Memorandum

Date: January 31, 2025

From: Guinea Worm Eradication Program, The Carter Center

Subject: GUINEA WORM WRAP-UP #316

To: Addressees

PRESIDENT JIMMY CARTER (1924-2024), GUINEA WORM COMMANDER-IN-CHIEF

Photo Credit: The Carter Center

October 2005, Atlanta, Georgia

We begin 2025 mourning our beloved leader, President Jimmy Carter, the Thirty-Ninth President of the United States and foremost advocate for Guinea worm (dracunculiasis) eradication, who died at his home in Plains, Georgia, USA, on December 29, 2024. He was 100 years old and had accomplished the equivalent of a lifespan twice as long. He was buried in Plains beside his wife Rosalynn on January 9, 2025, after a state funeral in Washington, D.C.

The U.S. Centers for Disease Control and Prevention (CDC) began promoting Guinea worm eradication as a part of the International Drinking Water Supply and Sanitation Decade (1981-1990) in October 1980; efforts which led to the first international meeting on Guinea worm disease in Washington in 1982, the first World Health Organization (WHO) resolution calling for dracunculiasis "elimination" in May 1986, and

the First African Regional Conference on Dracunculiasis Eradication in Niamey, Niger in July 1986. The effort really took off, however, when Former President Jimmy Carter began leading the campaign. In November 1986 he convinced Pakistan's head of state to accept Carter Center and CDC assistance for eliminating Guinea worm disease; convened an all-day meeting at The Carter Center with public health leaders from Pakistan, CDC, and The Carter Center, among others, to plan and discuss Pakistan's national Guinea Worm Eradication Program (GWEP); and personally participated in the meeting for two and a half hours. Pakistan became the first country to eliminate Guinea worm disease in the modern era, in 1993.

Under President Carter's leadership, The Carter Center began assisting Ghana in 1987, Nigeria in 1988, and other endemic countries later. To promote the effort, which was supported by the affected countries themselves, aided by major partners The Carter Center, CDC, WHO, and UNICEF, Carter visited endemic countries and met with heads of state, ministers of health, and other government officials. He wrote letters and made telephone calls to national leaders, lobbied donors and heads of international agencies, and engaged national and international mass media. He brought his political and diplomatic skills to bear most dramatically by negotiating a "Guinea Worm Cease-Fire" between the two warring sides in Sudan in March 1995--a humanitarian cease-fire that lasted for an unprecedented nearly six months, greatly accelerated Sudan's GWEP, kick-started Sudan's Onchocerciasis Control Program, and allowed distribution of vaccines and other medical supplies. He magnified his impact by recruiting former Malian Head of State General Amadou Toumani Toure, former Nigerian Head of State General Yakubu Gowon, and Ethiopian physician Dr. Tibebe Yemane Berhan as influential African advocates for Guinea worm eradication.

After participating in the opening session of the Second African Regional Conference on Dracunculiasis Eradication in Accra, Ghana in March 1988, President and Mrs. Carter saw their first cases of Guinea worm disease while visiting two Ghanaian villages. Before they left Nigeria to fly to Accra, a Nigerian newspaper headline read: "Jimmy Carter Here to Battle Guinea Worm". En route to an endemic Nigerian village years later, a child along the motorcade route held a hand-made sign with the message, "Go, Guinea worm, go! Jimmy Carter's around." President Carter visited Africa to advocate for Guinea worm eradication an average of once a year between 1988 and 2010. From an estimated 3.5 million Guinea worm cases in 1986, a provisional total of only 13 cases remained in 2024.

Devoted husband to his wife of 77 years, Rosalynn Smith-Carter (1927-2023), father, grandfather, and great-grandfather, Jimmy Carter was also a farmer, naval officer, nuclear engineer, submariner, Lions Club official, Georgia state senator, Governor of Georgia, and United States President. Thank you, and God bless you, Mr. President! We shall finish the job.

