Memorandum



Date: December 19, 2022

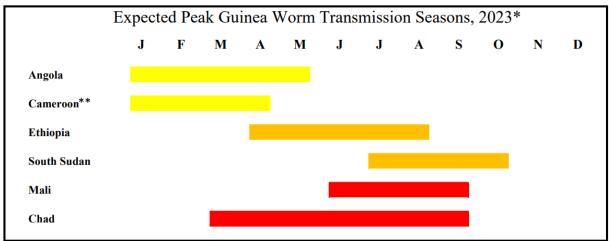
From: WHO Collaborating Center for Dracunculiasis Eradication, CDC

Subject: GUINEA WORM WRAP-UP #294

To: Addressees

<u>Contain</u> every worm! Find the <u>source</u> each infection!

Figure 1



*Guinea worm risk is year-round in all six countries; in Chad, transmission is year-round.

** Chad-Cameroon cross-border area.

ANGOLA: PREPARING FOR 2023



By training 42 new participants, including health professionals and community agents from Cuando Cubango Province, Angola completed implementation and expansion of the Community-Based Surveillance (CBS) system in the 24 communes of 9 Municipalities in the three provinces (Namibe, Huila, Cuando Cubango) that border endemic Cunene Province. A map of this area is included in

Guinea Worm Wrap-Up #280. This expansion, which began in December 2021, thus integrates a total of 126 surveillance agents as part of Angola's Dracunculiasis Eradication Program in the border areas with Cunene. In November, GWEP Cunene continued to work on consolidating and expanding CBS, supervising GWEP activities, including community agents and surveillance volunteers; and on strengthening community awareness.

On October 21, 2022, the program held a large, solemn community ceremony of "Monetary Reward Delivery" in the village of Onanime Omuwanashi, in Namacunde Municipality of Cunene Province, for the eighteen beneficiaries of the 7 confirmed, *uncontained* animal Guinea worm infections in Angola in 2022. The animal infections all occurred in Cunene Province: in Onanime village (6 dogs) of Namacunde Municipality and Ohemeke village (1 dog) of Cuanhama Municipality. The event took place under the presidency of the Provincial Director of Health of Cunene, <u>Dr. Georgina Gracieth Nunes</u>, on behalf of Her Excellency the Governor of Cunene Province and flanked by the Municipal Administrator of Cunene <u>Mrs. Cristiana Nameomunu</u>, and <u>Dr. Mavitidi Sebastiao</u>, the WHO Country Office's Dracunculiasis Focal Person. The administrators of Namacunde, Sede, and Chiedi communes and various local and traditional administrative authorities, of public order and security, partners and communities were among more than four hundred members of the communities who participated in the ceremony. The event was covered by local press and media of *Radio Cunene* and *Televisão Pública de Angola Cunene*. Angola has reported no human Guinea worm cases in January-October 2022.

Abate arrived in Angola in November; health staff are already trained to properly apply it.

The Angola GWEP and WHO-Angola team are considering proactive tethering of dogs and cats in endemic and at-risk villages during the approaching peak transmission season in 2023, following a virtual meeting with Carter Center GWEP Associate Director <u>Giovanna Steel, MA</u> in November. Dracunculiasis was in the spotlight during the cross-border meeting between the health professional of Angola and Namibia, which was held from November 7 to 11, 2022, in Ondangwa, in the region of Oshana-Republic from Namibia.

Editorial note: With 61 villages in Cunene Province under active surveillance, of which only two villages had known Guinea worm infections in 2022, Angola should be well-placed to <u>promptly detect</u> and <u>completely contain</u> any Guinea worm infection(s) in 2023. **Proactive tethering. Active surveillance. Targeted Abate.**

CAMEROON: PREPARING FOR 2023



Since 2019 Guinea worm cases and animal infections in Cameroon have occurred in a cluster of villages where extended families live on both sides of the border with Chad and indigenous transmission is believed to occur in Chad. Cameroon resumed proactive tethering of dogs in late November/early

