	69	71	67	74	
% CONT. OUTSIDE SUDAN	0	100	50	50	100	50	40	43	0	100	0	50	53	

* 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 and a second (contained) during May.

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													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SOUTH 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 / 0	0 / 3	0 / 3	0 / 2	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 / 368	234 / 301	132 / 182	92 / 119	36 / 49	6 / 9	**1338 / 1797**	74
% CONTAINED	88	64	70	75	76	71	76	78	73	77	73	67	74	
% CONT. OUTSIDE SUDAN	100	100	100	88	75	33	71	73	61	88	63	50	75	

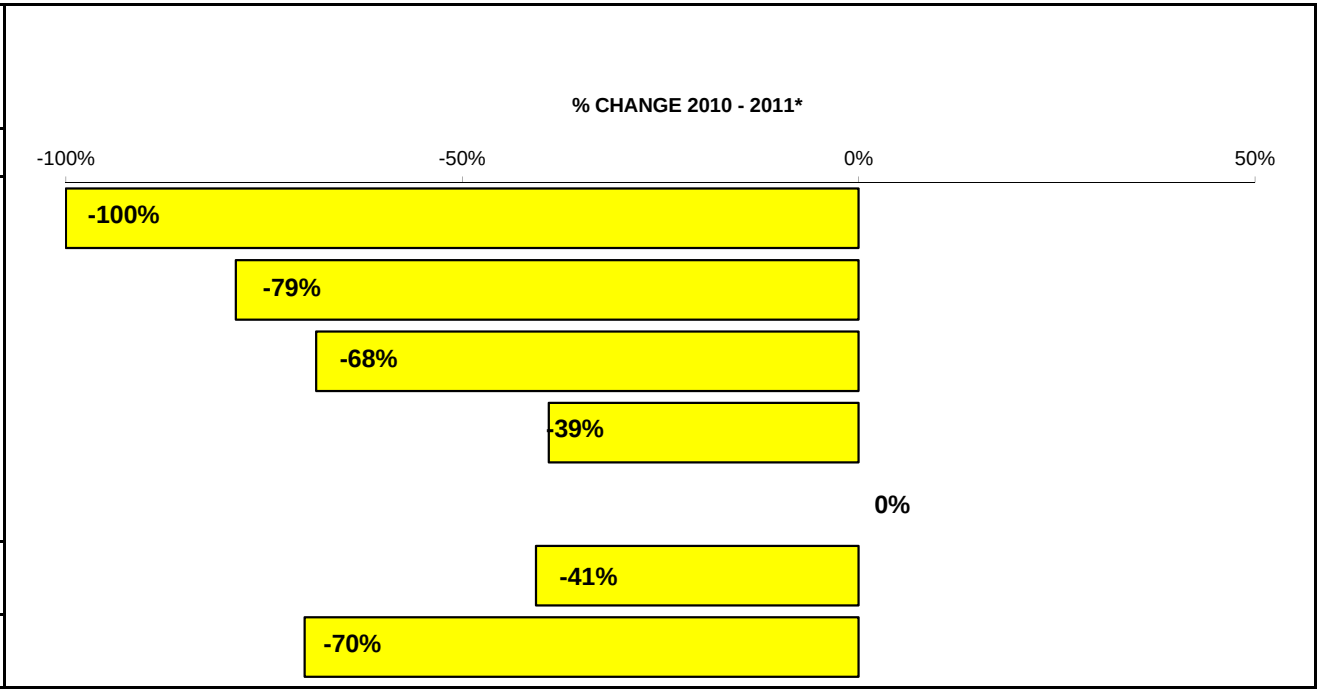
^ Ethiiopia reported and imported case from Southern Sudan in June, and Niger reported three imported cases from Mali (2 in October and 1 in November).The origin of cases in Chad is uncertain.

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

Country	Indigenous Cases Reported	
	2010	2011*
Ghana	8	0
Mali	56	12
Ethiopia	19	6
South Sudan	1691	1030
Chad	10	10
Total	1784	1058
All countries, excluding Sudan	93	28



* Provisional. Excludes two cases imported into Ethiopia from South Sudan one in March and one in May.

SOUTH SUDAN HOLDS ANNUAL PROGRAM REVIEW IN JUBA

On December 8-9, the South Sudan Guinea Worm Eradication Program (SSGWEP) held its 6th Annual Program Review, at the Juba Bridge Hotel in Juba, South Sudan. The meeting was opened by the Hon. Dr. Yatta Lori Lugor, Deputy Minister of Health, on behalf of the Honorable Minister of Health. A representative of the Honorable Minister of Water Resources and Irrigation also spoke at the Opening Ceremony, as well as the Honorable State Minister of Health, Eastern Equatoria State (Dr. Sam Felix Makuja), and representatives of the World Health Organization, UNICEF, the World Food Program, and The Carter Center. The Eastern Equatoria Minister of Health attended the entire review meeting, accompanied by his newly-appointed GW Coordinator for the state, Mr. Marino F. Lokale, who previously worked for the GWEP out of Kapoeta under the Government of Sudan in 1994-5. Also participating in the review meeting was Dr. Abdul Rahman Al-Awadi, the chairman of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE).

The National Program Coordinator of the SSGWEP, Mr. Samuel Makoy Yibi, summarized the progress made by the program in 2011. Overall, South Sudan reduced its cases by 39% from 1,698 to a provisional total of 1,030 cases between 2010 and 2011 (FIGURES 2 & 3), while reducing the number of villages reporting indigenous cases from 227 to 127, as a result of interventions in 2010 (TABLE 2).