2024: 14 HUMAN GW CASES, 26% FEWER ANIMAL INFECTIONS OVERALL (PROVISIONAL)

Guinea worm cases in humans held steady at 14 cases in 2023 to a provisional total of 14 cases in 2024: 8 cases in Chad (50% contained) and 6 cases in South Sudan (33% contained). Table 1 is a provisional line list of 2024's confirmed human Guinea worm cases, which occurred in two countries so far, compared to five countries (Cameroon, Central African Republic, Chad, Mali, South Sudan) that reported cases in 2023. Total animal Guinea worm infections were reduced by 26%, from 885 in 2023 to 654 (as of January 31st) in 2024. This was the fifth consecutive year of reduced animal infections, led by substantial reductions in Chad, Angola, and Mali that were partially offset by increased animal infections in Cameroon.

CHAD: 8 **HUMAN CASES, 43% LESS ANIMAL INFECTIONS**

Chad has reported 281 animal GW infections (67% contained) and 8 human cases (50% contained) in 2024, which is 43% fewer than the 497 infected animals (76% contained) and 11% fewer than the 9 human cases (67% contained) it reported in 2023. Chad's two most recent confirmed human GW cases are both male, ages 10 and 76 years, in Ardeb Djoballah village (Bouso district, Chari Baguirmi Province) and Al-Ardep village (Aboudeia district, Salamat Province), respectively. Neither patient has access to safe drinking water at home and both consume fish (Table 1). Al-Ardeb village practices collective fishing, its local water sources are frequented by sedentary and nomadic populations, and it had an infected dog in 2023. Ardep Djoballah also had one known GW infection in 2023.

His Excellency Minister of Health Dr. Abdelmadjid Abderahim opened Chad's Guinea Worm Eradication Program (CGWEP)'s twelfth annual two-day Program Review in N'Djamena on January 21, 2025. Deputy Secretary General of the City of N'Djamena, Hassan Ali Oumar, welcomed participants, who included representatives of each Guinea worm endemic province of Chad and partners, including The Carter Center, the World Health Organization (WHO), United States Agency for International Development, and others. Mr. Adam Weiss delivered remarks on behalf of The Carter Center, highlighting continued progress and challenges related to cross-border transmission. The WHO Country Representative for Chad, Dr. Anya Blanche, spoke of the remarkable progress Chad has made against Guinea worm since 2010. The minister of health's remarks inspired urgency to eradicate GW and formally launched the review meeting. National Program Coordinator Dr. Ouakou Tchindebet later reported on the program's progress and challenges over the past year. Carter Center participants included GWEP Director Adam Weiss, Carter Center Sr. Country Representative Dr. Abdalla Meftuh, Sr. Associate Director Sarah Yerian, MPH, and others. Dr. Dieudonne Sankara of WHO attended remotely and made a presentation on the current worldwide epidemiological situation of Guinea worm disease and certification activities.

The Carter Center participants earlier made a courtesy call on the minister of health. They extended greetings from The Carter Center leadership and underscored that President Carter would be proud of the progress Chad has made. The minister requested a moment of silence in honor of President Carter. He shared his condolences to the Carter family and to The Carter Center and expressed his thanks for the continued support provided by the Center, including its staff in Chad

Table 1. Provisional Line List of Confirmed Human Guinea Worm Cases, 2024 (as of January 13)

Country	District/Village	Sex/Age	Ethnicity	Worm Emerged	Contained?	Presumed Source of Infection	Likely mode of Infection	Number of GWs
Chad	Kyabe/Goho	F/60	Sara Kaba	30 May	No	Indigenous	Aquatic Animal	1
Chad	Kyabe/Moudjousso	M/14	Sara Kaba	3 July	No	Goho	Unclear	1
Chad	Kouno/Seneck	F/7	Goulaye	7 July	No	Kreyaou 1	Unclear	2
Chad	Kyabe/Ouboye	M/8	Sara Kaba	17 July	No	Unknown	Unclear	1
Chad	Kouno/Seneck	F/30	Goulaye	5 August	Yes	Kreyaou 1	Unclear	1
Chad	Bousso/Ardeb Djoballah	M/10	Arab	13 September	Yes	Indigenous	Unclear	1
Chad	Lai/Hamakara	F/60	Gabri	5 October	Yes	Indigenous	Aquatic Animal	2
Chad	Aboudeia/Al-Ardep	M/76	Arab	15 November	Yes	Indigenous	Unclear	2
S Sudan	Tonj E/Gaak	F/15	Dinka	28 June	No	Indigenous	Water	3
S Sudan	Rumbek N/Bardiak CC	M/7	Dinka	30 June	No	Unknown	Unclear	1
S Sudan	Tonj E/Gaak	M/50	Dinka	25 July	No	Indigenous	Water	1
S Sudan	Tonj E/Gaak	F/20	Dinka	7 July	No	Indigenous	Water	1
S Sudan	Nyirol/Wiyuot	M/28	Nuer	22 July	No	Unknown	Unclear	2
S Sudan	Yirol W/ Mayomathei	F/32	Dinka	26 September	No	Unknown	Unclear	1