December 2022 in preparation for the season of peak Guinea worm occurrence in Extreme North Region's Guere health district, which reported 26 Guinea worm-infected dogs, all of which were reportedly contained, in 2022. The proactive tethering will continue until about June 2023. As shown in Figure 1, the peak season for Guinea worm occurrence in this area is January-April. Cameroon began proactive tethering of area dogs in December 2021; it expanded active surveillance in January 2022, including all 9 villages with infected dogs; and applies Abate in villages with infected dogs. The Cameroonian dogs are believed to have been infected on the other side of the Logone River in Chad's endemic Bongor district, because area families live on both sides of the river. At the request of Cameroon's ministry of health, The Carter Center is providing

<u>Claire Aubry</u> to assist Cameroon's Guinea worm activities in Guere district. She arrived in mid-November. Formerly a technical advisor to the GWEP in Chad and before that a Peace Corps Volunteer in Ghana, Ms. Aubry holds master's degrees in Political Science and in Geopolitics and International Security. At the request of Cameroon's ministry of health, WHO provided <u>Mr. Yaya Gautang</u>, a technical assistant, who has been helping the national GWEP since December 2021, particularly in proactive tethering of area dogs, case detection, and Abate application. Claire and Yaya are both based in Guere district, providing additional hands to strengthen interventions and stop transmission. <u>Cameroon has reported no human cases of Guinea worm disease in January-October 2022</u>.

Editorial note: Since communities on both sides of the river will proactively tether dogs during the transmission season in 2023, no dogs in this area should cross the river in either direction during that period. Proactive tethering. Active surveillance. Targeted Abate.

ETHIOPIA: GUINEA WORM IN 2 BABOONS, 1 DOG, 1 HUMAN



The Ethiopia Dracunculiasis Eradication Program (EDEP) has reported laboratory-confirmed *D. medinensis* infections in 2 baboons (<u>uncontained</u>) and 1 dog, and a confirmed Guinea worm infection in a human. Details of the two infected baboons, which were killed near Gutok village of Abobo district/Gambella Region in August, were reported in *Guinea Worm Wrap-Up* #292. The confirmed human case is a 32-year-old male migrant worker whose

infection was detected at Tekle Girmay Farm in Abobo district, whose worm emerged on September 25 and is believed to have been contained. The source of this confirmed case is most likely Chengchaw pond at Mulat Farm in Atheti kebele of Gog district, where the patient drank water while working for eighteen days in August 2021, near where two baboons with multiple worms from the Tar and Tharpaw baboon troops were reported in Ablen village in 2020 and close to GW infections in a human and a dog in 2021 (He also worked at Goyi Farm and Goytom Farm in 2021) (Figure 2). The 2022 dog's Guinea worm infection, which is believed to have been contained, also occurred on September 25 in Cheing village of Gog district/Gambella Region. The source of this dog's infection was likely an infected dog that was detected in the same household on October 3, 2021, but whose Guinea worm infection was reportedly contained. Ethiopia tethered 2,246 dogs in Gog and Abobo districts in June 2022. It expanded Abate treatments from 7,337 in 2019 to 9,520 in 2021 and 5,998 in January-August 2022. Line lists of this year's human and animal Guinea worm infections are in tables 1 and 2. The EDEP will hold its annual national program review on January 24-25, 2023.

Editorial note: The goal of the EDEP at this stage must be to <u>detect</u>, <u>contain</u>, and identify the <u>source</u> of EVERY Guinea worm infection. One advantage is that Ethiopia's endemic area is relatively small.

Table 1. Ethiopian Dracunculiasis Eradication Program: Line List of confirmed human cases, Jan - Oct 2022

#	Age (years)	Sex	Ethnicity	Occupation	Village of Detection	District	Zone	Region	Date of Detection	Date of Emergence	Contained? (Yes / No)	Entered Water?	Lab. Result	Total # of worms
1	32	M	Amhara	Laborer	Tekle Girmay Farm	Abobo	Agnua	Gambella	25-Sep	25-Sep	Yes	No	Confirme d	1

Table 2. Ethiopian Dracunculiasis Eradication Program: Line list of confirmed animal infections, Jan - Oct 2022

#	Age (years)	Sex	Animal Type	Village of Detection	Zone	District	Region	Date of Detection	Date of Emergence	Contained? (Yes / No)	Entered Water?	Lab. Result	Total # of worms
1	Adult (4)	M	Baboon	Gutok	Agnua	Gog	Gambella	12-Aug	12- Aug	No	Unknow n	Confirmed	8
2	Adult (4)	M	Baboon	Gutok	Agnua	Gog	Gambella	12-Aug	16- Aug	No	Unknow n	Confirmed	1
3	Adult (3)	M	Dog	Cheing	Agnua	Gog	Gambella	25-Sep	25-Sep	Yes	No	Confirmed	1