The reductions in cases in 2011 were achieved mostly west of the Nile, in the two foci centered in Warrap and Lakes States, respectively. Meanwhile, the program has increased most interventions except water supply in 2011 (FIGURE 4), including raising the proportion of cases contained in a case containment center from 20% to 57% between 2010 and 2011 (FIGURE 5). Notably, the focus centered on Eastern Equatoria State, which reported 775 (75% of all cases in South Sudan in 2011, increased its case containment rate from 70% in 2010 to 80% in 2011 (TABLE 3), and raised the proportion of endemic villages using ABATE® Larvicide from 62% to 82%. A map showing the locations of affected payams in Eastern Equatoria and adjacent areas of Jonglei State is reproduced in FIGURE 6. To further intensify its efforts, the program has increased staff and reduced the size of supervisory areas, while 20 expatriate Technical Assistants agreed to remain in South Sudan to continue working through the Christmas and New Year holidays in order to help sustain the fight against the worms during this critical transmission season. The SSGWEP maintained active surveillance in 5,882 villages in known endemic areas, of which 2,053 (35%) are in the three endemic counties of Eastern Equatoria State. Security incidents disrupted SSGWEP operations a total of 6 times in 2011, compared to 20 incidents in 2010 and 32 incidents in 2009. Mr. Adam Weiss and Dr. Donald Hopkins of The Carter Center made supervisory visits to the program in Juba and Eastern Equatoria in early November 2011.

Table 2

SOUTH SUDAN GUINEA WORM ERADICAITON PROGRAM

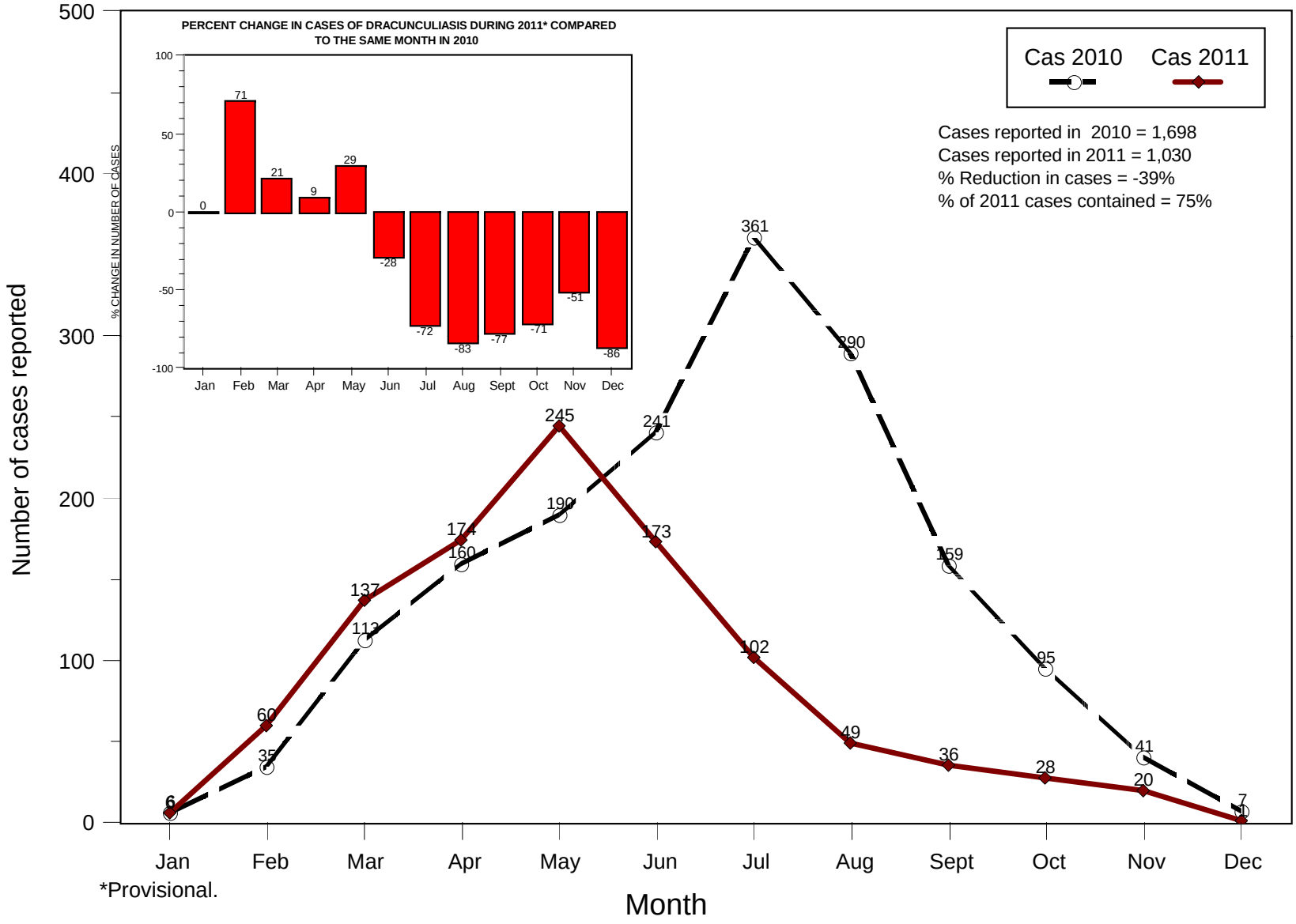
VILLAGES UNDER ACTIVE SURVEILLANCE (VAS) AND CASES REPORTED: 2010-2011

Parameter	VILLAGES UNDER ACTIVE SURVEILLANCE					
	Endemic Villages (EVS)		Other Villages Under Active Surveillance (Non EVS)*		Total Villages Under Active Surveillance (VAS)	
	Number	Number of Cases Reported	Number of Villages	Number of Cases Reported	Number of Villages	Number of Cases Reported
Total Villages under active surveillance (VAS) as of 1/1/2010	676	1,072	5,373	626	6,049	1,698
Villages reporting indigenous cases in 2010 = Endemic Villages (EVS) as of 1/1/2011	227					
Additional EVS designated during 2011	79					
Total EVS in 2011	306					
Reporting cases in 2011	145	519	5,737	511	5,882	1,030
Reporting indigenous cases in 2011	127	425	0	0	127	425
Reporting imported cases in 2011	18	94	447	511	465	605
Reporting zero cases in 2011	161	0	5,415	0	5,576	0

* At-risk non EVS in endemic areas.

