Memorandum



Date: September 22, 2015

From: WHO Collaborating Center for

Research, Training and Eradication of Dracunculiasis, CDC

Subject: GUINEA WORM WRAP-UP #236

To: Addressees

"I'd like the last Guinea worm to die before I do." Former U.S. President Jimmy Carter, 20 August 2015

#### 80% FEWER CASES IN JANUARY-AUGUST 2015

As of mid-September, the provisional total number of cases of Guinea worm disease reported globally in January-August 2015 was only 15, which is an 80% reduction from the 75 cases that were reported during the same eight months of 2014 (Figure 1). This dramatic reduction is led by South Sudan, which slashed its cases by 95% in that period. Although South Sudan had most of its cases last year in July and August (43 of 70 total cases), Mali, which had the second-highest total cases in 2014 (40), had its peak number of cases (39) in September-November (Table 1). The low overall containment rate (36%) so far this year is mainly because neither the 8 cases in Chad nor the single case in Mali were contained; South Sudan contained 2 of its 4 cases and Ethiopia contained both of its cases.

Figure 1

REPORTED CASES OF DRACUNCULIASIS BY COUNTRY
DURING JANUARY - AUGUST 2014 and 2015\*

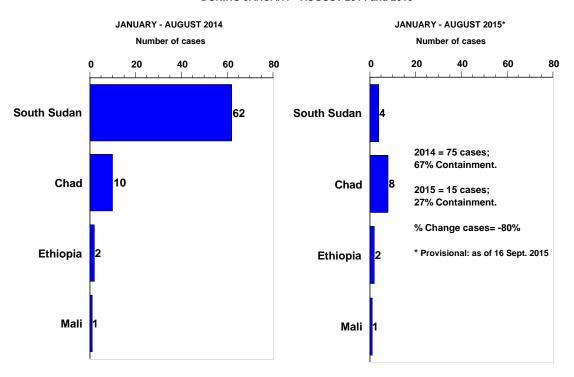


Table 1

# Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2015\*

(Countries arranged in descending order of cases in 2014)

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COUNTRIES WITH ENDEMIC					NUMBER	OF CASES CON	NTAINED / NUM	IBER OF CASES	REPORTED					% CONT.
TRANSMISSION	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SOUTH SUDAN	0/0	0/0	0/0	0/0	0/0	1/1	1/2	0/1	/	/	/	/	2/4	50
MALI <sup>§</sup>	0/0	0/0	0/0	0/0	0/0	0/0	0/1	0/0	/	/	/	/	0/1	0
CHAD	0/0	0/1	0/2	0/1	0/0	0/2	0/1	0/1	/	/	/	/	0/8	0
ETHIOPIA	0/0	0/0	0/0	0/0	1/1	0/0	0/0	1/1	/	/	/	/	2/2	100
TOTAL*	0/0	0/1	0/2	0/1	1/1	1/3	1/4	1/3	0/0	0/0	0/0	0/0	4 / 15	27
% CONTAINED	0	0	0	0	100	33	25	33					27	

#### \*Provisional

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were contained and reported that month.

Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

# Number of Reported Cases of Guinea Worm Disease Contained and Number Reported by Month during 2014 (Countries arranged in descending order of cases in 2013)

						-								$\overline{}$
COUNTRIES WITH ENDEMIC	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													
TRANSMISSION	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SOUTH SUDAN	0/0	0/0	3/3	3/4	3/4	6/8	13 / 22	14 / 21	4/5	1/3	0/0	0/0	47 / 70	67
CHAD	1/1	1/1	1/1	1/1	0/1	0/1	1/3	0/1	1/1	0/0	1/1	1/1	8 / 13	62
MALI <sup>§</sup>	0/0	0/0	0/0	0/0	0/0	0/0	0/0	1/1	14 / 18	12 / 13	8/8	0/0	35 / 40	88
ETHIOPIA	0/0	0/0	0/0	0/0	0/0	2/2	0/0	0/0	0/0	0/0	0/0	0/1	2/3	67
TOTAL*	1/1	1/1	4/4	4/5	3/5	8 / 11	14 / 25	15 / 23	19 / 24	13 / 16	9/9	1/2	92 / 126	73
% CONTAINED	100	100	100	80	60	73	56	65	79	81	100	50	73	

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were contained and reported that month.

Cells shaded in yellow denote months when transmission of GWD from one or more cases was not contained.