Figure 2

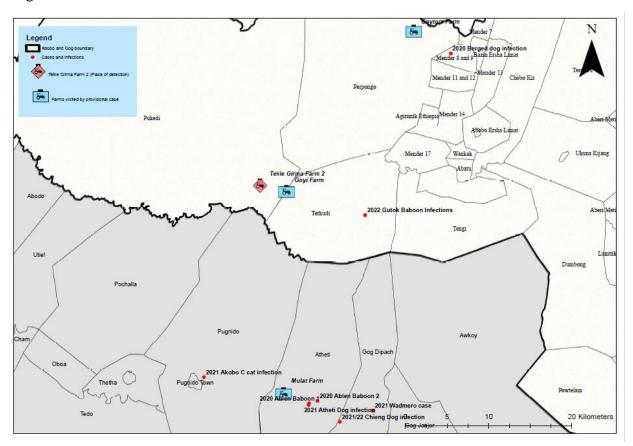


Table 3. Containing and tracing human Guinea worm transmission in 2022

Country	Age/Sex	Village	Date	Contained?	Source
	M/32	Marabodoukoya	4 Feb	Uncontained	Indigenous
	F/2	Madjyam	27 Feb	Yes	Indigenous
Chad	M/29	Ngama Sara	21 Jun	Uncontained	Unknown
Chud	M/16	M'Baranga	20 Jul	Uncontained	Indigenous
	M/3	Goudoum Massa	1 Aug	Yes	Indigenous
	F/17	Fadjalhala	22 Aug	Yes	Unknown
	M/18	Adeba	27 Jul	Uncontained	Unknown
	F/29	Jarweng	25 Sep	Yes	Unknown
South Sudan	M/13	Jarweng	25 Sep	Yes	Unknown
	M/6	Jarweng	2 Oct	Yes	Unknown
	M/9	Juba/Jarweng	10 Sep	Uncontained	Unknown
Ethiopia	M/32	Tekle Girmay Farm	25 Sep	Yes	Mulat Farm

SOUTH SUDAN: GUINEA WORM IN 5 HUMANS, 1 DOG; MINISTER OPENS PROGRAM REVIEW MEETING



The South Sudan Guinea Worm Eradication Program (SSGWEP) has reported laboratory-confirmed Guinea worm infections in a dog (<u>contained</u>) and 5 humans (<u>3 contained</u>) in 2022. Details of the first human case, which was detected in Lopa/Lafon County of Eastern Equatoria State in July, were described in *Guinea Worm Wrap-Up* #292; the dog infection in Tonj East County of Warrap State and

two human cases from Awerial County of Lakes State were described in *Guinea Worm Wrap-Up* #293. A third human case from Awerial County is from the same community (Jarweng) and family as the other cases from Awerial this year. A fourth human case linked to Awerial was detected in Juba but was in Jarweng boma during his period of infection. Epidemiological evidence suggests the cases in the same family whose worms emerged between August 31 and October 2 shared a contaminated source of drinking water after local borehole wells broke in June 2021, but the source of that contamination in 2021 is not known (Table 2). The SSGWEP knows of no GW infection in Jarweng in 2021 and no known overlap in travel between the infected ten-year-old cattle herder in Tomrok village of Awerial in October 2021 and Jarweng village about 15 miles (25 km) away. A line list of these 2022 Guinea worm infections is in Table 3.

