Memorandum

Date: March 12, 2012

Í

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

Subject: GUINEA WORM WRAP-UP #210

To: Addressees

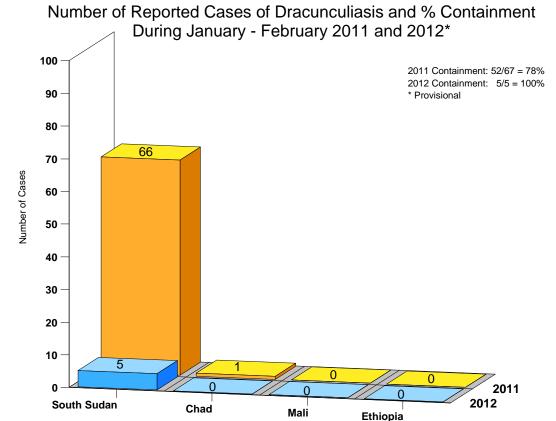
Detect and Explain Every Case! Contain Every Worm!

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 the 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 Narus 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 each) in Kapoeta East County, and in Karakamuge Payam, Kapoeta North County. Three of these five cases 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% each 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 case 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, over 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 18 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 of 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 Pibor Counties) to ascertain whether transmission of GWD remained endemic or not. Zero cases of GWD were found, but the two teams, one led by SSGWEP Director <u>Makoy Samuel Yibi</u> and the other by WHO staff <u>Mr. Evans Lyosi, learned</u> (from recently displaced Murle tribal group residents of Fertait Payam, Pibor County) of 6 rumors (all previously unreported) about alleged cases of the disease in that Payam during 2011.

The SSGWEP achieved dramatic reductions in endemic areas west of the Nile during 2011, compared to 2010. Since the peak transmission season for endemic areas east of the Nile begins earlier, we are beginning to see in 2012 the impact of the SSGWEP's hard work in Eastern Equatoria last year. WATCH THIS SPACE!