<sup>§</sup>Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Tinbuktu and Gao Regions; in late April. One technical advisor deployed to Kidal in April 2013 continues to overeee the program in that region.

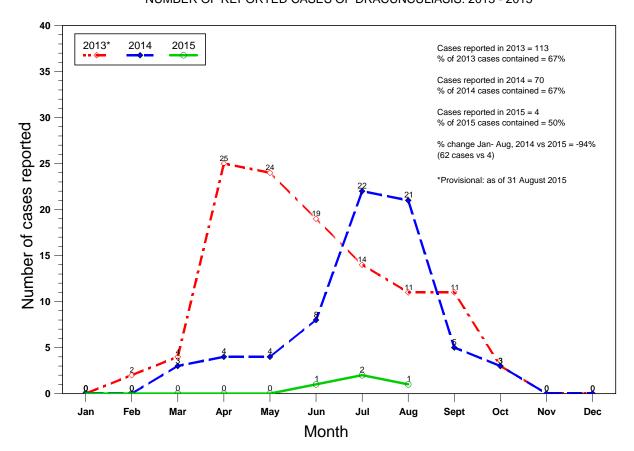
<sup>§</sup>Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Tinbuktu and Gao Regions; in late April, the GWEP deployed one technical advisor to Kidal to oversee the program during the transmission season (for the first time since 2012).

#### SOUTH SUDAN GWEP HOLDS MID-YEAR REVIEW

South Sudan's Guinea Worm Eradication Program (SSGWEP) held its Mid-Year Review at Kapoeta in Eastern Equatoria State on September 2-3, 2015. Led by the program's director, Mr. Samuel Makoy Yibi, participants included the director general of the Eastern Equatoria State Ministry of Health, the commissioners of Kapoeta East, Kapoeta North, and Kapoeta South Counties, technical advisors and program officers, as well as representatives of The Carter Center, WHO, UNICEF and the Bill & Melinda Gates Foundation.

Figure 2

SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM
NUMBER OF REPORTED CASES OF DRACUNCULIASIS: 2013 - 2015\*



The SSGWEP has reported only 4 cases in January-August 2015, 2 of which were contained. The presumed sources of 2 of the 4 infections have been ascertained; the two most recent cases are still under investigation (Table 2). For the first time the SSGWEP has found a dog with an emerging Guinea worm, in the same household as the latest human case. The dog is 3 years old and has lived in the patient's household for its entire life. It goes hunting with young boys and of course eats the scraps from what they hunt: dik dik, squirrel, rabbit and other small mammals. The dog eats scraps from the chickens and other meat the household eats as well as the sorghum the household eats. The household does not know any of the dog's habits regarding eating aquatic animals. The only fish they report eating is dry fish during dry season (November –

pending Laboratory Analysis

#### Table 2

# SOUTH SUDAN GUINEA WORM ERADICATION PROGRAM LINE LISTING OF CASES OF GWD DURING 2015\*

	Village or Localit	e or Locality of Detection					Case Contained?			Home Village				umed Source of Infection Identified?	Presume	ed Source of Infection is a Known EVA?			
Case #	Name	1 = 2 = EVAS NEVAS	Payam	County	Age Sex	Date GW Emerged	(Yes, No, or Pending)	If No, Date of Abate Rx*	1 = Imported 2= Indigenous	Name			(Yes / No)	Description	(Yes / No)	Actions?	Date Sent to	Diagnosis	CDC Accession Number
1.1	DAKBUONG	1	ABUYONG	AWERIAL	5 F	22-Jun-15	YES		2	DAKBUONG	4		YES	PATIENT WAS A CASE OF GWD DAKBUONG VILLAGE IN 2014. LIKELY INFECTED IN DAKBUONG IN 2014	YES		1-Jul-15	GUINEA WORM	PDB15-155
2.1	LORIWO	1	JIE	KAPOETA EAST	25 M	11-Jul-15	YES		2	LORIWO	5		YES	LIKELY INFECTED IN LOZUDOK OR KASSINGOR MOUNTAIN JIE VILLAGES IN 2014	YES		7-Jul-15	GUINEA WORM	PDB15-164
3.1						26-Jul-15											12-Aug-15	GUINEA WORM	PDB15-167
3.2	ANGOON	2	UDICI	JUR RIVER	12 F	25-Aug-15	- NO	28/Aug/15	2	ANGOON		2	NO	STILL UNDER INVESTIGATION	NO				
4.1						26-Aug-15											9-Sep-15	GUINEA WORM	PDB15-181
4.2	ALATIP	2	WUNLIT	TONJ EAST	28 F	10-Sep-15	- NO		2	ALATIP		2	NO	STILL UNDER INVESTIGATION	estigation no				