Figure 3

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

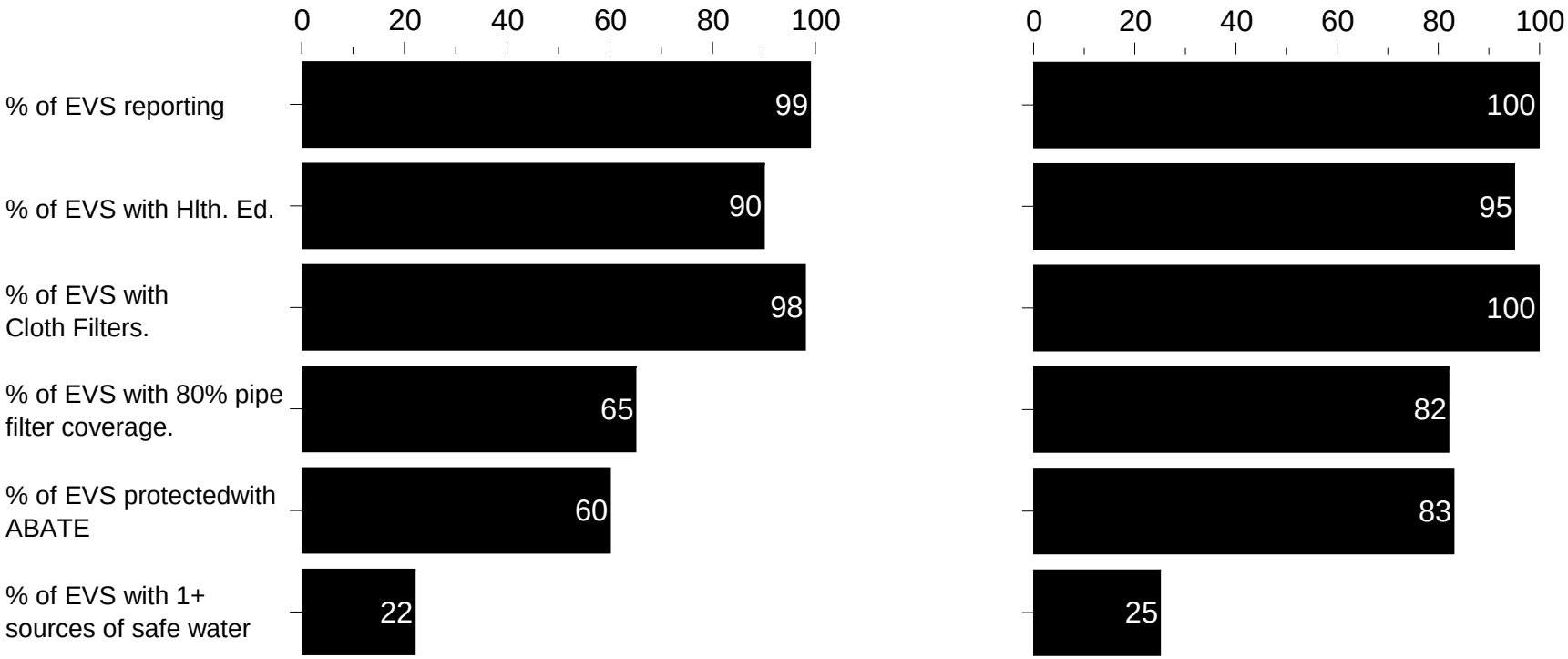


*Provisional.

Figure 4

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
STATUS OF INDICATORS IN ENDEMIC VILLAGES (EVS) DURING 2010 AND 2011*

Year	2010	2011*
Number of village under active surveillance	6,049	5,882
Number of endemic villages	676	306
Villages reporting indigenous cases	227	127
Number of cases reported	1,698	1,029
Percent of cases contained	74%	75%
% of cases contained at a containment center	30%	58%