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM

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

State County Jan Feb Mar Apr May Jun Jul Aug Sept O Eastern Equation Kapoeta East 3 / 4 30 / 39 76 / 96 94 / 115 129 / 1154 77 / 100 32 / 39 16 / 20 77 / 8 42 / 4 Kapoeta Scuth 0 / 0 12 / 14 18 / 27 30 / 35 25 / 31 20 / 24 8 / 13 3 / 3 3 / 4 2 / 4 Kapoeta Scuth 0 / 0 12 / 14 18 / 27 30 / 35 25 / 31 20 / 24 8 / 13 3 / 3 3 / 4 2 / 10 STATE TOTAL 3 / 4 42 / 53 94 / 124 130 / 161 164 / 186 9/ 132 40 / 52 19 / 24 10 / 12 6 / 0 Jonglei Marc 0 / 0 3 / 6 2 / 10 1 / 9 5 / 31 2 / 4 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 / 0 0 / 0 0	01-11-	0			ABES REI (contained / Case	,						%
Equation Equation Kapoeta North 0 / 0 12 / 14 18 / 27 30 / 35 25 / 31 20 / 24 8 / 13 3 / 3 3 / 4 2 / / 2 / 10 STATE TOTAL 3 / 4 42 / 53 94 / 124 130 / 11 6 / 11 10 / 11 4 / 8 0 / 0 0 / 1 0 / 0	State	County	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total	Contained
Equatorial Magoeta South O / 0 12 / 14 18 / 27 30 / 35 25 / 31 20 / 24 8 / 13 3 / 3 3 / 4 2 / 2 / 4 STATE TOTAL 3 / 4 42 / 53 94 / 124 130 / 161 164 / 116 99 / 132 40 / 52 19 / 24 10 / 12 6 / 0 Jonglei Ploor 0 / 0	_	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 South 0 / 0 0 / 1 6 / 11 10 / 11 4 / 8 0 / 0 0 / 1 0 / 0 0 / 0 STATE TOTAL 3 / 4 42 / 53 94 / 124 130 / 161 184 / 196 99 / 132 40 / 52 19 / 24 10 / 12 0 / 0		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%
Pibor 0 / 0 3 / 6 2 / 10 1 / 9 5 / 31 2 / 4 0 / 0 1 / 2 0 / 0 0 / 0 Jonglei Ayod 0 / 0		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%
Jonglei Ayad 0 / 0 <t< td=""><td>STAT</td><td>E TOTAL</td><td>3 / 4</td><td>42 / 53</td><td>94 / 124</td><td>130 / 161</td><td>164 / 196</td><td>99 / 132</td><td>40 / 52</td><td>19 / 24</td><td>10 / 12</td><td>6/9</td><td>5 / 7</td><td>1 / 1</td><td>613 / 775</td><td>79%</td></t<>	STAT	E 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 Ayod 0 / 0 <t< td=""><td></td><td>Pibor</td><td>0 / 0</td><td>0.40</td><td>0 / 40</td><td>4.40</td><td>5 / 04</td><td>0.1.4</td><td>0.40</td><td>4.40</td><td>0.4.0</td><td>0.4.0</td><td>0.40</td><td>0.40</td><td>44.4.00</td><td>220/</td></t<>		Pibor	0 / 0	0.40	0 / 40	4.40	5 / 04	0.1.4	0.40	4.40	0.4.0	0.4.0	0.40	0.40	44.4.00	220/
Warra 0 / 0 <th< td=""><td>Jonalei</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0 / 0</td><td>0 / 0</td><td>14 / 62</td><td>23%</td></th<>	Jonalei												0 / 0	0 / 0	14 / 62	23%
Unit Unit <th< td=""><td><u>-</u></td><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0 / 0</td><td>0/0</td><td>0 / 0</td><td>0%</td></th<>	<u>-</u>	-											0 / 0	0/0	0 / 0	0%
Marrap Tonj North 1 / 1 0 / 0 1 / 1 2 / 2 4 / 4 8 / 13 4 / 8 8 / 11 5 / 7 2 / 2 Warrap Tonj East 0 / 0 0 / 0 0 / 0 0 / 0 3 / 4 7 / 9 13 / 15 2 / 3 8 / 9 3 / 4 Warrap Tonj South 0 / 0 <td>т</td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>0 / 0</td> <td>0 / 0</td> <td></td> <td>23%</td>	т				1								0 / 0	0 / 0		23%
Warrap Tonj East 0 / 0			070	3/6	2 / 10	1/9	5/31	2/4	070	1/2	070	0 / 0	070	0 / 0	14 / 62	2376
Warrap Tonj South 0 / 0		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%
Viainap Gogrial East 0 / 0		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%
Gogrial East 0 / 0	Warran	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%
Twic Mayardit 0 / 0	manap	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%
STATE TOTAL 1 1 0 0 1 2 2 8 9 16 23 22 35 13 15 18 5 Westem Bahr Al Ghazal Jur River 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%
Western Bahr Al Ghazal Jur River 0 / 0 0 / 0 0 / 0 1 / 1 0 / 0 0 / 2 1 / 1 0 / 0 0 / 0 TOTAL 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%
Ghazal Jur River 0 / 0 0 / 0 0 / 0 0 / 0 1 / 1 0 / 0 0 / 2 1 / 1 0 / 0	STAT	E 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%
Ghazal Jur River 0 / 0 0 / 0 0 / 0 0 / 0 1 / 1 0 / 0 0 / 2 1 / 1 0 / 0	Western Bahr A	AI														
Lakes Awerial 0 / 0 0 / 0 1 / 1 2 / 2 1 / 4 12 / 13 7 / 11 3 / 3 1 / 3 7 / 7 Cuibet 0 / 0 <		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%
Auklat 0 / 0 0 / 0 0 / 0 1 / 1 1 / 2 1 / 4 1 / 1 0 / 1 1 / 3 1 / 1 </td <td>TC</td> <td>OTAL</td> <td>0 / 0</td> <td>0/0</td> <td>0/0</td> <td>0 / 0</td> <td>1 / 1</td> <td>0 / 0</td> <td>0 / 2</td> <td>1 / 1</td> <td>0 / 0</td> <td>0 / 0</td> <td>0 / 0</td> <td>0 / 0</td> <td>2 / 4</td> <td>50%</td>	TC	OTAL	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%
Cuibet 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 1 / 1 Yirol E. 0 / 0 <td< td=""><td>Lakes</td><td>Awerial</td><td>0/0</td><td>0 / 0</td><td>1 / 1</td><td>2 / 2</td><td>1 / 4</td><td>12 / 13</td><td>7 / 11</td><td>3/3</td><td>1/3</td><td>7 / 11</td><td>8 / 10</td><td>0 / 0</td><td>42 / 58</td><td>72%</td></td<>	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%
Yirol E. 0 / 0												1 / 1	0 / 0	0 / 0	1 / 1	0%
Yirol W. 0 / 0												0 / 0	0 / 0	0 / 0	0 / 0	0%
Maper 0 / 0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0 / 0</td><td>0%</td></th<>												0 / 0	0 / 0	0 / 0	0 / 0	0%
Rumbek Centre 0 / 0		Maper	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		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%
Central Equatoria Terekeka 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 0 / 1 0 / 0 1 / 1 0 / 0 Juba 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0				0 / 0	0 / 0			0 / 0				0 / 0	0 / 0	0 / 0	0 / 0	0%
Equatoria Terekeka 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 0 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 3 0 / 1 1 / 1 0 / 0 1 / 2 0 / 0 2 / 3 0 / 0 TOTAL 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 1 / 2 0 / 0 2 / 3 0 / 0	STAT	E 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%
Equatoria Terekeka 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 0 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 1 0 / 0 1 / 3 0 / 1 1 / 1 0 / 0 1 / 2 0 / 0 2 / 3 0 / 0 TOTAL 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 1 / 2 0 / 0 2 / 3 0 / 0																
TOTAL 1 / 1 1 / 1 1 / 1 0 / 0 1 / 3 0 / 1 1 / 2 0 / 0 2 / 3 0 /		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%
	т	OTAL	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%
SOUTHERN SUDAN TOTAL 5 / 6 46 / 60 99 / 137 135 / 174 180 / 244 129 / 173 70 / 102 37 / 48 28 / 36 19 /	SOUTHERN SU	UDAN TOTAL	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%
	% CONTAINED	0			Î							68%	74%	100%	74%	