The Honorable Minister of Health, Ms. Yolanda Awel Deng Juach, opened the SSGWEP's 17th Annual Program Review Meeting, which was held at the Palm Africa Hotel in Juba on December 6-7, 2022. She was joined by several State Ministers of Health and Director Generals, as well as representatives of the Ministry of Water Resources and Irrigation, World Health Organization (WHO), UNICEF, and The Carter Center. More than sixty participants discussed key presentations by SSGWEP Director Mr. Makoy Samuel Yibi and representatives of the four endemic states: Eastern Equatoria, Jonglei, Lakes, and Warrap. On December 5, Undersecretary of Health Dr. Victoria Anib Majur led a visit to Lafon County in Eastern Equatoria State for a handover ceremony to pay the cash reward to South Sudan's first Guinea worm case of 2022. The undersecretary was accompanied by the SSGWEP Director, the county commissioner, state minister of health, National Certification Committee for Dracunculiasis Eradication Vice-Chair Dr. Margaret Itto, Carter Center Vice President Dr. Kashef Ijaz, Carter Center GWEP Director Mr. Adam Weiss, Carter Center Country Representative Mr. Jim Niquette, as well as Dr. Mutale Nsakashalo of WHO, Mr. Dara Johnston of UNICEF, and Mr. Torben Vestergaard of the cloth filter donor Vestergaard Frandsen. The undersecretary and her entourage also visited a local health center, several households, and water systems.

Editorial note: The goal of the SSGWEP at this stage must be to <u>detect</u>, <u>contain</u>, and identify the <u>source</u> of EVERY Guinea worm infection. Genetic comparison of worms from 2021-2022 may be most helpful here, in addition to epidemiologic investigations. One advantage is that animal infections appear to be rare.

 $Table\ 4.\ South\ Sudan\ line\ listing\ of\ confirmed\ human\ Guinea\ worm\ cases,\ January-November\ 2022$

Nb. Case	Age	Sex	Village of Detection	Boma	Payam	County	Detection	Emergence	Contained? (Y/N)	If no, date Abate applied	Presumed source identified?
1	18	M	Lafon Center	Ukwere	Burgilo	Lopa/Lafon	3 Aug	27 July	No	11 Aug	TBD
2	29	F	Jarweng	Jarweng	Alel	Awerial	31 Aug	8 Sep	Yes		TBD
3	13	M	Jarweng	Jarweng	Alel	Awerial	7 Sep	7 Sep	Yes		TBD
4	6	M	Jarweng	Jarweng	Alel	Awerial	2 Oct	2 Oct	Yes		TBD
5	9	M	Madiseen	Luri	Luri	Juba	13 Sep	10 Sep	No	13 Sep	Imported from Awerial

MALI: ESCALATED INTERVENTIONS



Mali has reported 35 confirmed animal infections (33 dogs, 2 cats; 63% contained) in January-October 2022, mostly in Macina district of Segou Region and Djenne district of Mopti Region. This is an increase of 119% from the 16 known animal infections in January-October 2021. A map showing locations of the first thirty infections is in *Guinea Worm Wrap-Up* #293. Mali has reported no human cases so far in 2022. Some endemic areas of Djenne Town in Mopti

Region; and Kolongo Bozo village, Kolongo Bozo Town, and Macina Town in Segou Region began tethering dogs and caging cats proactively as early as November 2021. Residents of endemic areas of Markala district agreed to inspect their animals daily. By February 2022, about 200 dogs were being tethered in Djenne Town and 30 dogs in Kolongo Bozo village, and the practice has increased slowly since then. Djenne tethered 328 dogs proactively and Kolongo Bozo 63 dogs in September 2022. Mali's Guinea Worm Eradication Program (MGWEP) treated 1,327 water sources with Abate in January-September 2022, slightly more than 1,270 water sources treated in the same period of 2021. Abate could not be applied in several localities that reported uncontained Guinea worm infections because those villages are located on the banks of the flowing Niger River. There was no water source eligible for treatment with Abate during this period of flowing water.

Mali's Peace-Health Initiative, in which the MGWEP, ministry of health, regional and local leaders worked with communities to reduce insecurity in Tenenkou district of Mopti Region beginning in 2020, expanded to three more districts in 2022. National Program Coordinator <u>Dr. Cheick Oumar Coulibaly</u> and <u>Dr. Sissoko Kadiatou Diarra</u> from the National Directorate of Veterinary Services led a supervisory mission to Djenne district in Mopti Region and Tominian and San districts of Segou Region on October 26-November 3, 2022. MGWEP Data Manager <u>Mr. Yaouba Traore</u> and Carter Center consultant <u>Dr. Gabriel Guindo</u> led a supervisory mission to Baraoueli, Macina, and Markala districts of Segou Region on October 24-31, 2022. The Mali GWEP annual review meeting is scheduled for February 9-10, 2023, in Bamako.

Editorial note: Mali's GWEP should extend proactive tethering and daily inspection of dogs and cats to as many endemic villages as possible during the 2023 transmission season, especially in Macina and Djenne districts.