CC = Cattle Camp

S Sudan = South Sudan

SOUTH SUDAN: 6 HUMAN CASES, 1 ANIMAL INFECTION

The SSGWEP reported 6 human GW cases (0% contained) and 1 emerged animal GW infection (not contained) in 2024. The figures for 2024 are preliminary, pending final examination of all specimens. In 2024, Guinea worms were confirmed in 3 counties east of the Nile and four counties west of the Nile. Table 2 summarizes the locations of the 18 confirmed emerged human Guinea worm cases and 18 confirmed animal Guinea worm infections (3 emerged, 15 un-emerged) that the South Sudan Guinea Worm Eradication Program (SSGWEP) detected in 2020-2024. (See article on emerged and un-emerged Guinea worms on page 3 of last month's *Guinea Worm Wrap-Up*). Notably, Tonj East County has detected Guinea worms in humans and/or animals for the past five consecutive years (2020-2024), while Lafon County detected Guinea worms in the past three consecutive years (2022-2024), suggesting the need for thorough attention to those two counties as well as focus on the five other counties that had known Guinea worms in 2024. A detailed report of human Guinea worm cases and animal infections in South Sudan was included in the previous issue.

New Guinea Worm Warrior. South Sudan's Minister of Health appointed a new Director of the SSGWEP following the former director's retirement in December 2024. The new SSGWEP Director is Dr. Hakim Makuer Gol. Dr. Hakim's most recent position was as a Director General at the State Ministry of Health for Lakes State, from 2017 to 2024. He earned a Bachelor Degree of Science with honors at the University of Ottawa in Canada, a Post Graduate Diploma in pharmaceuticals research and drugs development from the Toronto Institute of Pharmaceutical Technology, and a Master of Public Health from Makerere University in Kampala, Uganda. Welcome, Dr. Hakim!

Table 2. Known Guinea Worm Infections (Human, Animal, Emerged, Un-emerged, Contained, Uncontained by country 2020 – 2024*)

	2020	2021	2022	2023	2024*
East of Nile					
Nyirol/Upper Nile					1h
Uror/Upper Nile		1h			2a
Lafon/E. Equatoria			1h	1a	2a
West of Nile					
Tonj E/Warrap	1h	1h	1a	2h	3h 8a
Rumbek N/Lakes		1h			1h 3a
Rumkek C/Lakes					1a
Yirol W/Lakes					1h
Awerial/Lakes		1h	4h		

*Provisional
h = Human GW Case
a = Animal GW Infection

MALI: 43% FEWER ANIMAL INFECTIONS, 0 HUMAN CASE

Mali has reported 0 human GW cases in 2024 vs. 1 human case in 2023, and 27 animals (21 dogs, 6 cats; 52% contained) with confirmed GW infections in 2024, compared to 47 infected animals (41 dogs, 5 cats, 1 donkey; 74% contained) in 2023 (Table 3: Line List). This is a 43% reduction of animal infections between 2023 and 2024.