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														
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*			
SOUTH SUDAN	² / ₂	³ / ₃	/	/	/	/	/	/	/	/	/	/	5 _{/5}	100		
MALI	0 _{/ 0}	0 _{/ 0}	/	/	/	/	/	/	/	/	/	/	⁰ / ₀			
CHAD	0 _{/ 0}	0 _{/ 0}	/	/	/	/	/	/	/	/	/	/	⁰ / ₀			
ETHIOPIA	0 _{/ 0}	0 _{/ 0}	/	/	/	/	/	/	/	/	/	/	⁰ / ₀			
TOTAL*	² / ₂	³ / ₃	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0/0	0 / 0	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.

COUNTRIES REPORTING CASES					NUMB	BER OF CASES C	ONTAINED / NUM	MBER OF CASE	S 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^	0 _{/ 0}	0 _{/ 0}	¹ / ₂	1 / ₁	4 / 4	1 / ₁	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	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
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	

Number of Cases Contained and Number Reported by Month during 2011

(Countries arranged in descending order of cases in 2010)

* 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.

Table 2

Figure 2 Number of Indigenous Cases Reported During the Specified Period in 2011 and 2012*, and Percent Change in Cases Reported

Country	Indigenou Repo			% CHANGE 20	10 - 2011*	
	2011	2012*	-100%	-50%	0%	50%
Chad (2)	1	0	<mark>-100%</mark>			
South Sudan (2)	66	5	<mark>-92%</mark>			
Mali (2)	0	0			~	
Ethiopia (2)	0	0			~	
Total	67	5	<mark>-93%</mark>			
All countries, excluding Sudan	1	0	-100%			

* Provisional.Numbers in parentheses indicate months for which reports have been received, i.e., (2) = January - February. Excludes cases exported from one country to another.

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 in new pledges to the Guinea Worm Eradication Program were announced in London on January 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 up to 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.

