

Date: March 12, 2012

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

Subject: GUINEA WORM WRAP-UP #210

To: Addressees

Detect and Explain Every Case! Contain Every Worm!

**SOUTH SUDAN: 100% CONTAINMENT, 92% FEWER CASES IN DECEMBER-FEBRUARY**

The South Sudan Guinea Worm Eradication Program (SSGWEP) has reported only 6 cases of Guinea worm disease in December 2011 through February 2012, all of them contained, compared to 73 cases reported (78% contained) during the same three months a year ago.

The 5 cases reported in January-February 2012 were only cases detected worldwide in those two months (Figure 1, Table 2), thus meeting so far the goal to contain every case everywhere

Figure 1



during 2012. In January one case of GWD was detected in Na Payam, Kapoeta East County, and one case was detected in Najie, Kapoeta North County, whereas in February cases were detected in Mogos and Narus Payams (1 case) in Kapoeta East County, and in Karakamuge Payam, Kapoeta North County. Three of these foci were managed at a case containment center and the other two at the village level. South Sudan reported a total of 1,028 cases during all of 2011, 74% contained, which was a reduction of 39% from the 1,698 cases reported in 2010. Seventy-five percent (75%) of the cases in 2011 were reported from Eastern Equatoria State, 11% were from Warrab State and 6% were reported from Lakes and Jonglei States (Table 1). The cases in southern Jonglei State were contiguous with the large focus in Eastern Equatoria. Cases were evenly divided by gender (517 male, 511 female), and 867 (84%) were in the 6-35 year old age group. Of the 763 cases of GWD in 2011 meeting the standards for case containment, 600 (79%) were contained at a containment center. Patients who were cared for in case containment centers had an average of 1.6 worms each.

The SSGWEP reports that during 2011, 8,000 volunteers covered 5,882 villages under active surveillance, but only 125 villages reported indigenous cases. During 2011, 100% of 304 endemic villages had cloth filters in all households, 95% were exposed to health education on how to prevent the disease, 85% had water sources treated with ABATE® Larvicide, 25% had one or more sources of safe drinking water, and 83% of targeted villages had pipe filters. Fifty-eight percent (58%; 600/1,028) of all cases were contained at case containment centers (6 fixed, 12 mobile). UNICEF has contracted for 15 borehole wells to be drilled in a highly endemic area on the plateau in Kapoeta East County, Eastern Equatoria State. As of March 1, 2012, boreholes had been drilled already in 5 villages reporting 32 (86%) of 37 cases reported from 7 villages in Lotimor Payam (district) of Kapoeta East County during 2011.

Following recommendations made during the SSGWEP review meeting in December 2011, the program, with assistance from WHO conducted an assessment in formerly endemic areas of Jonglei State (Wuror, Nyrol, Ayod, and Pibou Counties) to ascertain wh

Table 1

**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	30 / 39	76 / 96	94 / 115	129 / 154	75 / 100	32 / 39	16 / 20	7 / 8	4 / 7	5 / 7	1 / 1	472 / 590	80%
	Kapoeta North	0 / 0	12 / 14	18 / 27	30 / 35	25 / 31	20 / 24	8 / 13	3 / 3	3 / 4	2 / 2	0 / 0	0 / 0	121 / 153	79%
	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	42 / 53	94 / 124	130 / 161	164 / 196	99 / 132	40 / 52	19 / 24	10 / 12	6 / 9	5 / 7	1 / 1	613 / 775	79%
Jonglei	Pibor	0 / 0	3 / 6	2 / 10	1 / 9	5 / 31	2 / 4	0 / 0	1 / 2	0 / 0	0 / 0	0 / 0	0 / 0	14 / 62	23%
	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 / 2	0 / 0	0 / 0	0 / 0	0 / 0	14 / 62	23%
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	1 / 2	0 / 0	37 / 47	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	1 / 2	0 / 0	84 / 116	72%
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%
<b>SOUTHERN SUDAN TOTAL</b>		<b>5 / 6</b>	<b>46 / 60</b>	<b>99 / 137</b>	<b>135 / 174</b>	<b>180 / 244</b>	<b>129 / 173</b>	<b>70 / 102</b>	<b>37 / 48</b>	<b>28 / 36</b>	<b>19 / 28</b>	<b>14 / 19</b>	<b>1 / 1</b>	<b>763 / 1028</b>	<b>74%</b>
<b>% CONTAINED</b>		<b>83%</b>	<b>77%</b>	<b>72%</b>	<b>78%</b>	<b>74%</b>	<b>75%</b>	<b>69%</b>	<b>77%</b>	<b>78%</b>	<b>68%</b>	<b>74%</b>	<b>100%</b>	<b>74%</b>	