Mali's GWEP conducted two supervisory visits from November 25 to December 3, 2024. National GWEP Coordinator Dr. Cheick O. Coulibaly and the head of the National Veterinary Service Mme. Djenebou Kone visited Mopti and Djenne health districts in Mopti Region and Tominian health district in Segou Region. In Tominian, they viewed various fish and dog trading sites, the household which reported an infected dog, and noted the integration of a dog census with national immunization day. Their activities in parts of Djenne and Tominian were limited due to insecurity. In Djenne, some communities did not practice proactive tethering and others bought more dogs and cats to try to benefit from the reward for proactive tethering. GWEP Data Manager Souleymane Diarra and Consultant Dr. Gabriel Guindo visited Macina, Markala and San districts in Segou Region. They noted some families did not follow the protocol for proactive tethering in Macina Town and Kayo Bozo village. Community sensitization and corrective actions were taken in all cases. Insecurity was an issue in parts of all three districts they visited.

Table 3. Mali GWEP Listing of Animal Infections: Year 2024

#	Region	District	Health Zone	Village	GPS(N)	GPS (E)	Ethnicity	Profession	Host	Host name	Probable origin	Date of detection	Date of emergence	Entered water?	Abate Applied? (Y/N)	Contained?* (Y/N)	Confirmed (Y/N)	Total # of GW	CDC Accession No.
1	Ségou	Macina	Touara	Touara	13.0085	-5.21653	Bozo	Fishing	Dog	Mamagni	Unknown	07/18/24	07/18/24	Yes	Yes	No	Yes	1	GW24-433
2	Ségou	Markala	Sibila	Nakry	13.71331	-5.93942	Bozo	Fishing	Dog	Tarigean	Nakry	07/22/24	07/24/24	No	Yes	Yes	Yes	1	GW24-498
3	Ségou	Macina	Macina Central	Ouolofobougou	13.577	-5.2163	Bozo	Student	Cat	Mousse	Macina	08/01/24	08/03/24	No	Yes	Yes	Yes	1	GW24-437
4	Ségou	Macina	Kolongo	Kolongo Bozo Hamlet	13.50517	-541728	Bozo	Fishing	Cat	Bagnoumake	Kolongo Bozo Hamlet	08/06/24	08/06/24	No	No	Yes	Yes	1	GW24-494
5	Mopti	Djenné	Kouakourou	Kara Daga	NA	NA	Bozo	Fishing	Dog	Siou	Unknown	07/31/24	08/08/24	Yes	No	No	Yes	1	GW24-493
6	Mopti	Djenné	Djenné Central	Tolober	13.54183	-4.3226	Sonrhaï	Metal Joiner	Dog	Bahubali	Unknown	07/27/24	08/08/24	No	No	Yes	Yes	1	GW24-496
7	Ségou	Macina	Macina Central	Miérou	13.59122	-5.17658	Bozo	Fishing	Dog	Djonkounadi	Unknown	08/14/24	08/14/24	Yes	Yes	No	Yes	1	GW24-499
8	Mopti	Djenne	Soala	Soala daga	13.81411	-4.514893	Bozo	Fishing	Dog	Medor	Unknown	08/17/24	08/16/24	Likely	No	No	Yes	1	GW24-500