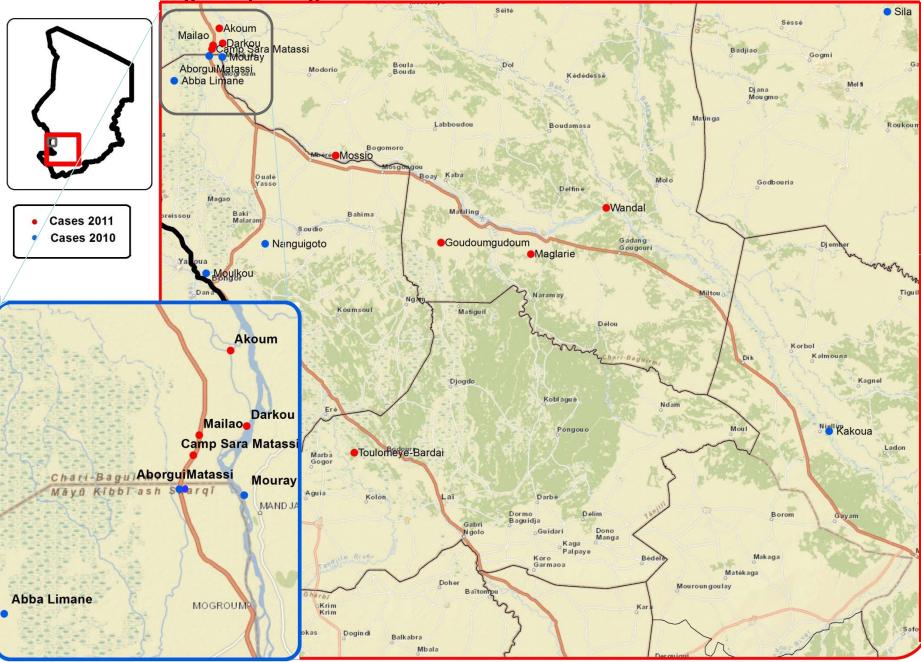
CHAD: INCREASING COVERAGE BY ACTIVE SURVEILLANCE

Chad reported a total of 10 cases, only four of them contained, from 9 villages during 2011. None of the villages where cases were detected in 2011 had been found to have a case in 2010, and none of the 8 villages with known cases in 2010 reported a case in 2011. Seven of the 17 known affected villages in 2010 and 2011 are clustered along the Chari River in Bousso District of Chari Baguirmi Health Region (Figure 3, Table 3). Seven hundred and seventy-seven (777) village volunteers have been trained to conduct active surveillance in 414 (64%) of the 642 villages believed to be a highest risk (based on the known cases discovered in 2010-2011). Given the apparently unusual epidemiology manifest in this outbreak so far however, the true areas at risk cannot be known until coverage with active surveillance is more complete. However, during February 565 at–risk villages Bousso, Bongor, and Fianga Districts initiated active surveillance and rendered their first monthly report to the GWEP, with none reporting cases of GWD during the month.

WHO reports that during December 2011 and again during January 2012, fifteen district level consultants and 10 district surveillance officers for polio eradication, respectively, were trained to conduct surveillance for cases of GWD in their areas of assignment as part of their regular duties. Contracts were signed with 22 of 33 local radio stations in areas free of GWD to broadcast jingles during January- March 2012 about the availability of rewards for reports leading to confirmation of cases of the disease.

Figure 3

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



Chad Guinea Worm Eradication Program Reported Cases of Guinea Worm Disease: 2010 - 2011*

Patient- #	Main Resident Village / Di		uinea Worm Dia Date of Emergence of 1st GW	Age	Gender	Ethnicity	Occupation	# worms
2010-1	Nanguigoto / Gu	uelendeng	04 2010	60	F	Massa	housewife	2
2010-2	Nanguigoto / Gu	uelendeng	18-Jun-10	27	F	Massa	housewife	1
2010-3	Matassi / Ma	assenya	24-Aug-10	27	F	Kabalay	housewife	1
2010-4	Madjafa and Matassi / Do	ourbali	10-Aug-10	25	F	Gouley	housewife	2
2010-5	Abba Limane / Gu	uelendeng	10-Aug-10	15	М	Gouley (Tandjile)	student/ fisherman	2
2010-6	Abourgoui / Ma	assenya	1-Jul-10	60	М	Massa	village chief	5 ??
2010-7	Moulkou / Gu	uelendeng	17-Sep-10	4	F	Sara	child	1
2010-8	Kakoua / Sa	arh	1-Oct-2010	9	М	Massa	child	2
2010-9	Sila / Me	elfi	15-Jul-10	10	F	Sara	child	2
2010-10	Sila / Me	elfi	15-Sep-10	42	F	Niellim	housewife	2
2011-1	Toulomeye-Bardai / Be	era	18-Feb-11	11	F	Nangtchere	student	1
2011-2	Wandal / Bo	ousso	5-Apr-11	12	F	Baguirmi	student	1
2011-3	Mailao / Ma	andalia	17-Jul-11	12	М	Gurri	student	1
2011-4	Mossio / Bo	ousso	17-Jul-11	55	F	Massa	housewife	2
2011-5	Goudoumgudoum (Bailli) / Bc	ousso	4-Aug-11	13	М	Moussei	herder	1
2011-6	Goudoumgudoum (Bailli) / Bc	ousso	6-Aug-11	16	М	Moussei	student	1
2011-7	Darkou / Ma	andalia	10-Aug-11	22	М	Massa	fisherman	1
2011-8	Akoum / Ma	andalia	29-Aug-11	6	М	Massa	child	1
2011-9	Camp Sara Matassi (Gambarou Health Center catchement area) / Ma	andalia	10-Dec-12	90	М	Mousgoum	farmer	1
2011-10	Maglarie Ferrick (camp) / Bc	ousso	17-Dec-11	37	М	Fulbe	Nomadic herder	1