* Provisional: January - November reports

Figure 5

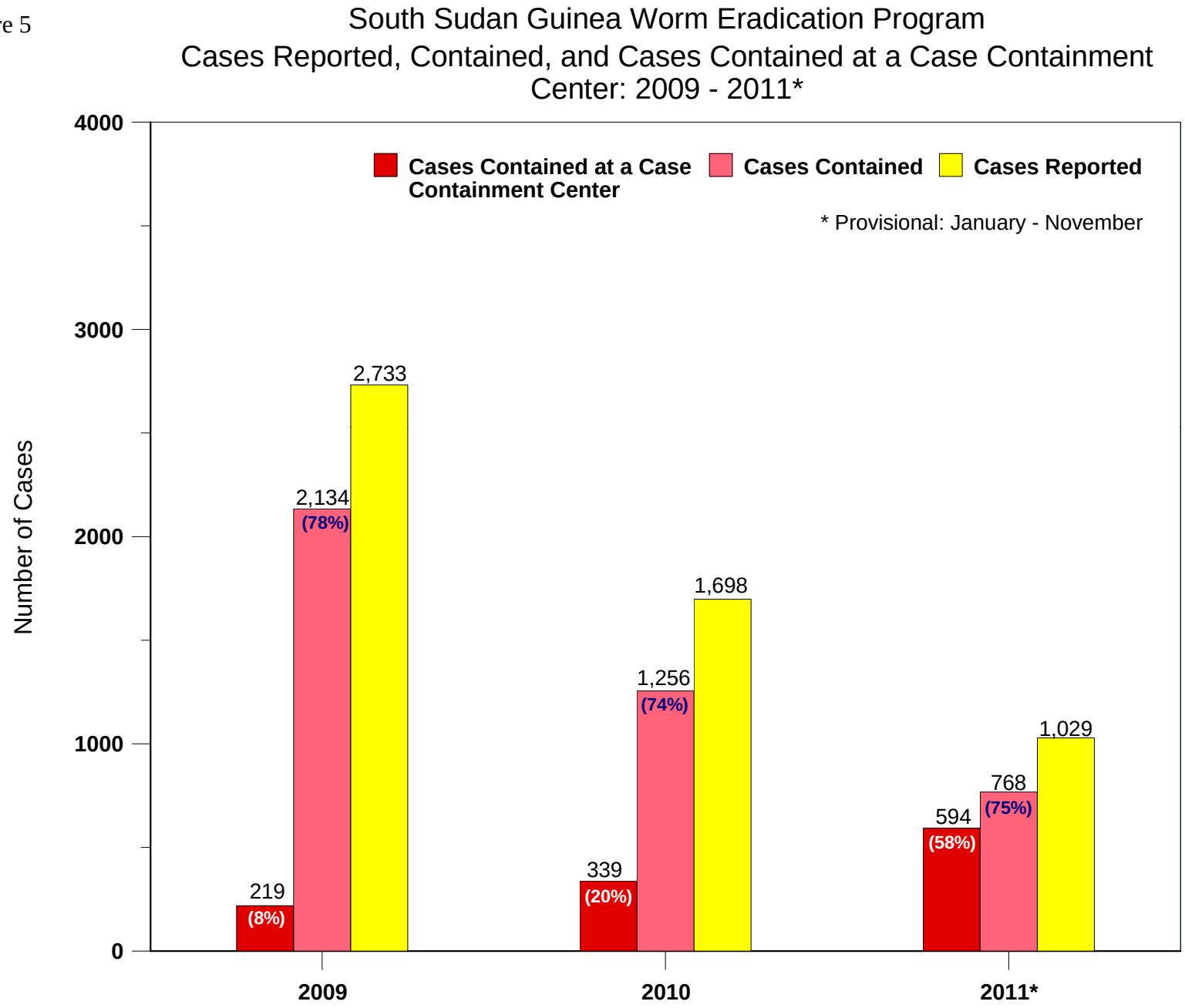

South Sudan Guinea Worm Eradication Program
Cases Reported, Contained, and Cases Contained at a Case Containment Center: 2009 - 2011*
Cases Contained at a Case Containment Center
Cases Contained
Cases Reported
* Provisional: January - November
Number of Cases
4000
3000
2000
1000
0
219
(8%)
2,134
(78%)
2,733
339
(20%)
1,256
(74%)
1,698
594
(58%)
768
(75%)
1,029
2009
2010
2011*