\* Provisional

EVAS = endemic villages under active surveillance

NEVS = Non Endemic Villages

May). There are no other dogs reported to have emerging worms at this time or anytime previously. Specimens from both of these latter infections are being sent to the Centers for Disease Control and Prevention (CDC) for laboratory examination. The surface water sources associated with the latest cases were or are being treated with ABATE@ Larvicide applications. During 2015 UNICEF rehabilitated 10 non-functional water points and drilled 7 new borehole wells in the endemic Kassingor and Nanyangachor areas of Kapoeta East County. The location of villages reporting confirmed cases of GWD in 2014 and so far during 2015 are shown in Figure 3.

Interviews of persons from 1,066 households in areas under active surveillance in Kapoeta East County (Kauto Central, Kauto East, Lotimor) of Eastern Equatoria State in July 2015 found 922 (86%) of households knew of the cash reward, while 71% of 367 interviewees in Kauto West, which is also under active surveillance, knew of the reward. Kauto West reported that 86% of the 14 cases reported there in 2014 have been visited weekly so far in 2015. In the active surveillance areas of Lakes State, 11 (92%) of the 12 cases reported there in 2014 have been visited weekly so far in 2015 (the 12th patient was visited weekly for six months and monthly for two months). Kauto West reported 1,513 rumors of cases and Awerial and Wulu Counties of Lakes State reported 329 rumors of cases in January-July 2015. In Risk Level II (adjacent to currently endemic counties) and Risk Level III (never endemic & low importation risk) areas, the SSGWEP investigated 99% of 136 rumors received in January-May 2015, and 99% of 219 rumors received in June-August 2015; 89% of the 219 rumors were investigated within 24 hours.

# CHAD: COVERAGE WITH INTERVENTIONS INCREASES

Chad has reported an eighth case of GWD for the year, in a 54 year old woman whose worm began to emerge on August 17 and was not contained. This infection was discovered after the patient's 5 year old granddaughter recognized the emerging worm, and informed her older brother that their grandmother had a worm that might be Guinea worm. Her brother then informed the Guinea worm village volunteer supervisor about his grandmother's condition. Five of the 8 cases reported so far this year have occurred outside of the villages under active surveillance, underscoring the unpredictable specific residences of human GW infections in Chad and perhaps indicating the efficacy of enhanced health education in the villages under active surveillance. (Table 3). Although two water impoundments were identified as possible sources of infection in two of the 8 cases, it is not certain infection was via drinking water. The monthly numbers of infected dogs meanwhile continues to decline at the end of the peak transmission season as in recent years (Figure 4). Overall, 301 (70%) of 430 infected dogs have been tethered to date in 2015 (compared to 40% of infected dogs in 2014). As illustrated in Figure 4, according to the most recent surveys, 87% (401/461) of households in priority villages, 89% (1056/1185) of households in fishing villages, and 98% (261/266) of fish vendors were reportedly practicing safe disposal of fish entrails.

Reward awareness: as of July, 15 (30%) of 50 persons surveyed in an area of N'Djamena were aware of the cash reward for reporting a case of GWD, while 3 (6%) of 50 were aware of the reward for reporting an infected dog. In the areas under active surveillance, 56 (85%) of 66 residents knew of the reward for reporting a case, and 45 (68%) of 66 residents knew of the reward for reporting an infected dog.