Table 2

**Number of Cases Contained and Number Reported by Month during 2012\***  
(Countries arranged in descending order of cases in 2011)

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*	
SOUTH SUDAN	2 / 2	3 / 3	/	/	/	/	/	/	/	/	/	/	5 / 5	100
% CONTAINED	100	100											100	
% CONT. OUTSIDE SUDAN	0	0											0	

\*Provisional

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

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**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*	
SOUTH SUDAN	5 / 6	46 / 60	99 / 137	135 / 174	180 / 244	129 / 173	70 / 102	37 / 48	28 / 36	19 / 28	14 / 19	1 / 1	763 / 1028	74
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 <sup>^</sup>	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	47 / 61	100 / 139	136 / 176	184 / 248	131 / 177	72 / 107	40 / 55	28 / 37	20 / 29	14 / 20	2 / 3	779 / 1058	74
% CONTAINED	83	77	72	77	74	74	67	73	76	69	70	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.

<sup>^</sup> one case of GWD (not contained) was imported into Ethiopia from South Sudan during March and a second (contained) during May.

Figure 2  
Number of Indigenous Cases Reported During th

Country	2011	2012*
Chad (2)	1	0
South Sudan (2)	66	5
Mali (2)	0	0

## UNITED KINGDOM, GATES FOUNDATION, UNITED ARAB EMIRATES AND CHILDREN'S INVESTMENT FUND FOUNDATION COMPLETE FUNDING NEEDED FOR GUINEA WORM ERADICATION

We are delighted to report that U.S. \$40 million new pledges to the Guinea Worm Eradication Program were announced in London on July 30, 2012, by the Bill & Melinda Gates Foundation (\$23.3 million); His Highness Sheikh Khalifa bin Zayed Al Nahyan, the President of the United Arab Emirates (\$10 million); and the Children's Investment Fund Foundation (\$6.7 million). The three grants, along with the top 20 million pounds sterling (approximately \$31 million) that the United Kingdom's Department for International Development (DFID) committed in October 2011, will fund the Carter Center's assistance to endemic countries for interventions against remaining cases of the disease and WHO's assistance for surveillance by countries during and after elimination of transmission and for certification of eradication.