Table 3

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM

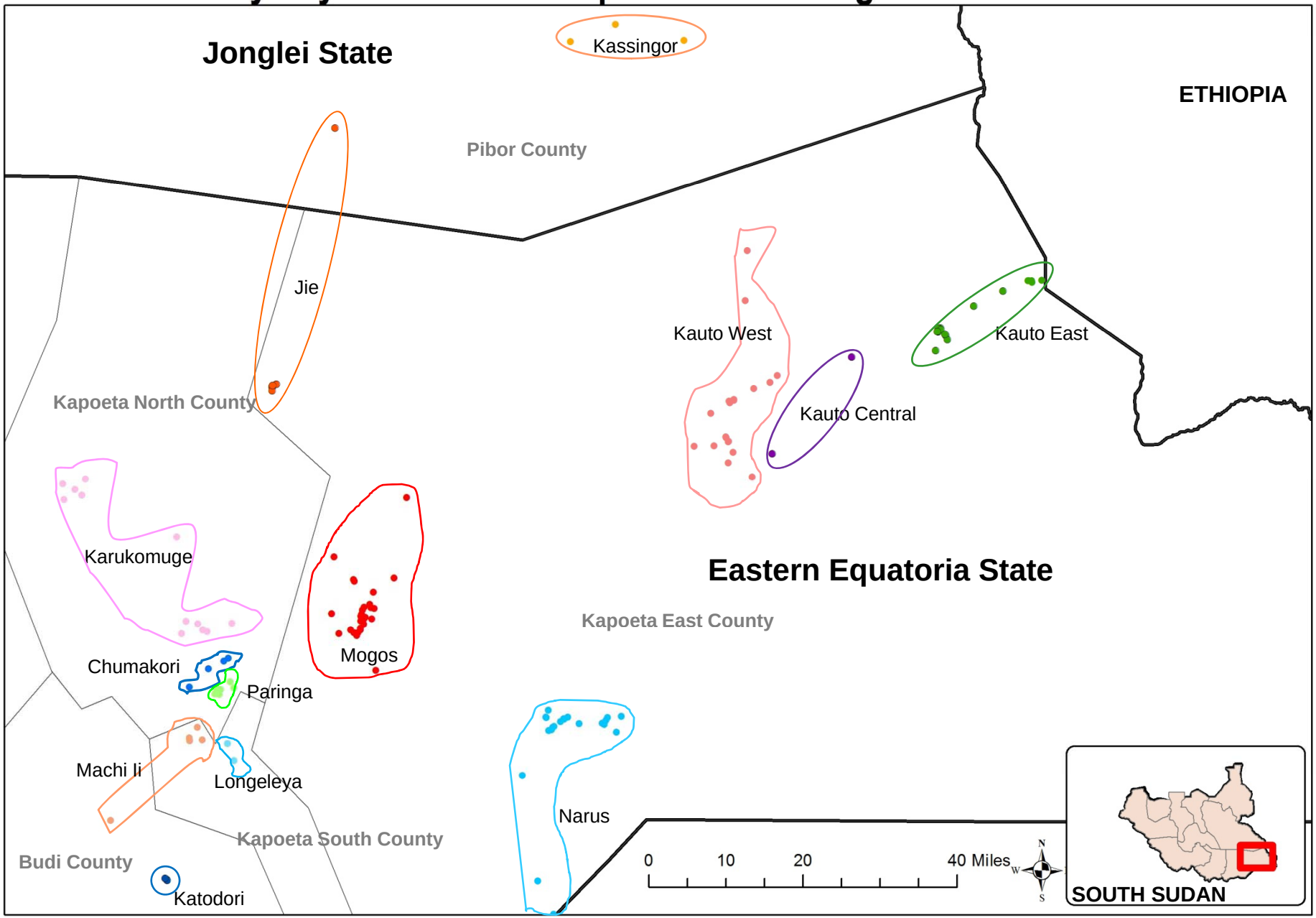
CASES REPORTED AND CONTAINED DURING 2011* BY STATE, COUNTY AND MONTH

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	31 / 39	76 / 96	96 / 115	132 / 154	76 / 100	32 / 39	16 / 20	7 / 8	4 / 7	5 / 7	1 / 1	479 / 590	81%
	Kapoeta North	0 / 0	12 / 14	17 / 27	30 / 35	25 / 31	20 / 24	8 / 13	3 / 3	2 / 4	2 / 2	0 / 0	0 / 0	119 / 153	78%
	Kapoeta South	0 / 0	0 / 0	0 / 1	6 / 11	10 / 11	4 / 8	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	20 / 32	63%
STATE TOTAL		3 / 4	43 / 53	93 / 124	132 / 161	167 / 196	100 / 132	40 / 52	19 / 24	9 / 12	6 / 9	5 / 7	1 / 1	618 / 775	80%
Jonglei	Pibor	0 / 0	3 / 6	2 / 10	1 / 9	5 / 31	2 / 4	0 / 0	1 / 3	0 / 0	0 / 0	0 / 0	0 / 0	14 / 63	22%
	Ayod	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	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 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0%
TOTAL		0 / 0	3 / 6	2 / 10	1 / 9	5 / 31	2 / 4	0 / 0	1 / 3	0 / 0	0 / 0	0 / 0	0 / 0	14 / 63	22%
Warrap	Tonj North	1 / 1	0 / 0	1 / 1	2 / 2	4 / 4	8 / 13	4 / 8	8 / 11	5 / 7	2 / 2	0 / 0	0 / 0	35 / 49	71%
	Tonj East	0 / 0	0 / 0	0 / 0	0 / 0	3 / 4	7 / 9	13 / 15	2 / 3	8 / 9	3 / 5	2 / 3	0 / 0	38 / 48	79%
	Tonj South	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	3 / 4	3 / 3	2 / 2	0 / 0	0 / 0	0 / 0	10 / 11	91%
	Gogrial East	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 8	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 9	0%
	Gogrial West	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	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 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0%
STATE TOTAL		1 / 1	0 / 0	1 / 1	2 / 2	8 / 9	16 / 23	22 / 35	13 / 18	15 / 18	5 / 7	2 / 3	0 / 0	85 / 117	73%
Western Bahr Al Ghazal	Jur River	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 4	50%
TOTAL		0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 2	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	2 / 4	50%
Lakes	Awerial	0 / 0	0 / 0	1 / 1	2 / 2	1 / 4	12 / 13	7 / 11	3 / 3	1 / 3	7 / 11	8 / 10	0 / 0	42 / 58	72%
	Cuibet	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	1 / 1	0%
	Yirol E.	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	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 / 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 / 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 / 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	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	12 / 13	7 / 11	3 / 3	1 / 3	8 / 12	8 / 10	0 / 0	43 / 59	73%
Central Equatoria	Terekeka	1 / 1	1 / 1	1 / 1	0 / 0	1 / 3	0 / 1	0 / 1	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	5 / 9	56%
	Juba	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	1 / 2	0 / 0	0 / 0	0 / 0	2 / 3	0%
TOTAL		1 / 1	1 / 1	1 / 1	0 / 0	1 / 3	0 / 1	1 / 2	0 / 0	2 / 3	0 / 0	0 / 0	0 / 0	7 / 12	58%
SOUTH SUDAN TOTAL		**5 / 6**	**47 / 60**	**98 / 137**	**137 / 174**	**183 / 244**	**130 / 173**	**70 / 102**	**37 / 49**	**27 / 36**	**19 / 28**	**15 / 20**	**1 / 1**	**769 / 1030**	**75%**
% CONTAINED		**83%**	**78%**	**72%**	**79%**	**75%**	**75%**	**69%**	**76%**	**75%**	**68%**	**75%**	**100%**	**75%**	

*Provisional

Figure 6

Location of 144 Villages with Endemic Guinea Worm Disease by Payam in Eastern Equatoria and Jonglei States in 2011



MALI: GETTING CLOSE, BUT MIND THE GAPS

Mali has reported only 12 cases of dracunculiasis in 2011, which is a dramatic reduction of 79% from the 57 cases it reported in 2010. 2011 marked the first year ever that Mali did not export cases to any of its neighbors, particularly to Niger! There are, however, reasons to worry whether Mali has broken transmission or will do so soon, or will suffer another surprise outbreak. The cases in 2011 resided in six villages, spread over six different regions. Only 5 of the cases (42%) were contained, and the sources of some of the cases are still uncertain. Five of the 7 uncontained cases are believed not to have infected anyone else, either because no surface water sources existed when the worms emerged (Alkite village), or because ABATE was used within a few days after the worms emerged (Fangasso, Nantaga, Nanguaye). The two uncontained cases of most concern occurred in the patient in Banido village (worm emerged 12 September) and the first patient in Fangasso village (worm emerged 4 July) (TABLE 4).