# Table 3

#### CHAD GUINEA WORM ERADICATION PROGRAM LINE LISTING OF CONFIRMED CASES OF GWD DURING 2015

					Patient						Presumed Source				Source of	f		
C !!	Village or Loc	ality of Det	tection	District	Region			Date GW	Case Co	ontained?	1 = Imported	Home Villa	age or Loca	lity	Infection I		Presumed	Source of Infection is a Known VAS?
Case #	Name	1 = VAS	2 = VNAS	District		Age	Sex	emerged (D/M/Y)	(Yes, No, or Pending)	If No, Date of Abate Rx	2= Indigenous	Name	1= VAS	2 = VNAS	(Yes or No)	Name	(Yes or No)	Actions/Comments?
1.1	Mourgoum		2	Dourbali	Chari Baguirmi	13	М	19-Feb-15	No	-	2	Mourgoum		2	No		No	Contaminated flowing water
2.1	Marabe I		2	Kyabe	Moyen Chari	8	F	7-Mar-15	No	-	2	Marabe I		2	No	-	No	Did not contaminate water
2.2								24-Mar-15										
2.3								13-Apr-15										
3.1	Diganaly	1		Guelendeng	Mayo-Kebi Est	9	М	28-Mar-15	No	6-Apr-15	2	Diganali	1		No	-	No	
3.2								5-Apr-15										
3.3								14-Apr-15										
4.1	Maicomb		2	Danamaji	Moyen Chari	3	M	28-Apr-15	No		2	Maicomb		2	No		No	
4.2								17-May-15										
4.3								17-May-15										
5.1	Mourabat	1		Ba Illi	Chari Baguirmi	14	M	24-Jun-15	No		2	Mourabat	1		Yes	Pond 1km of Pandki	Yes	The boy drank water from a contaminated pond last year. The pond was contaminated by a dog in Ngargue (1km of Pandori where the boy resided for several months last year)
6.1	Ferick Tchaguine		2	Tandjile	Logonne Occidental	18	М	26-Jun-15	No		1	Ferick Tchaguine		2	Yes	Pond 1km of Pandki	Yes	Although detected in Lai this case is linked to the one from Ba Illi as they were together in the Ba Illi area in 2014 and presumably drank water from the pond was contaminated by a dog in Ngargue (1km of Pandori where case #5 resided for several months last year)
7.1	Houa Ali		2	Am-Timan	Salamat	12	F	6-Jul-15	No		2	Goz-Arachidia		2	No		No	
8.1	Mana Belegna	1		Massenya	Chari Baguirmi	54	F	17-Aug-15	No		2	Boulama Bororo Centre	1		No		No	

VAS = village under active surveillance VNAS = village not under active surveillance

Figure 4 Chad Guinea worm eradication program
REPORTED GUINEA WORM INFECTIONS IN DOGS BY MONTH DURING 2014 AND JANUARY - AUGUST 2015\*