CHAD: ESCALATED INTERVENTIONS



Chad has reported six confirmed human cases of Guinea worm disease (33% contained) in January-October 2022, compared to eight human cases in the same period of 2021, which is a 25% reduction in human cases. An updated line list of human cases in 2022 is in Table 4. It reported 456 infected dogs (66% contained) and 75 cats in January-October 2022, compared to 753 dogs and 65 cats in the same period of 2021. This is a 39% reduction in infected dogs and a 15% increase

in Guinea worm-infected cats. Chad's Guinea Worm Eradication Program (CGWEP) expanded Abate treatments and proactive tethering in 2022. It treated 8,047 water sources in 667 villages in January-September 2022, compared to 6,204 water sources in 642 villages in January-December 2021. After aiming to proactively tether dogs in villages with five or more Guinea worm infections in 2020 and villages with three or more infections in 2021, following the Guinea Worm Summit in March 2022 the CGWEP expanded eligibility for that intervention to include *all* villages with one or more infections, reaching 467 (96%) of 486 eligible villages and 26,853 (63%) of 42,643 eligible animals by September 2022.

Editorial note: The CGWEP needs to proactively tether all eligible dogs and cats in 2023, with special attention to Bongor district, which borders Guere district of Cameroon and to districts of the regions of Salamat and Moyen-Chari that border Central African Republic. No dogs in Bongor and Guere districts should cross the border in either direction during the transmission season in 2023.

Table 5. Chad line listing of confirmed human cases, January – November 2022

Nb. Case	Age	Sex	Ethnicity	Occupation	Village of Detection	Zone	District	Region	Detection	Emergence	Contained? (Y/N)	Imported? (Y/N)	Location of worm	Presence of safe water in village
1	32	M	Sarakaba	Fisher	Marabodoukouya 1	Marabe	Kyabe	Moyen Chari	4 Feb	4 Feb	No	No	Left leg	No
2	2	F	Tounia	N/A	Madjyam	Marabe	Kyabe	Moyen Chari	27 Feb	27 Feb	Yes	No	Right thigh	No
3	29	M	Ngambaye	Fisher/Farmer	Ngama Sara	Malo	Mandelia	Chari Baguirmi	18 June	21 June	No	Local	Lower abdomen	Yes
4	16	M	Borno	Student	Goulaka	Mbaranga	Bousso	Chari Baguirmi	20 July	20 July	No	No	Pubis	Yes
5	3	M	Ngambaye	N/A	Goudoum Goudoum Massa	Kelengue	Bailli	Chari Baguirmi	1 Aug	1 Aug	Yes	No	Testicle	No
6	18	F	Massalat	Housewife	Fadjalhala	Mangueigne	Haraze	Salamat	30 July	22 Aug	No	No	Right forearm	No

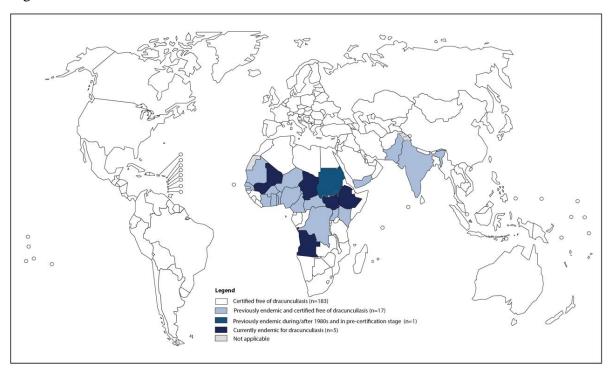
WHO CERTIFIES DEMOCRATIC REPUBLIC OF THE CONGO



Convened virtually on November 22, 2022, the Sixteenth Meeting of the International Commission for the Certification of Dracunculiasis Eradication (ICCDE) approved the Democratic Republic of the Congo's (DRC) application for certification as free of Guinea worm disease (dracunculiasis). Commission members voted to approve the application after discussing the thorough report of