#	Region	District	Health Zone	Village	GPS(N)	GPS (E)	Ethnicity	Profession	Host	Host name	Probable origin	Date of detection	Date of emergence	Entered water?	Abate Applied? (Y/N)	Contained?* (Y/N)	Confirmed (Y/N)	Total # of GW	CDC Accession No.
9	Mopti	Djenne	Djenné Central	Kansara	13.73873	-4.36039	Bobo	Farming	Dog	No Name	Imported from Nantaka (Mopti district) April 2024	08/15/24	08/18/24	Likely	Yes	No	Yes	1	GW24- B0364
10	Segou	Markala	Barakabougou	Barakabougou	13.786	-5.73584	Bozo	Fishing	Dog	Kaganna	Barakabougou	08/18/24	08/21/24	No	Yes	Yes	Yes	1	GW24-508
11	Segou	Macina	Soumouni	Komara	14.07168	-4.29534	Bozo	Farming/Fishing	Dog	Kaba	Unknown	08/12/24	08/21/24	No	No	Yes	Yes	1	GW24-512
12	Segou	Tominian	Tominian Central	Tominian town	13.2859	-4.59762	Bobo	Farming	Dog	Tout passe	Unknown	08/23/24	08/23/24	Likely	No	No	Yes	1	GW24-B-0366
												09/01/24	09/01/24					1	GW24-B-0366.2
13	Segou	Macina	Macina Central	Mierou	13.59122	-5.17658	Bozo	Farming/Fishing	Dog	Police	Unknown	09/04/24	09/04/24	Likely	Yes	No	Yes	1	GW24-B-0378
14	Segou	Markala	Sibila	Nakry	13.71331	-5.93942	Bozo	Housewife	Cat	No Name	Nakry	09/01/24	09/04/24	No	No	Yes	Yes	1	GW24-0363
15	Mopti	Djenne	Djenné Central	Djenne (Doteme)	13.90536	-4.535177	Bambara	Housewife	Dog	Diagui	Djenne town	09/06/24	09/05/24	Likely	Yes	No	Yes	1	GW24-0363
16	Segou	Macina	Kolongo	Kolongo Ablobougou	13.53175	-5.40875	Bambara	Farming	Dog	Soldat	Unknown	09/06/24	09/06/24	Likely	No	No	Yes	1	GW24-B-0377
17	Segou	Macina	Macina Central	Ke-Bozo	13.56943	-5.22661	Bozo	Housewife	Cat	Mouche	Ke-Bozo	09/09/24	09/09/24	No	No	Yes	Yes	1	GW24-B-0368
18	Segou	Markala	Dioro	Dioro	13.69681	-5.809979	Kakolo	Tailor	Dog	Fidel	Unknown	09/08/24	09/10/24	No	No	Yes	Yes	1	GW24-B-0365
19	Segou	Markala	Sibila	Sosse	13.74148	-5.80591	Bozo	Housewife	Cat	No Name	Unknown	09/09/24	09/10/24	No	No	Yes	Yes	1	GW24-B-0367
20	Mopti	Djenne	Madiama	Konguena	13.74284	-4.37194	Mininanka	Farming	Cat	No Name	Unknown	09/15/24	09/13/24	Likely	Yes	No	Yes	1	GW24-B-0349
21	Mopti	Djenne	Djenné Central	Djenne (Dioboro)	13.54183	-4.3226	Bozo	Fishing	Dog	Toupass	Djenne town	09/12/24	09/14/24	No	Yes	Yes	Yes	1	GW24-0350
22	Segou	Macina	Touara	Touara	13.00856	-5.21653	Sarakole	Farming	Dog	Kaba	Unknown	09/24/24	09/24/24	Likely	Yes	No	Yes	1	GW24-B-0351
23	Mopti	Djenne	Djenné Central	Sanouna	13.5518	-4.315	Bozo	Fishing	Dog	No Name	Unknown	09/27/24	09/26/24	Likely	No	No	Yes	1	GW24-B-0326
24	Segou	Macina	Touara	Touara	13.00856	-5.21653	Sarakole	Farming	Dog	Kamassi	Unknown	09/28/24	09/28/24	Likely	No	No	Yes	1	GW24-B-0325
25	Segou	Macina	Kolongo	Kolongo Bozo Hamlet	13.50528	-5.43398	Bozo	Farming/Fishing	Dog	Gnanimandjougou	Kolongo Bozo Hamlet	09/29/24	09/29/24	No	No	Yes	Yes	1	GW24-B.0327
26	Segou	Macina	Kolongo	Kayo Bozo	13.53359	-5.37016	Bozo	Farming/Fishing	Dog	Baoubaly	Kayo Bozo	10/17/24	10/17/24	No	No	Yes	Yes	1	GW24-B.0380
27	Segou	Macina	Kolongo	Kolongo Bozo Hamlet	13.50528	-5.43398	Bozo	Farming/Fishing	Dog	Tourbot	Kolongo Bozo Hamlet	10/23/24	10/23/24	No	No	Yes	Yes	1	GW24-B.0382
28	Segou	Macina	Kolongo	Kolongo Bozo Hamlet	13.50528	-5.43398	Bozo	Farming/Fishing	Dog	Magnine	Kolongo Bozo Hamlet	11/11/24	11/11/24	No	No	Yes	Pending	1	
29	Segou	Macina	Macina Central	Medine (Macina quartier)	13.57733	-5.21129	Bozo	Farming/Fishing	Dog	John	Macina town	11/30/24	12/01/24	No	No	Yes	Pending	1	