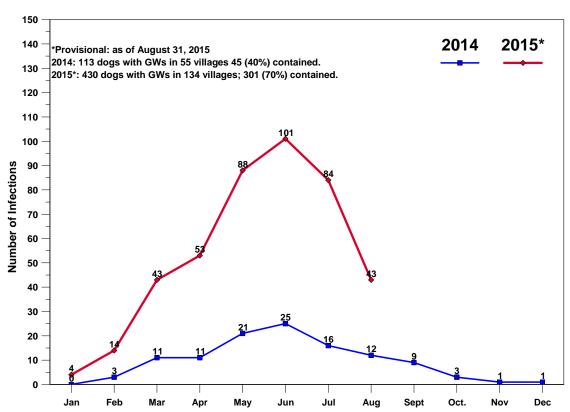


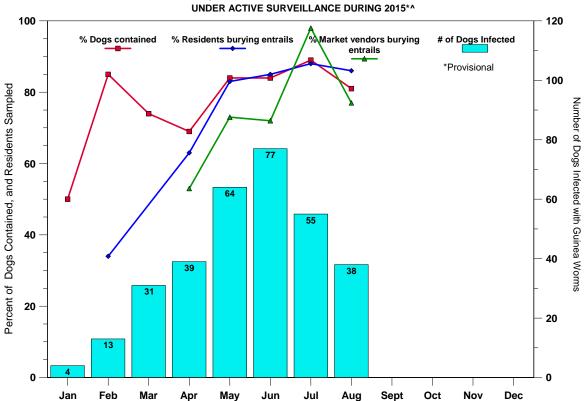
Figure 5

CHAD GUINEA WORM ERADICATION PROGRAM

PERCENTAGE BY MONTH OF INFECTED DOGS CONTAINED AND OF SAMPLED RESIDENTS AND MARKET

VENDORS BURYING FISH ENTRAILS, AND NUMBER OF DOGS INFECTED WITH GUINEA WORMS IN 816 VILLAGES

LINDER ACTIVE SUBVEILLANCE DURING 2015\*A

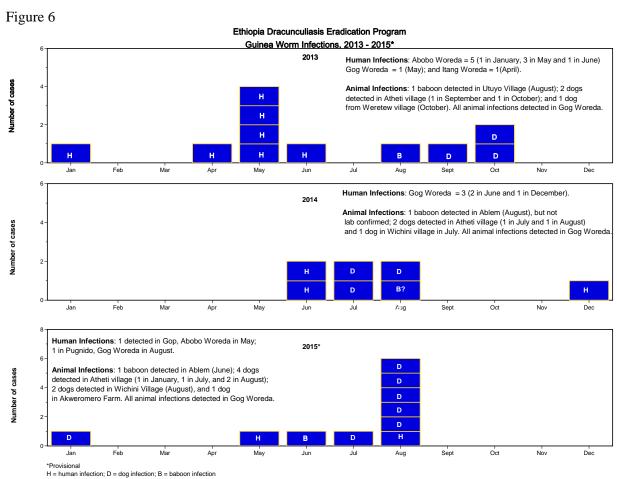


^319 dogs with GW reported from villages under active surveillance and 111 additional dog infections were reported from villages not under active surveillance; total Jan -August 2015 = 430 dog infections.

#### ETHIOPIA: 1 CASE IN A HUMAN AND 5 INFECTED DOGS IN AUGUST

The Ethiopian Dracunculiasis Eradication Program (EDEP) has reported its second case of GWD so far this year in a thirty year old male Agnuak farmer/hunter resident of PRC-Agnuak in Gog district of Gambella Region (Table 4). Four of the five infected dogs reported in August are resident in Atheti or Wichini villages, which are located across the road from each other in Gog district (Figure 7). The fifth infected dog lives in the Akweramero Farm area of Gog district. The 2 patients reported in August and May 2015 hunted together approximately one year ago along with two other men who are under observation but have not shown symptoms or signs of a GW infection. Both cases were contained and the presumed source of both patients' infections was ascertained (Table 4). Worm specimens from all 6 infections reported in August have been confirmed as Guinea worms at CDC. The total number of GW infections reported in Ethiopia so far this year includes 7 dogs (2 contained), 2 humans (both contained) and 1 baboon (not contained), all of which occurred in Gog district. Surface water sources associated with all these infections have been treated with Abate (Figure 6).

In June, the EDEP conducted reward awareness surveys in Akobo, Jikawo, Lare, Makuye, and Wantawo districts of Gambella Region. Of 616 persons interviewed, 120 (19%) had heard of the cash reward. Overall, 12 of 13 rumored cases were investigated within 24 hours in the same region in June. Another survey of 2,304 residents in eight of the ten non-endemic districts of Gambella Region in July found 437 (19%) were aware of the cash reward, while 100% of 38 rumored cases were investigated within 24 hours.



NB: All dog and baboon infections in 2014-2015 were detected in Gog Woreda (District), as were human infections in 2014 and 1 human infection in May 2013. Water sources associated with human, dog and baboon infections in 2014-2015, in Atheti, Whichini, and Ablem villages of Gog Woreda treated monthly with ABATE. The human case in May 2015 was fully contained at the Aboo Woreda case containment center, and considered to have been infected in Bathor forest area of Gog Woreda during 2014, therefore imported from that locality. The human case in August was also contained.

Figure 7 Ethiopia Dracunculiasis Eradication Program
Location of Villages in Gog with Human Cases or Infected Dogs during 2015