A spot check to assess knowledge of the cash reward (CFA 5,000 or US$ 10) for reporting cases of Guinea worm disease in areas now free of the disease as well as in areas with endemic transmission was conducted by the Malian GWEP in December 2011 during market days in Doro, Gao Region (an endemic area), and in Yelekebougou, Koulikoro Region (which reported its last indigenous case of GWD in 2002). 100 persons were randomly selected and interviewed in each market. While 93% of persons interviewed in Doro knew about GWD and 71% knew about the rewards, 86% of those interviewed in Yelekebougou knew about GWD but only 2% knew about the availability of the rewards for reports leading to confirmed of cases of GWD. These results are indicative of the urgent need in Mali to disseminate information about the availability of the rewards to all areas of the country more effectively, as it is urgent to encourage the Malian population at large to immediately report persons with signs and symptoms compatible with GWD to the public health authorities. Routine assessments of such knowledge in endemic areas, as well as in areas free of the disease are also warranted.

Insecurity is now a serious concern in all of the Guinea worm-affected areas. In addition, the national program coordinator and secretariat of the Mali GWEP cannot cover the vast country adequately without more help and a sense of urgency from still-passive local health departments, as the low case containment rate shows. More urgency is also needed in the World Health Organization office in Mali to release funding for strengthening surveillance in Guinea worm-free areas.

CHAD: BUILDING ACTIVE SURVEILLANCE

Chad reported two cases of GWD during December 2011. The status of implementation of active surveillance in 642 villages is summarized in TABLE 5. National program coordinator Mr. Djimadjoumadji Ngarodjel, and Carter Center country representative Dr. Fernand Toe delivered cash rewards of 50,000 CFA to six informants during ceremonies held in five villages in late November, and conducted further training of village volunteers and supervisory staff during December. The latest update of progress of trainings is shown in TABLE 5. The surveillance system in these villages will be activated, once the arrival in N'Djamena of motorcycles and bicycles and training of their use and care is completed for the 96 supervisory staff.

Table 4

Mali Guinea Worm Eradication Program
Villages Reporting Cases in 2011

Village & Region	Case Onset (Month)	Case Contained ?	Cases in 2010?
Alkite, Kidal	1-Jun	No	No
	2-Jun	No	
	10-Jun	Yes	
	29-Jul	Yes	
	3-Aug	Yes	
Fangasso, Segou	4-Jul	No	Yes
	13-Jul	No	
Nanguaye, Timbuktu	17-Aug	Yes	Yes
	16-Nov	No	
Nantaga, Mopti	19-Aug	No	No
Banido, Koulikoro	12-Sep	No	No
Tagaribouch, Gao	4-Oct	Yes	Yes

Table 5

Chad Guinea Worm Eradication Program
Status of Implementation of Active Surveillance in 642 Villages: 2011

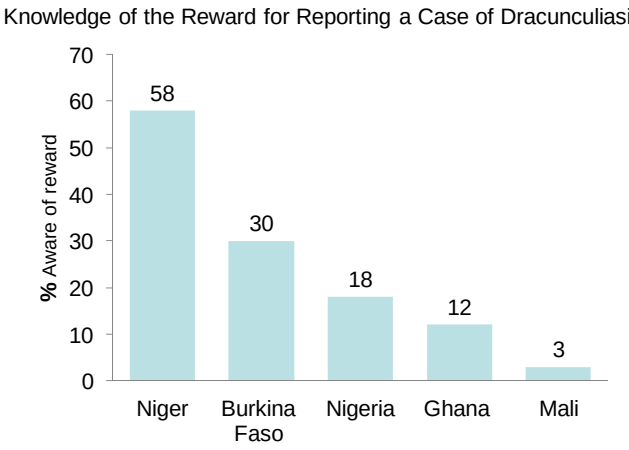
Health Center	Number of Villages	Number of Trained Staff		
		Village Volunteer	Vill. Vol. Supervisor	"Agent Renfort"
Bogomoro	52	24	2	
Mogo	65	42	4	
Mailao	61	98	5	1
Miltou	32	22	0	
M'Bourao	34	66	3	1
Onoko	50		2	1
Bouram	20		1	1
Ba Illi	44		4	2
Gambarou	48	81	2	1
Béré	20	43	2	1
Nanguigoto	21	40	2	1
Moulkou	53	111	5	2
Magao	24	47	2	
Mogrom	17	31	2	
Abba Limane	20	43	1	
Bongor	6	12		
Mbaranga	24	48	2	
Total	591	708	39	11
Goal	642	1,240	64	32
% Accomplished	92%	57%	61%	34%

ICCDE MEETING RECOMMENDS CERTIFICATION OF BURKINA FASO, TOGO

The 8th Meeting of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) met at WHO headquarters in Geneva on November 29-December 1, under the chairmanship of Dr. Abdul Rahman Al-Awadi. After thorough consideration, the ICCDE recommended to WHO that two formerly-endemic countries, Burkina Faso and Togo, as well as Eritrea, Bosnia-Herzegovina, and Brunei Darussalam be certified as having interrupted transmission of the disease. This brings the total number of countries and territories certified to 192, with 14 countries remaining to be certified (FIGURE 8). The ICCDE also recommended that all available specimens from suspected cases of Guinea worm disease in formerly-endemic countries, certified countries, and countries in pre-certification stage be sent to CDC for testing and confirmation (see article below).

According to data on assessment of knowledge of the reward system presented by WHO at the ICCDE meeting, knowledge of the reward for reporting a case of dracunculiasis in never-endemic areas of the five countries assessed (FIGURE 7) was much lower in almost all countries as compared to that in the recently freed or formerly endemic areas:

Figure 7



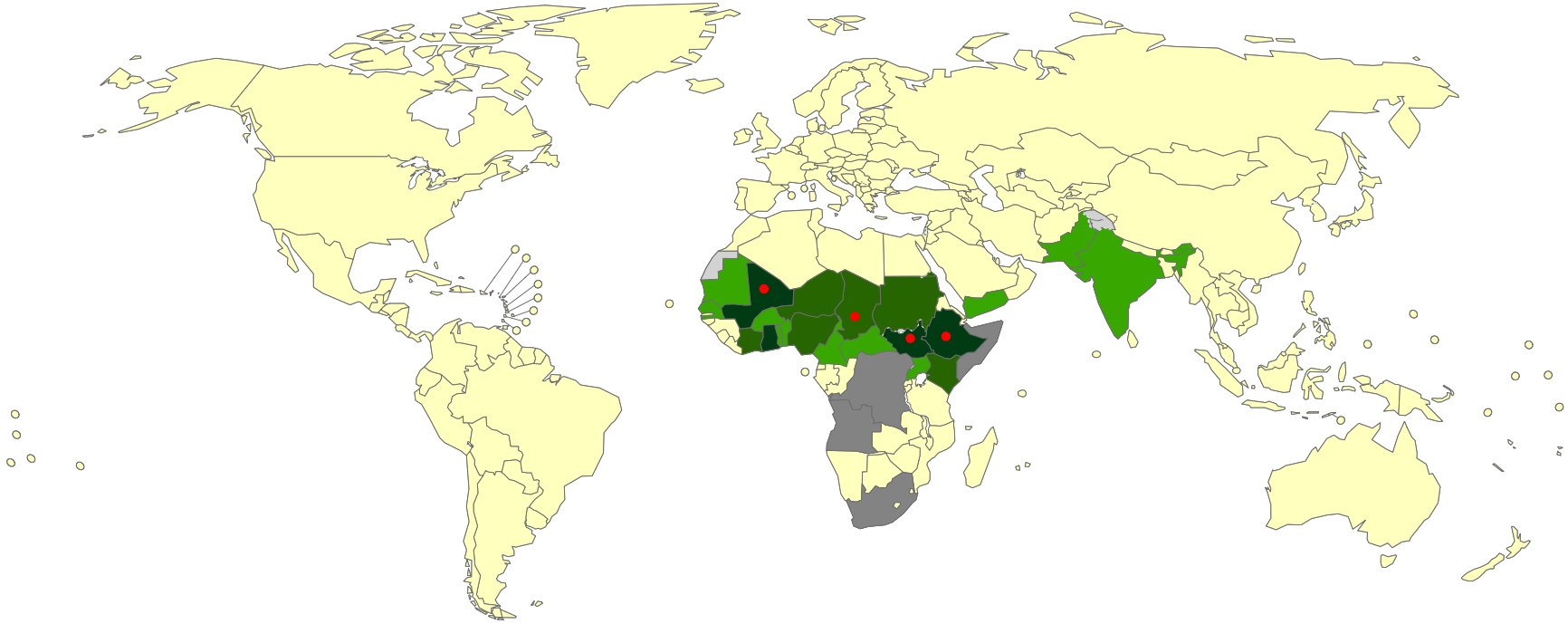
Readers of the previous issue of *Guinea Worm Wrap-Up* will recall that a similar assessment conducted in an area of Ethiopia's Guinea worm-free Amhara Region in September revealed that 2% of those surveyed knew about the cash reward.

The International Commission for the Certification of Dracunculiasis Eradication (ICCDE) noted that in a few of the countries that have been certified by WHO as being free of dracunculiasis on the recommendation of the ICCDE, alleged emergence of worm-like structures similar to dracunculiasis had been reported, viz, in Cameroon, Senegal and recently from India. The ICCDE recommended that all such samples suspected to be *Dracunculus* (Guinea worm) should be preserved in ethyl alcohol and the specimen immediately sent for confirmation to the WHO Collaborating Centre for Research, Training and Eradication of Dracunculiasis at the US Centers for Disease Control and Prevention in Atlanta, USA. Presently this is the only WHO Collaborating Center recognized for confirmation of dracunculiasis with both morphological and molecular methods.

Laboratory (molecular) confirmation of suspected worm specimens is also warranted in countries in the pre-certification phase as well as in areas in endemic countries, which have interrupted transmission or where interruption of transmission is imminent.

Figure 8

Status of certification of dracunculiasis eradication as of December 2011



Countries currently endemic for dracunculiasis

Countries at precertification stage

Previously endemic countries certified free of dracunculiasis

Other countries and territories certified free of dracunculiasis

Countries and territories not known to have dracunculiasis but yet to be certified

Not applicable

No data

Countries reporting cases in 2011

Note: Chad - country in the precertification stage had an outbreak since 2010

Data Source: World Health Organization

The boundaries shown and the designations on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers sor boundaries. Dotted lines on map represent approximate border lines for which there may not yet be full agreement.

PROCEDURE FOR THE COLLECTION AND SHIPMENT OF SPECIMENS TO US CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC).

In order to perform both morphologic and molecular evaluation of worm specimens that is necessary to confirm the diagnosis of dracunculiasis (Guinea worm disease) caused by *Dracunculus medinensis*, it is critical that specimens be preserved properly. Most importantly, specimens should NOT be fixed or preserved in formalin solution as that destroys the ability to perform molecular analysis. The ideal preservative, widely available even in remote field settings, is alcohol. Ethyl alcohol (ethanol) is preferable, and any concentration between 30 – 70% is acceptable. The specimen should be placed in a small vial or tube with enough preservative to cover the specimen. Preferably a non-breakable container such as plastic centrifuge tube should be used. The container should be tightly sealed and placed in a plastic bag to prevent leakage, packaged and labeled with as much information about the case as is available, and sent by courier to Dr. Mark Eberhard, Division of Parasitic Diseases and Malaria, CDC, 1600 Clifton Rd NE, Atlanta, GA 30333.

IN BRIEF:

In Ethiopia, Dr. Zerihun Tadesse made his fourth supervisory visit to the program in Gambella Region on October 23-26. Ethiopia has not reported an endemic case of dracunculiasis for the past six months, beginning in July 2011. The only known uncontained case in 2011 was in March, which was a case imported from South Sudan.

MEETINGS

World Health Organization

The 130th Session of WHO's Executive Board will meet at WHO headquarters in Geneva on January 16-23, 2012. A report on the status of the Dracunculiasis Eradication Program will be considered, as required by last year's Resolution WHA64.16.