EXTRAORDINARY GW WARRIOR SAMUEL MAKOY RETIRES

Photo Credit: The Carter Center/Darren Arthur

Mr. MAKOY Samuel Yibi Logora's last day as Director of the South Sudan Guinea Worm Eradication Program (SSGWEP) was December 23, 2024, when he retired from South Sudan's Ministry of Health. Mr. Makoy became the Terekeka County State Coordinator for Guinea Worm Eradication in 1996, soon after the 1995 "Guinea Worm Cease-Fire" allowed Sudan's GWEP to accelerate. Previously educated as a general medical technician at the University of Gezira and after earning a Diploma in Preventive and Curative Medicine, Mr. Makoy was appointed Director of the SSGWEP in December 2005 as South Sudan prepared to assume responsibility for its own health affairs under the Comprehensive Peace Agreement between the two sides in the civil war.

As SSGWEP Director, Makoy brought his early experience with Guinea worm eradication in his home county, deep knowledge of South Sudan's numerous ethnic groups, varied ecology, sociology, challenging climate, and limited infrastructure to bear as he faced the exceptionally complex epidemiology of Guinea worm disease in post-war South Sudan. His intelligence, tenacity, respect for all, and personal courage were tested repeatedly as he crisscrossed the country by airplane, vehicle, boat, and on foot to reach remote villages, encourage and instruct local workers, and to inform and engage local, national, and international political and medical leaders. Under his nearly two decades of exemplary leadership, the SSGWEP reduced Guinea worm in South Sudan from 20,582 cases reported in 8 states in 2006 to a provisional total of 6 cases in 3 states in 2024. He led aggressive efforts to follow-up South Sudan's first reported infection in a wild animal, a genet, in 2023 by engaging wildlife authorities and local communities to increase surveillance of wild animals, which revealed un-emerged Guinea worm infections in several small wild felines as the likely source of infection in the few sporadic human cases in the recent past. Thank you, God bless you, and Godspeed, Makoy!

Makoy promises that leaving the ministry of health does not mean he is abandoning the fight against Guinea worm disease. He joins former Commissioner of Kapoeta East the Honorable Titus Lokwachuma and former Health Commissioner for Eastern Equatoria State Dr. Margaret Itto as senior volunteers for the SSGWEP.

NENA OKELLO OMOD (1984-2024), ETHIOPIAN GUINEA WORM WARRIOR

We regret to report the untimely passing of Nena Okello Omod on December 13, 2024. He was a dedicated public health professional and Guinea Worm Warrior whose career focused on epidemiology, emergency management, and disease prevention. He earned his master's degree in Field Epidemiology and worked in Ethiopia at The Carter Center for eight years, during which he helped establish the Gambella Project Office. Nena made significant contributions to health systems strengthening in Gambella with special emphasis on Guinea worm eradication program activities in Level 2 surveillance areas of Gambella Regional State. He was a beloved husband and father of seven children. His public health legacy will inspire future generations of practitioners. The many Guinea worm eradication communities he touched at various levels will remember his contributions long after Guinea worm is eliminated from Ethiopia.

DEFINITIONS:

A **rumor** is defined as any information about a possible case of Guinea worm disease or animal infection.

A **suspect** is a person or animal exhibiting a sign or symptoms compatible with GW infection (i.e., localized or generalized itching and/or swelling, a painful blister, and/or a skin lesion) but no visible Guinea worm.

A Guinea worm/dracunculiasis **case** is defined as an infection occurring in a person exhibiting a skin lesion or lesions with emergence of one or more worms that is laboratory-confirmed as *Dracunculus medinensis* at CDC. Because *D. medinensis* has a 10-14-month incubation period, each infected person is counted as having an infection only once during a calendar year. [The same requirement of worm emergence applies to confirmed *D. medinensis* infections in animals.]