## CHAD: INCREASING COVERAGE

Figure 3

## Chad Guinea Worm Eradication Program Villages Reporting Cases of Dracunculiasis in 2010 or 2011

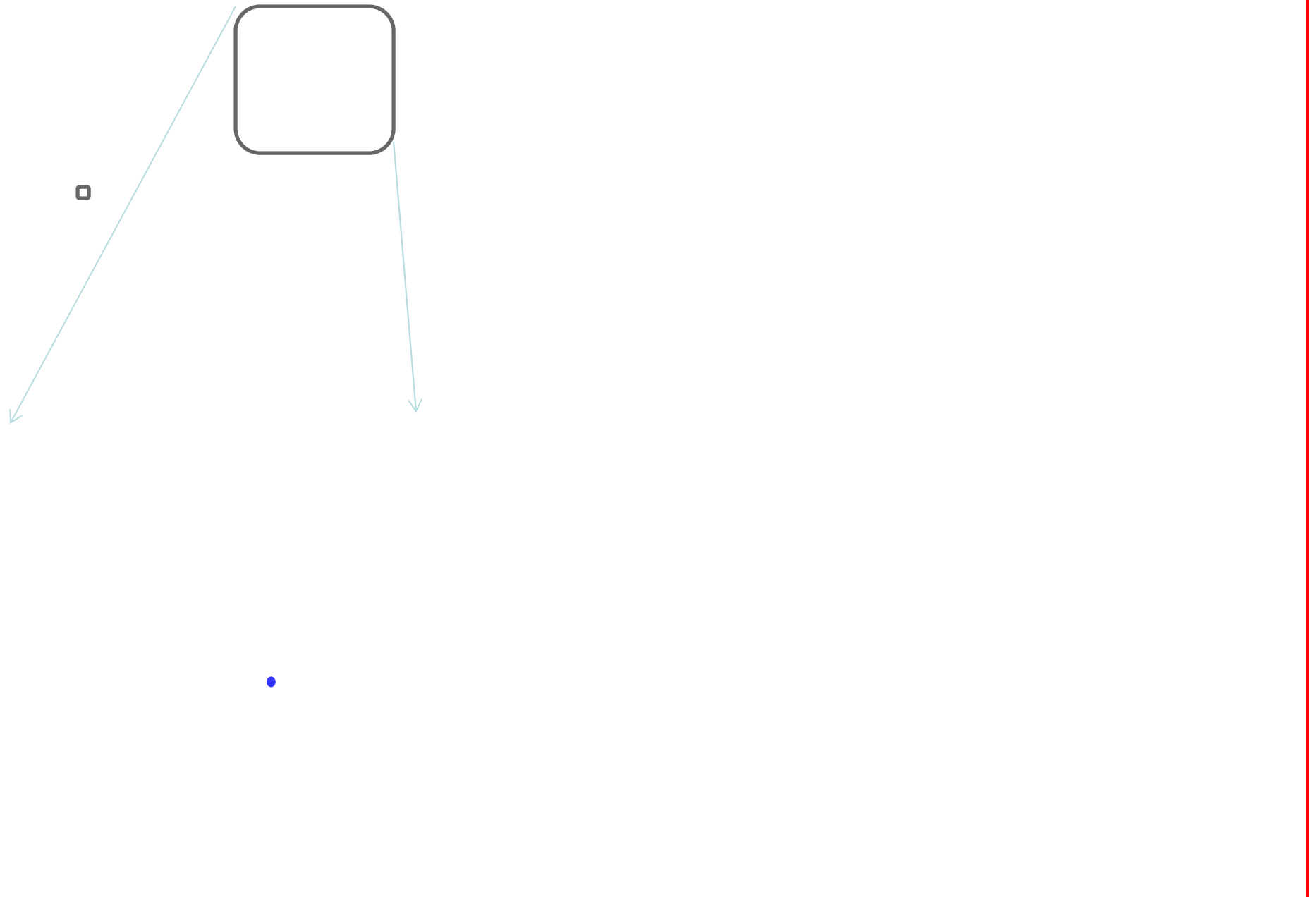


Table 3

Patient- #	Main Resident Village / District	Date of Emergence of 1st GW	Age	Gender	Ethnicity	Occupation	# worms
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## MALI: 42% CONTAINMENT, 79% REDUCTION IN CASES IN 2011

Mali's Guinea Worm Eradication Program has reported a final total of 12 cases (42% contained) from 6 localities during 2011, compared to 57 cases (79% contained) reported in 2010. All 5 cases reported in Kidal District were in the same family. Eight of the patients were female, 6 were white Touaregs, 2 black Touaregs, 2 B, and one each Sarakole and Songhai. The program applied ABATE in 92% of 26 endemic villages in 2011, compared to 63% of endemic

Table 4

**Gog Woreda-Dracunculiasis Eradication Program: 2011 Patient Data**

Village of Detection	Month	Case Number	Age	Sex	Date Worm First Emerged	Date VBV First Saw Case	Date Bandaging Began	Date Worm Completely Removed or Cut	Date Supervisor Confirmed Case	Name of Reporter	Date Admitted into CCC	Date Discharged from CCC	Location of Worm Emergence	Did Patient Enter Water with worm	Imported?	Case Contained?	Likely Importation Location	Likely Source of Infection	
Abawiri	March	Marcht TJ73.7826	1.2609	TD	(Left Leg (Upper )TP -1.2609	TD(Inside Calf))-3681.5	(No)-2765.2	(No)-2373.9	(Yes)-6842.1	(Pigtonyi, Aniche)TJ-73.7826	-4.8696	TD[Abawiri]-2851.6	(May)-2936.9	(3.2)-957.7	(40)-452.9	(M)-1993.1	(7/5/2011)-2020.5	(23/4/2011)-1638.2	(23/4/2011)TJ35.0435