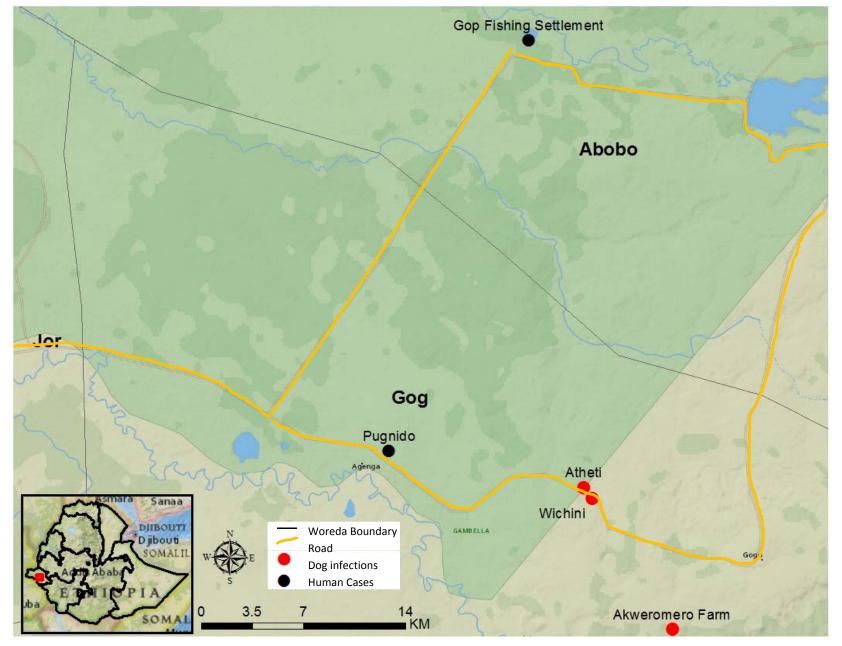


Table 4

#### ETHIOPIA DRACUNCULIASIS ERADICATION PROGRAM (EDEP) LINE LISTING OF CONFIRMED CASES OF GWD DURING 2015

						Patient								Drosumod	Source of			
Case #	Village or Loc	ality of Det	ection					Date GW	Case Co	ontained?	1 = Imported	Home Village or Locality			Infection Identified?		Presumed Source of Infection is a Known VAS?	
Case #	Name	1= VAS	2= VNAS	woreda	Region	Age	Age Sex	(D/M/Y)	(Yes, No, or Pending)	If No, Date of Abate Rx	2=Indigenous	Name	1= VAS	3= VNAS	(Yes or No)	Name	(Yes or No)	Actions/Comments?
1.1	Gop Fishing Area	1		Abobo	Gambella	25	M	27-Mar-15	Yes	1	1	Terkudi	1		Yes			One of group of four men associated with activities in the forest area near Bathor village (residence of December 2014 case of GWD).
2.1	PRC Agnuak	1		Gog	Gambella	30	M	2-Aug-15	Yes	-	1	Marabe I	1		Yes	-		One of group of four men associated with activities in the forest area near Bathor village (residence of December 2014 case of GWD).

VAS = village under active surveillance VNAS = village not under active surveillance

# Table 5

#### MALI GUINEA WORM ERADICATION PROGRAM LINE LISTING OF CONFIRMED CASES OF GWD DURING 2015

						Patient									Dresumed	Source of		
Case #	Village or Locality of Detection		District	Region			Date GW	Case Contained?		1 = Imported		/illage or Locality		Infection Identified?		Dresumed Source of Intection is a Known VASZ		
Case #	Name	1= VAS	2= VNAS	District	Kegion	Age	Sex	Emerged (D/M/Y)	(Yes, No, If No, Date or of Abate Pending) Rx		2=Indigenous	Name	1= VAS	3= PSV	(Yes or No)	Name	(Yes or No)	Actions/Comments?
1.1	Parasilame		2	Tominian	Segou	18	М	22-Jun-15	No	13-Aug-15	2	Parasilame		3	No		?	Fulani (Peulh) shepherd; Nomad

VAS = village under active surveillance VNAS = village not under active surveillance

#### MALI

Despite the insecurity, in July and August GW team members and health staff visited Tanzikratene, Nanguaye, and Fion settlements (which reported all of the 40 cases in Mali in 2014) several times, and a staff member of the program is also resident in Kidal town. Parasilame village which reported the only case in 2015, so far, is located about 20 kilometers from Fion, which reported a single case of GWD in 2014. The case containment center in Tanzikratene is staffed and ready to care for any patients that develop an emerging worm.



UNICEF completed repairs on September 14, 2015 to the mechanized water supply system in Tanzikratene, which reported 29 of Mali's 40 cases of GWD in 2014. It also repaired the water system in Tessit, another formerly endemic locality, and is in the process of repairing other boreholes in the area. Thank you UNICEF!

The national coordinator decided to classify the single case of GWD reported in Mali so far in 2015 as an August case based on the date of confirmation of the worm by the CDC. The case was considered a suspect case during July, and no one from the GWEP or the health system witnessed the emergence of the worm that the patient pulled out in late July until the CDC confirmed that worm to be GW in August. The same patient had a second worm emerge in early August but the specimen was not sent to the CDC since it came from the same person already declared a case of GWD (Table 5). A ceremony was organized at Fangasso in Tominian district of Segou Region to hand over the cash reward to the informant of this case during a visit by the program to Parasilame where the patient lives. The presumed source of this patient's infection has not been ascertained. Eight of the 11 patients with GWD reported from Tominian district over the past 8 years were of the Bobo ethnic group.