an International Certification Team led by commission member Prof. Robert Guiguemde which visited the DRC on July 19-August 6, 2022. The DRC retrieved reports of 518 dracunculiasis cases that were recorded in 1949-1958 during colonial times, but no cases since then. Health officials conducted six standalone active case searches, during 2016-2019, that reached 53,683 villages in 24 of the country's 26 provinces and queried 541,337 persons. Two provinces where standalone case searches were not conducted, North and South Kivu, had never reported a Guinea worm case. However, these provinces, along with the rest of country were covered by case searches integrated in cooperation with mass drug administration, immunization, and vitamin distribution programs. DRC has never found an animal with Guinea worm infection; 94% of persons queried did not recognize a photograph of an emerging Guinea worm; and respondents said there is no known name for the disease in local languages. ICCDE Chairman Dr. Joel Breman submitted the Commission's recommendation to WHO Director General Dr. Tedros Adhanom Ghebreyesus, who accepted the recommendation. WHO has now certified 200 countries, areas, and territories as Guinea worm-free. Only five endemic countries (Angola, Chad, Ethiopia, Mali, South Sudan) and one formerly endemic country (Sudan) remain to be certified.

Figure 3



The boundaries and names shown and the designations used 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 or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. © WHO 2022. All rights reserved

Data Source: World Health Organization Map Production: Control of Neglected Tropical Diseases (NTD) World Health Organization



Numbe	r of Labo	ratory-Cor	nfirmed	Cases of (Count	f Guinea tries arra	Worm I	Disease, escendir	and Num	ber Reporte cases in 202	ed Contai 21)	ned by M	onth during	g 2022*	1
COUNTRIES WITH TRANSMISSION OF GUINEA								SES CONTA						% CONT.
WORMS	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
CHAD	0/0	1/2	0/0	0/0	0/0	0/1	0/1	1/2	0/0	0/0	0/0		2/6	33 %
SOUTH SUDAN	0/0	0 / 0	0/0	0/0	0/0	0/0	0/1	0/0	2/3	1/1	0/0		3/5	60 %
MALI	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0 / 0	0/0	0/0		0/0	N/A
ETHIOPIA	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	1/1	0/0	0/0		1/1	100%
ANGOLA	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0/0	0 / 0	0/0	0/0		0/0	N/A
TOTAL*	0/0	1/2	0/0	0/0	0/0	0/1	0 / 2	1/2	3/4	1/1	0/0		6 / 12	50 %
% CONTAINED	N/A	50 %	N/A	N/A	N/A	0 %	0 %	50 %	75 %	100 %	N/A		50 %	
Numl					of Guin		Disease	e. and Nu	mber Renor	ted Cont	ained by I	Month duri	ng 2021	
Numb				d Cases	of Guin	ea Worm			mber Repor		ained by I	Month duri	ng 2021	
COUNTRIES WITH TRANSMISSION OF GUINEA				d Cases	of Guin	ea Worm nged in d	escendir R OF CAS		cases in 202		ained by I	Month duri	ng 2021	% CONT.
COUNTRIES WITH TRANSMISSION				d Cases	of Guin	ea Worm nged in d	escendir R OF CAS	ng order of	cases in 202	20)	ained by I		ng 2021	
COUNTRIES WITH TRANSMISSION OF GUINEA	per of Lab	ooratory-C	onfirme	d Cases (Count	of Guin tries arra	ea Worm inged in d NUMBEI NUMBI	escendir R OF CAS ER OF CA	ng order of SES CONTA SES REPO	Cases in 202 AINED / ORTED	20)	, ,			