## 16<sup>TH</sup> ANNUAL PROGRAM MANAGERS MEETING HELD AT THE CARTER CENTER

High level delegations from Chad, Ethiopia, Mali and South Sudan participated in the 16th Annual Program Managers Meeting that was held at The Carter Center on March 1-2, 2012. Chad's delegation was led by the

Table 5

## Dracunculiasis Eradication Campaign: Status of Interventions:2011

Countries Reporting Cases in 2010	Number of reported cases (indigenous) in 2011	Number of reported cases (imported) in 2011*	% of all cases reported that were contained during 2010	Overall % change in indigenous cases in villages/localities under surveillance during the same period of 2010 and 2011	Villages/Localities											
					Villages Under Active Surveillance in 2011						Status of Interventions in Endemic Villages in 2011					
					Number	% Reporting Monthly	No. reporting zero cases	No. reporting one or more cases	No. reporting only imported cases**	No. reporting indigenous cases	Endemic villages 2010-2011	% reporting monthly^	% with filters in all households^	% using Abate^	% with one or more sources of safe water^	% provided health education^
Sudan	1,028	0	74%	-39%	5,882	100%	5,419	463	338	125	304	100%	100%	85%	25%	95%
Mali	12	0	42%	-79%	102	100%	96	6	0	6	26	100%	100%	92%	40%	100%
Chad†	10	0	40%	0%	42	85%	33	9	0	9	NA	NA	NA	NA	NA	NA
Ethiopia	6	2	88%	-68%	67	100%	62	5	2	3	6	100%	100%	100%	83%	100%
Total	1,056	2	73%	-41%	6,093	99%	5,610	483	340	143	336	100%	100%	86%	27%	95%
Total outside Sudan	28	2	53%	-67%	211	97%	191	20	215	18	32	100%	100%	94%	48%	100%

\* Imported from another country

\*\* imported from another country or from another in-country disease-endemic village

^ The base of the percentage is the number of villages/localities where the program applied interventions during 2010-2011

† Chad is not a disease-endemic country, but one with an outbreak. Hence, there are no official disease-endemic villages. However the 10 cases of Guinea worm disease reported during 2010 were reported from 8 villages and the 10 cases reported during 2011 were from 9 different villages.

NA = Not applicable.

## GUINEA WORM ERADICATION ON FILM BROADCASTS

During April, 2012 Cielo Productions documentary film *Foul Water Fiery Serpent* will air on Public Broadcasting Stations (PBS) through ~~American~~ Public Television (APT) in the cities listed below.

- x Atlanta (GPB) – April 4, 2012 @ 7 p.m.
- x Portland (OPB) – April 5, 2012 @ 8 p.m. (OPB Plus)
- x Denver (KBDI) – April 5, 2012 @ 9 p.m.; April 6, 2012 @ 12 a.m.; April 7, 2012 @ 7 p.m. on channel 12.2
- x Seattle (KCTS) – April 6, 2012 @ 12 p.m.; April 22, 2012 @ 11 p.m.
- x Sacramento (KVIE) – April 11, 2012 @ 11 p.m.; April 13, 2012 @ 2 a.m.; April 16, 2012 @ 4 a.m. on KVIE2; April 18, 2012 @ 7 p.m. on KVIE2.
- x Kansas City (KCPT) – April 20, 2012 @ 10 p.m.
- x Cleveland (WVIZ) April 22, 2012 @ 3 p.m.
- x Los Angeles (KLCS) April 24, 2012 @ 8 p.m.
- x South Carolina (SCETV) – April 30, 2012 @ 10 p.m. (SCETV is a statewide network that overlaps into GA & NC).

## MEETINGS

The 16<sup>th</sup> meeting of Program Review of all the National Guinea Worm Eradication Programs sponsored by WHO will be held in Addis Ababa on March 26-29, 2012. Representatives of all endemic (Ethiopia, Mali, and South Sudan), precertification countries (Chad, Cote d'Ivoire, Ghana, ~~Kenya~~, Niger, Nigeria and Sudan) and other countries yet to be certified (Angola, DRC and Somalia) will participate. A planning meeting of WHO/AFRO countries focusing on strengthening the surveillance of Guinea worm disease will be held on 30 March 2012.

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

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