A presumed source of Guinea worm infection of a human dracunculiasis case is considered identified if: The patient drank unsafe water from the same source/location (specify) as other human case(s) or an infected animal 10-14 months before infection, or

The patient lived in or visited the (specify) household, farm, village, or non-village area of a (specify) Guinea worm patient or infected domestic/peri-domestic animal 10-14 months before infection, or

The patient drank unsafe water from a (specify) known contaminated pond, lake, lagoon or cut stream 10-14 months before infection.

If none of the above is true, the presumed source/location of the infection is unknown. Whether the patient's residence is the same as the presumed source/locality of infection or not should also be stated in order to distinguish indigenous transmission from an imported case.

A contained case** means all of the following conditions are met:

1. The patient is detected before or within 24 hours of worm emergence; and
2. The patient has not entered any water source since the worm emerged; and
3. A village volunteer or other health care provider has properly managed the case, by cleaning and bandaging until the worm is fully removed and by giving health education to discourage the patient from contaminating any water source (if two or more emerging worms are present, the case is not contained until the last worm is pulled out); and
4. The containment process, including verification that it is a case of Guinea worm disease, is validated by a supervisor within 7 days of the emergence of the worm, and
5. ABATE® is used if there is any uncertainty about contamination of the source(s) of drinking water, or if a source of drinking water is known to have been contaminated.

***The criteria for defining a contained case of Guinea worm disease in a human should be applied also, as appropriate, to define containment for an animal with Guinea worm infection.*

Table 4

Number of Laboratory-Confirmed Human Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2024*

(Countries arranged in descending order of cases in 2023)

COUNTRIES WITH TRANSMISSION OF GUINEA WORMS	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
CHAD	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	0 / 3	1 / 1	1 / 1	1 / 1	1 / 1		4 / 8	50%
SOUTH SUDAN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 2	0 / 3	0 / 0	0 / 1	0 / 0	0 / 0		0 / 6	0%
CENTRAL AFRICAN REPUBLIC	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
CAMEROON	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
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
TOTAL*	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 2	0 / 6	1 / 1	1 / 2	1 / 1	1 / 1		4 / 14	29%
% CONTAINED	N / A	N / A	N / A	N / A	0%	0%	0%	100%	50%	100%	100%		29%	

Provisional

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

Numbers indicate how many cases were contained and reported that month.

Number of Laboratory-Confirmed Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2023

(Countries arranged in descending order of cases in 2022)

COUNTRIES WITH TRANSMISSION OF GUINEA WORMS	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													% CONT.
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL	
CHAD	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	1 / 3	1 / 1	1 / 2	1 / 1	0 / 0	0 / 0	6 / 9	67 %
SOUTH SUDAN	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 1	0 / 0	0 / 0	0 / 0	0 / 2	0 %
ETHIOPIA	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	N / A
CENTRAL AFRICAN REPUBLIC	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 1	0 %
MALI	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	0 %
CAMEROON	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	100 %
TOTAL	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	1 / 1	1 / 3	1 / 3	1 / 3	1 / 2	0 / 0	0 / 0	7 / 14	50 %
% CONTAINED	N / A	N / A	N / A	N / A	100%	100%	33%	33%	33%	50%	N / A	N / A	50%	

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

Numbers indicate how many cases were contained and reported that month.

IN BRIEF

Angola has reported 36 animal GW infections (25% contained), and no human case in 2024, compared to 85 animal infections and no human case in 2023—a 58% reduction in GW infections.

Cameroon has reported 312 animal GW infections (35% contained), and no human case in 2024, compared to 254 animal infections and no human case in 2023—a 23% increase in GW infections.

Ethiopia has reported 1 confirmed animal GW infection (a baboon), uncontained, and no human case in 2024, compared to 1 animal infection (a dog), and no human case in 2023.

MEETINGS

South Sudan GWEP Review Meeting—February 4-5, 2025

Mali GWEP Review Meeting—February 20-21, 2025

Ethiopia GWEP Review Meeting—February 27-28, 2025

Note to contributors: Submit your contributions via email 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, and Dr. Dieudonné Sankara of WHO. Formatted by Diana Yu.

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