 * Cases # 2010-1and 2010-2 are aunt and niece. Cases # 2011-5 and 2011-6 are siblings.

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 Bobo, and one each Sarakole and Songhai. The program applied ABATE in 92% of 26 endemic villages in 2011, compared to 63% of endemic villages in 2010, and reportedly had cloth filters in all households of all endemic villages in 2011. For the first time, Mali exported no known cases to another country during 2011. Mali's transmission season for GWD is in the second half of the calendar year. Mali's last known case, which was uncontained, was in November 2011. The unexplained origin of cases in Segou Region in recent years is a lingering concern, as is the on-going insecurity in nearly all endemic areas. In 2012, the program will increase the cash reward offered for reporting a case of the disease to 20,000 CFA (~US\$40), from 5,000 CFA last year.

Recent insecurity incidents in Kidal and Gao Regions (both with endemic GWD) led to displacement of residents into neighboring countries and to other parts of Mali and to alerts by WHO to all areas involved about the need to intensify surveillance for possible cases of GWD, particularly in Niger, Burkina Faso, Mauritania and within Mali itself, but also within camps established by United Nations organizations to care for those displaced.

ETHIOPIA: LAST KNOWN UNCONTAINED CASE IN MARCH, LAST CASE IN JUNE 2011

It has now been eight successive months since the last known case of Guinea worm disease was detected in Ethiopia. Five villages reported six indigenous and 2 imported cases. All but one of the villages that reported cases in 2010 and/or 2011 have a source of safe drinking water (Table 5). The Ethiopia Dracunculiasis Eradication Program (EDEP) has a new national program coordinator, <u>Mrs. Frehiwot Belete</u>, who was appointed as of November 30, 2011. She visited Gog Woreda in Gambella District in December 2011, attended the program review meeting in December (see below) and returned to visit Gog Woreda in early March 2012. <u>Dr. Gautam Biswas</u> of WHO headquarters, <u>Dr. Abebayehu Mengistu</u> and <u>Mr. Getachew Temeche</u> of WHO/Ethiopia office, and <u>Dr. Zerihun Tadesse</u> and <u>Mr. Adam Weiss</u> of The Carter Center were among the 58 participants and two journalists who attended the annual in-country review of the EDEP that was held in Gambella on January 17, 2012.

<u>Mr. Ted Chaiban</u>, Country Director for UNICEF, visited Gog Woreda during February to learn about the status of GWD and provision of safe water to affected communities. UNICEF plans to drill two more boreholes in the endemic parts of Gog Woreda (in Utuyu, the only remaining endemic village without safe drinking water, and in Menyo pond area). Mr. Chaiban encouraged the government and UNICEF authorities in Gambella Region to continue to support the EDEP.