Mali's program reported a total of 316 rumors of cases in January-July 2015, of which 311 (98%) were investigated within 24 hours, compared to 151 rumors of cases reported in all of 2014. Another 33 rumored cases were reported in August 2015. A survey of reward awareness conducted in seven districts of Mopti Region in May-July 2015 found that 100% of 1,825 persons interviewed were aware of the reward for reporting a case of GWD. In July a survey of 1,868 persons in Ansongo district of Gao Region found that 91% knew of the cash reward.

## **DEATHS IN WEST DARFUR**



We regret to announce the death of two United Nations staff, members of a humanitarian team assessing the status of Guinea worm disease in West Darfur State, on Tuesday 8 September 2015, when their vehicle was ambushed by unidentified gunmen about 40 kilometers from state capital Geneina, in the Kreinik area as the team was returning from its mission.

#### GLOBAL REWARD FOR CASES OF GUINEA WORM DISEASE



The International Commission for Certification of Dracunculiasis (ICCDE) has recommended that WHO begin preparatory work for the launch of the global cash reward, including developing a communication strategy for global messaging, preparing contracts with media agencies, and consulting with countries during 2016. The actual implementation is to begin when transmission is interrupted

everywhere.

#### **MEETINGS**

- Chad GWEP Annual Review: N'Djamena, meeting dates pending.
- South Sudan GWEP Annual Review: Juba, December 9-10, 2015
- Ethiopia DEP Annual Review: Gambella, December 14-15, 2015
- Mali GWEP Annual Review: meeting dates pending.
- 20th Annual GWEP managers review meeting, Atlanta, March 9-11, 2016

## **TRANSITIONS**

Adamu Sallau, who began working in Nigeria's Guinea Worm Eradication Program many years ago and more recently has been working in Nigeria's malaria and lymphatic filariasis programs on behalf of The Carter Center, successfully completed his final examination on September 1st and has been awarded a PhD degree in Environmental Geochemistry by the University of Jos. CONGRATULATIONS, Dr. Adamu!!

On August 31, 2015 <u>Dr. Donald Hopkins</u> stepped down as Vice-President (Health) of The Carter Center. He will continue working at The Carter Center as Special Advisor for Guinea Worm Eradication.

#### RECENT PUBLICATIONS

Author unknown 2015. Unknown gunmen kill two humanitarian workers in West Darfur. *Sudan Tribune*. Sept. 11, 2015

Carter, J. 2015. Jimmy Carter Remains Stalwart in Vow to Eradicate Guinea Worm. *Weekend Edition Saturday (NPR)* [serial online]. August 22, 2015 <a href="http://www.npr.org/2015/08/22/433569465/jimmy-carter-remains-stalwart-in-vow-to-eradicate-guinea-worm">http://www.npr.org/2015/08/22/433569465/jimmy-carter-remains-stalwart-in-vow-to-eradicate-guinea-worm</a>

Sutton, B; Canyon, D 2015. The Tortoise and the Hare: Guinea Worm, Polio and the Race to Eradication. *PLOS Currents Outbreaks* Aug 31. <a href="http://currents.plos.org/outbreaks/article/the-tortoise-and-the-hare-guinea-worm-polio-and-the-race-to-eradication/">http://currents.plos.org/outbreaks/article/the-tortoise-and-the-hare-guinea-worm-polio-and-the-race-to-eradication/</a>

Whitty C. 2015. Political, social and technical risks in the last stages of disease eradication campaigns. *International Health* [serial online]. September 2015; 7(5):302-303.

World Health Organization, 2015. Monthly report on dracunculiasis cases, January-June 2015. *Weekly Epidemiological Record* 90: 430-431.

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

In memory of BOB KAISER

#### Note to contributors:

Submit your contributions via email to Dr. Sharon Roy (gwwrapup@cdc.gov) or to Dr. Ernesto Ruiz-Tiben (eruizti@emory.edu), by the end of the month for publication in the following month's issue. Contributors to this issue were: the national Guinea Worm Eradication Programs, Drs. Donald R. Hopkins and Ernesto Ruiz-Tiben of The Carter Center, Drs. Sharon Roy and Mark Eberhard of CDC and Dr. Dieudonné Sankara of WHO.

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 <a href="http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp">http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp</a>

Back issues are also available on the Carter Center web site English and French are located at <a href="http://www.cartercenter.org/news/publications/health/guinea\_worm\_wrapup\_english.html">http://www.cartercenter.org/news/publications/health/guinea\_worm\_wrapup\_francais.html</a>



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