The Ethiopian Dracunculiasis Eradication Program (EDEP) will hold a review meeting in Gambella Town, for the EDEP in Gambella Region, Ethiopia, during January 17, 2012.

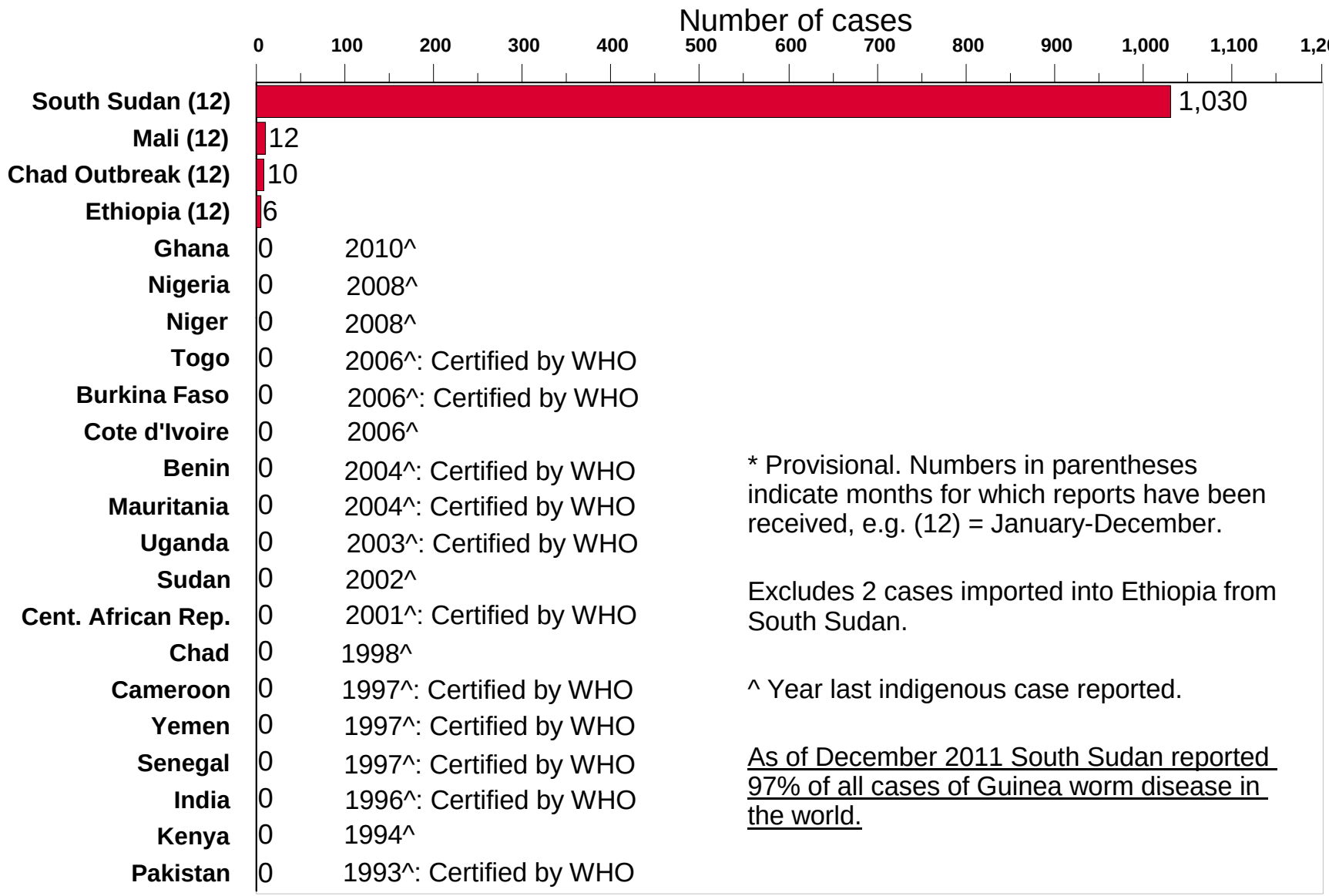
The 16th Program Review of National Guinea Worm Eradication Programs will be held at The Carter Center in Atlanta, Georgia on March 1-2, 2012. Representatives of the four countries still reporting cases (Chad, Ethiopia, Mali and South Sudan) will participate.

WHO will sponsor a Program Review of all the National Guinea Worm Eradication Programs, including countries in pre-certification of eradication, in Addis Ababa on March 26-29, 2012. Representatives of all endemic (Ethiopia, Mali, and South Sudan) and precertification countries (Chad, Cote d'Ivoire, Ghana, Kenya, Niger, Nigeria and Sudan) will participate.

The 65th World Health Assembly will convene at WHO headquarters in Geneva, Switzerland on May 21-26, 2012. As in recent years, an informal meeting of representatives of endemic and formerly endemic countries will be convened on a date to be decided.

Figure 9

Distribution of 1,058 Indigenous Cases of Dracunculiasis Reported during 2011*



RECENT PUBLICATIONS

Choubisa SL, Verma R, Choubisa L, 2010. Dracunculiasis in tribal region of southern Rajasthan, India: a case report. J Parasit Dis (India) 34(2):94-96.

Choubisa SL, 2002. Guinea worm (Dracunculus medinensis) in Rajasthan, India: A case report. J Parasit Dis (India) 26(2):105-106.

Stepan NL, 2011. "Eradication: Ridding the World of Diseases Forever?" Ithaca, NY: Cornell University Press.

World Health Organization, 2011. Monthly report on dracunculiasis cases, January-September 2011. Wkly Epidemiol Rec 86:556.

World Health Organization, 2011. Monthly report on dracunculiasis, January-October 2011. Wkly Epidemiol Rec 86:580.

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, Centers for Disease Control and Prevention, Mailstop C-09, 1600 Clifton Road NE, Atlanta, GA 30333, USA, email: gwwrapup@cdc.gov, fax: 404-728-8040. *The GW Wrap-Up web location is* http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp

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