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	Importation Information
Abawiri	March	1.1	10 M	30/3/2011	28/3/2011	28/3/2011	16/4/2011, Cut	30/3/2011	Self Reporter	29/3/2011	28/4/2011	Left Leg (Upper Calf)	No	Yes	Yes	Utuyu Forest	Kubedi	KUBEDI IS NEAR TO BATH IITH, WHICH IS A WATER SOURCE USED BY PEOPLE HUNTING AND COLLECTING STICKS NEAR UTUYU
Utuyu	April	2.1	35 F	18/4/2011	3/4/2011	3/4/2011	24/4/2011, Cut	18/4/2011	Self Reporter	17/4/2011	24/6/2011	Right Foot (Outside of Heel)	No	No	Yes		Bath lith, Pintoyi	KUBEDI IS NEAR TO BATH IITH, WHICH IS A WATER SOURCE USED BY PEOPLE HUNTING AND COLLECTING STICKS NEAR UTUYU, PIGNTONYI IS ON THE WALKING PATH FROM ABAWIRI TO PRC-AGNUAK
Utuyu	Мау	2.2	35 F	6/5/2011	3/4/2011	2/5/2011	11/5/2011, Cut	6/5/2011	Self Reporter	17/4/2011	24/6/2011	Left Foot (Top of Foot)	No	No	Yes		Bath lith, Pintoyi	KUBEDI IS NEAR TO BATH IITH, WHICH IS A WATER SOURCE USED BY PEOPLE HUNTING AND COLLECTING STICKS NEAR UTUYU, PIGNTONYI IS ON THE WALKING PATH FROM ABAWIRI TO PRC-AGNUAK
Utuyu	Мау	2.3	35 F	20/5/2011	3/4/2011	17/5/2011	24/5/2011, Cut	20/5/2011	Self Reporter	17/4/2011	24/6/2011	Groin/Private	No	No	Yes		Bath lith, Pigntonyi	KUBEDI IS NEAR TO BATH IITH, WHICH IS A WATER SOURCE USED BY PEOPLE HUNTING AND COLLECTING STICKS NEAR UTUYU, PIGNTONYI IS ON THE WALKING PATH FROM ABAWIRI TO PRC-AGNUAK
Abawiri	Мау	3.1	40 M	3/5/2011	23/4/2011	23/4/2011	4/5/2011, Cut	3/5/2011	Self Reporter	4/5/2011	15/7/2011	Left Leg (Upper Inside Calf)	No	No	Yes		Pigntonyi, Aniche	RESIDENT IN ABAWIRI, BUT REGULARLY TRAVELS TO PRC-AGNUAK TO HELP COLLECT REFUGEE RATIONS. HE IS AN AVID HUNTER AND TRAVELS EXTENSIVELY WITHIN THE FOREST NEAR ABAWIRI. HE RECALLED SPENDING 3 DAYS IN MAY 2010 NEAR THE PIGNTONGY POND TO CUT LARGE TREES FOR SALE IN PUGNIDO.
Abawiri	Мау	3.2	40 M	7/5/2011	23/4/2011		8/5/2011, Cut 20/5/2011, Re-Emerge 24/5/2011, Cut	7/5/2011	Self Reporter	4/5/2011	15/7/2011	Right Foot (Inner Ankle)	No	No	Yes		Pigntonyi, Aniche	
Abawiri	May	3.3	40 M	28/5/2011	23/4/2011	23/5/2011	12/07/2011, Pullout	28/5/2011	Self Reporter	4/5/2011	15/7/2011	Right Thigh (Under)	No	No	Yes		Pigntonyi, Aniche	
Atheti	Мау	4.1	38 F	20/5/2011	18/5/2011	19/5/2011	27/6/2011, Cut	20/5/2011	Self Reporter	23/5/2011- Outpatient 29/5/2011- Inpatient	1/7/2011	Right Leg (Inner Calf)	No	No	Yes		Chieng, Tanchay, Awowi	HAD GWD IN 2010. ROUTINELY VISITS HER MOTHER IN WICHINI (WHO ALSO HAD GWD IN 2010, BUT SHOWS NO SIGN OF GWD NOW). LIVES IN A SECTION OF ATHETI CALLED 'CHIENG' AND DRINKS FROM CHIENG AND AWOWI PONDS. SHE IS A REFUGEE AND COMES TO PRC- AGNUAK FOR MONTHLY RATIONS. NO ACKNOWLEDGED TRAVEL TO ABAWIRI/UTUYU/CHEYANAK.
Abawiri	May	5.1	17 M	26/5/2011	10/5/2011		30/5/2011, Cut, 4/6/2011, Re-Emerge 20/6/2011, Cut		Self Reporter	20/5/2011		Right Leg (Calf)	No	No	Yes		Pigntonyi	RESIDENT IN ABAWIRI, BUT REGULARLY TRAVELS TO PUCNIDO/ACENGA. HE IS AN AVID HUNTER AND TRAVELS EXTENSIVELY WITHIN THE FOREST NEAR UTUYU/CHEYANAK. TRAVELLED WITH OMOD OMAN ATI (FEBRUARY 2010 CASE) FOR HUNTING IN FEBRUARY 2010. HE ALSO HUNTED WITH OKOTH OKACH (MARCH 2011 CASE). HE ALSO RECALLED SPENDING 3 DAYS IN MAY 2010 NEAR THE PIGNTONGY POND WITH ORIEMI (2011 CASE 31-3:3) TO CUT LARGE TREES TO FOR SALE IN PUGNIDO.
Atheti	June	6.1	45 M	21/6/2011	9/6/2011		7/7/2011, Cut, 17/7/2011, Re-emerge 20/7/2011, Pullout	21/6/2011	Ariet Agwa (Grandchild)	22/6/2011	21/7/2011	Left Thigh (Under)	No	Yes		Utuyu	Lel Doth	RESIDENT IN ATHETI (NEAR ABELLEN WALKING PATH). SPENT 1 MONTH IN UTUVU (WITH HIS SISTER) DURING JULY 2010. ADMITS NOT FILTERING WATER. ALSO VISITS ABAWIRI, WHERE HIS UNCLE LIVES.
Abawiri	Septemb	3.4	40 M	16/9/2011	16/9/2011	16/9/2011	16/9/2011, Emerges dead 20/9/2011, Pullout of	16/9/2011	Omod Ogebo (GWO)	16/9/2011	3/10/2011	Left knee (Center)	No	No	Yes		Abawiri, Pigntonyi pond	THE WORM EMERGED AS A RESULT OF A FORCED INCISION ON THE KNEE