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS	per of Lab	poratory-C	onfirmed MARCH	d Cases (Count	of Guin tries arra	ea Worm nged in d NUMBEI NUMBI	escendir R OF CAS ER OF CA	SES CONTA ASES REPO	Cases in 202 AINED / DRTED SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	CONT.
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS CHAD	JANUARY	FEBRUARY	onfirmed MARCH 1/1	APRIL	of Guin tries arra	ea Worm Inged in d NUMBEI NUMBI JUNE 0/0	escendir R OF CAS ER OF CAS JULY 1/2	SES CONTA ASES REPO AUGUST	AINED / ORTED SEPTEMBER 0/0	OCTOBER 1/1	NOVEMBER 1/1	DECEMBER 0/0	TOTAL 6/8	CONT.
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS CHAD ETHIOPIA	JANUARY	FEBRUARY 1/1 1/1	MARCH 1/1 0/0	APRIL 1/2 0/0	of Guin tries arra	ea Worm inged in d NUMBEI NUMBI JUNE 0/0 0/0	R OF CASER OF CAS	SES CONTA ASES REPO AUGUST 0/0	AINED / DRTED SEPTEMBER 0/0 0/0	OCTOBER 1/1 0/0	NOVEMBER 1/1 0/0	DECEMBER 0/0 0/0	TOTAL 6/8 1/1	75 % 100 %
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS CHAD ETHIOPIA SOUTH SUDAN	JANUARY 0/0 0/0 0/0	FEBRUARY 1/1 1/1 0/0	MARCH 1/1 0/0 0/0	APRIL 1/2 0/0 0/0	MAY 0/0 0/0 0/0	ea Worm Inged in d NUMBEI NUMBI JUNE 0/0 0/0	R OF CASER O	SES CONTA ASES REPO AUGUST 0/0 0/1	AINED / DRTED SEPTEMBER 0/0 0/0	OCTOBER 1/1 0/0 0/1	NOVEMBER 1/1 0/0 0/0	DECEMBER 0/0 0/0 0/0 0/0	TOTAL 6/8 1/1 1/4	75 % 100 % 25 %
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS CHAD ETHIOPIA SOUTH SUDAN ANGOLA MALI TOTAL	JANUARY 0/0 0/0 0/0 0/0	FEBRUARY 1/1 1/1 0/0 0/0	MARCH 1/1 0/0 0/0	APRIL 1/2 0/0 0/0	MAY 0/0 0/0 0/0	ea Worm Inged in d NUMBEI NUMBI JUNE 0/0 0/0 0/0	R OF CASER O	ASES CONTA ASES REPO AUGUST 0/0 0/1 0/0	AINED / ORTED SEPTEMBER 0/0 0/0 0/0	OCTOBER 1/1 0/0 0/1 0/0	NOVEMBER 1/1 0/0 0/0 0/0	DECEMBER 0/0 0/0 0/0 0/0 0/0	TOTAL 6/8 1/1 1/4 0/0	75 % 100 % 25 % N/A
COUNTRIES WITH TRANSMISSION OF GUINEA WORMS CHAD ETHIOPIA SOUTH SUDAN ANGOLA MALI	JANUARY 0/0 0/0 0/0 0/0 0/0 0/0 N/A	FEBRUARY 1/1 1/1 0/0 0/0 2/2 100 %	MARCH 1/1 0/0 0/0 0/0 1/1 100 %	APRIL 1/2 0/0 0/0 0/0 1/2 50 %	MAY 0/0 0/0 0/0 0/0 0/0 N/A	ea Worm Inged in d NUMBEI NUMBI JUNE 0/0 0/0 0/0 0/0 0/0 N/A	R OF CASER O	AUGUST 0/0 0/1 0/2 0 %	AINED / ORTED SEPTEMBER 0/0 0/0 0/0 1/1	OCTOBER 1/1 0/0 0/1 0/0 1/2 50%	NOVEMBER 1/1 0/0 0/0 0/0 1/1 100 %	DECEMBER 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 0 / 0 N / A	TOTAL 6/8 1/1 1/4 0/0 1/2	75 % 100 % 25 % N/A 50 %

RECENT PUBLICATIONS

Hopkins DR, Weiss AJ, Yerian S, Sapp SGH, Cama VA, 2022. Progress toward global eradication of dracunculiasis, January 2021-June 2022. Morbid Mortal Mthly Rep 71(47):1496-1502.

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 Adam Weiss (adam.weiss@cartercenter.org), 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, Dr. Donald Hopkins and Adam Weiss of The Carter Center, Dr. Sharon Roy of CDC, and Dr. Dieudonné Sankara of WHO.

WHO Collaborating Center for Dracunculiasis Eradication, Center for Global Health, Centers for Disease Control and Prevention, Mailstop H21-10, 1600 Clifton Road NE, Atlanta, GA 30333, USA, email: gwwrapup@cdc.gov, fax: 404-728-8040. The GW Wrap-Up web location is https://www.cdc.gov/parasites/guineaworm/wrap-up
Back issues are also available on the Carter Center web site in English, French, and Portuguese and 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_francais.html

http://www.cartercenter.org/news/publications/health/guinea worm wrapup portuguese.html



CDC is the WHO Collaborating Center for Dracunculiasis Eradication