16TH 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 Ministry of Public Health's Secretary-General Dr. Kanika Djam Nargaye and included the National Coordinator, Mr. Ngarodjel Djimadoumadji. Deputy Director-General Dr. Daddi Jimma Wayessa represented Ethiopia's Ministry of Health, and National Coordinator Dr. Gabriel Guindo represented Mali's Ministry of Public Health. South Sudan's representatives included Deputy Minister Dr. Yatta Lori Lugor, Minister of Health for Eastern Equatoria State Dr. Felix Sam Makuja, Undersecretary Dr. Makur Matur Karion, Director-General of Preventative Medicine Dr. Lul Riek, and National Program Coordinator Mr. Samuel Makoy Yibi of the Ministry of Health, as well as Undersecretary Isaac Liabwel and Director-General Rural Water Supply and Sanitation Mr. Peter Mahal Dhieu Akat Chooli of the Ministry of Water Resources and Irrigation. Other senior representatives included Mr. Michael Forson (headquarters) and Mr. Ken Maskall (South Sudan office) of UNICEF, Dr. Gautam Biswas (headquarters), Dr. Alhousseini Maiga (African Regional Office), and Dr. Riadh Ben-Ismail (Eastern Mediterranean Regional Office) of WHO, Drs. Sharon Roy and Mark Eberhard of CDC, and Drs. Donald Hopkins and Ernesto Ruiz-Tiben of The Carter Center. Carter Center country representatives in each of the four countries also participated in the meeting. UNICEF, WHO and The Carter Center supported participation by the high level representatives. Former U.S. President Jimmy Carter addressed the participants by telephone briefly on the second morning of the meeting to thank everyone for the progress achieved to date and to ask for everyone's help to ensure that he will "outlive the Guinea worm".

IN BRIEF



World Health

Organization

The Executive Board of WHO reviewed the Progress Report on the global Guinea Worm Eradication Program at its meeting in Geneva on January 23, 2012. The delegate of Sierra Leone commended the progress on behalf of the African Region, and expressed concern about poor access to safe drinking water and the risks posed

by nomadic populations and weak surveillance. The delegate from Yemen expressed the commitment of that Region to finish eradicating the disease. The representative from the United Kingdom, which is not currently a member of the Executive Board, was pleased to note the progress to date, acknowledged the remaining challenges, and stated his government's commitment to ensure that resources were available to The Carter Center and WHO to complete and certify eradication.

Dracunculiasis Eradication Campaign: Status of Interventions:2011

Countries Reporting Cases in	Number of reported cases	Number of reported cases	% of all cases reported that were	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													
2010	(indidenous) (in	(imported) in 2011*	contained during 2010		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 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.

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

MEETINGS



World Health Organization The 16th 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.



We regret to report the deaths of <u>Mr. Marko Logule</u>, case containment center watchman in Naliel, Kapoeta East County, on January 1, 2012, and of <u>Mr. Henry</u> <u>Woja</u>, cook at the SSGWEP compound in Rumbek, South Sudan, on January 23, 2012. We extend our deepest condolences to their families.

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/quineaworm/publications.html#gwwp

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_english.html.



Organization

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