Memorandum

Date: December 1, 2025

From: Guinea Worm Eradication Program, The Carter Center

Subject: GUINEA WORM WRAP-UP #326

To: Addressees

Perseverance and spirit have done wonders in all ages.

George Washington

ETHIOPIA: 84% LESS GW SINCE 2020

Table 1

Humans and animals detected with emerging Guinea worms in Ethiopia, 2016-2025

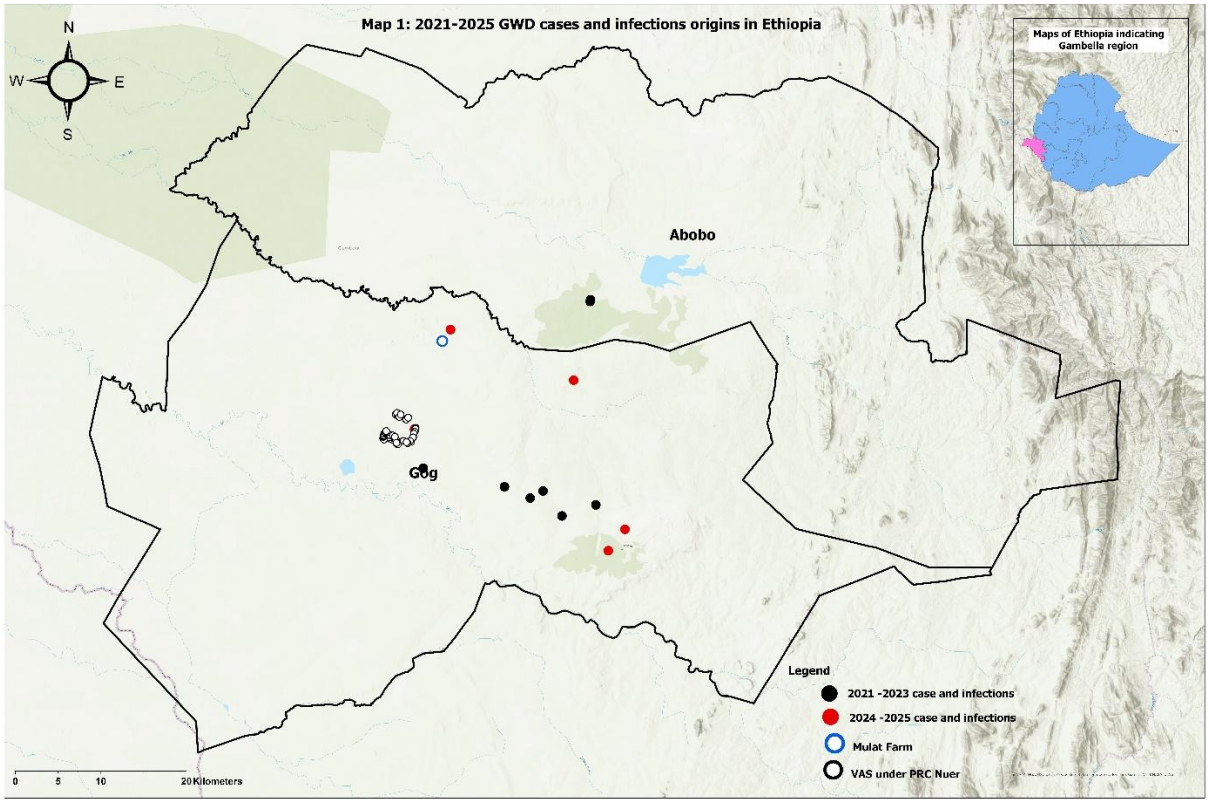
	2016-2020	2021-2025*
Humans	29	6
Dogs	41	4
Domestic cats	13	2
Baboons	17	4
TOTAL	**100**	**16**

*As of November 2025.

The Ethiopian Dracunculiasis Eradication Program (EDEP) has reported 4 confirmed (3 contained) human GW cases and a confirmed domestic cat infection so far in 2025. The first three human cases, described in detail in issue #323, were young Agnuak men ages 32, 27, and 25-years-old, whose worms emerged on June 17, July 19, and July 28. All three of their GWs were contained. The provisional fourth case is a 28-year-old Amhara man, whose uncontained worm emerged on August 12. The four men, who were migrant laborers, appear to share a common potential exposure to unfiltered drinking water at Mulat Farm in Gog district of Gambella Region in June (case #1) and August (cases #2, 3, 4) 2024. Case #4 was detected at

the Jeen Gold mine site in Dimma district of Gambella Region. At least two of the men had a pipe filter but forgot or didn't use it consistently. This is the third documented outbreak linked to a commercial farm, following 15 cases at Goyi Farm in 2017 and 7 cases at Duli Farm in 2020, but the overall number of such cases remains low, considering that hundreds, possibly thousands, of casual or migrant laborers consume unfiltered water at commercial farms in Ethiopia. A domestic cat with a confirmed infection that occurred in Gog district at PRC Nuer about 5 miles (9 km) distant from Mulat Farm, had 3 GWs emerge on August 14 & 15. Baboons are known to visit water sources near Mulat Farm and PRC Nuer (Figure 1). These troops are being monitored in follow up to the GW cases and infection in 2025.

Figure 1



The 4 confirmed human GW cases and 1 confirmed cat infection in 2025 notwithstanding, Ethiopia's EDEP continues to make progress towards elimination, with greatly reduced GW detected in humans, dogs, cats, and baboons since 2020 (Table 1). The EDEP piloted proactive tethering of dogs and cats in two villages in 2018 and began expanding to full scale, tethering about 89% of 1,978 targeted animals in 50 priority villages in 2019 and an average 99.9% of 1,509 eligible dogs and cats by 2024. It increased Abate treatments dramatically from 1,860 treatments in 2016 to 3,059 in 2017, 7,337 in 2019, and over 9,000 annual treatments in at-risk areas of Gog and Abobo districts by 2020 onward. The EDEP also introduced an innovative environmental management strategy to eliminate redundant unsafe ponds that serve as breeding sites for copepod intermediate hosts of GW larvae, permanently eliminating 1,635 water sources between 2020 and September 2025. As a result of these interventions, the EDEP has reported an 84% reduction in known GW in humans and animals in the country between 2016-2020 and 2021-2025.

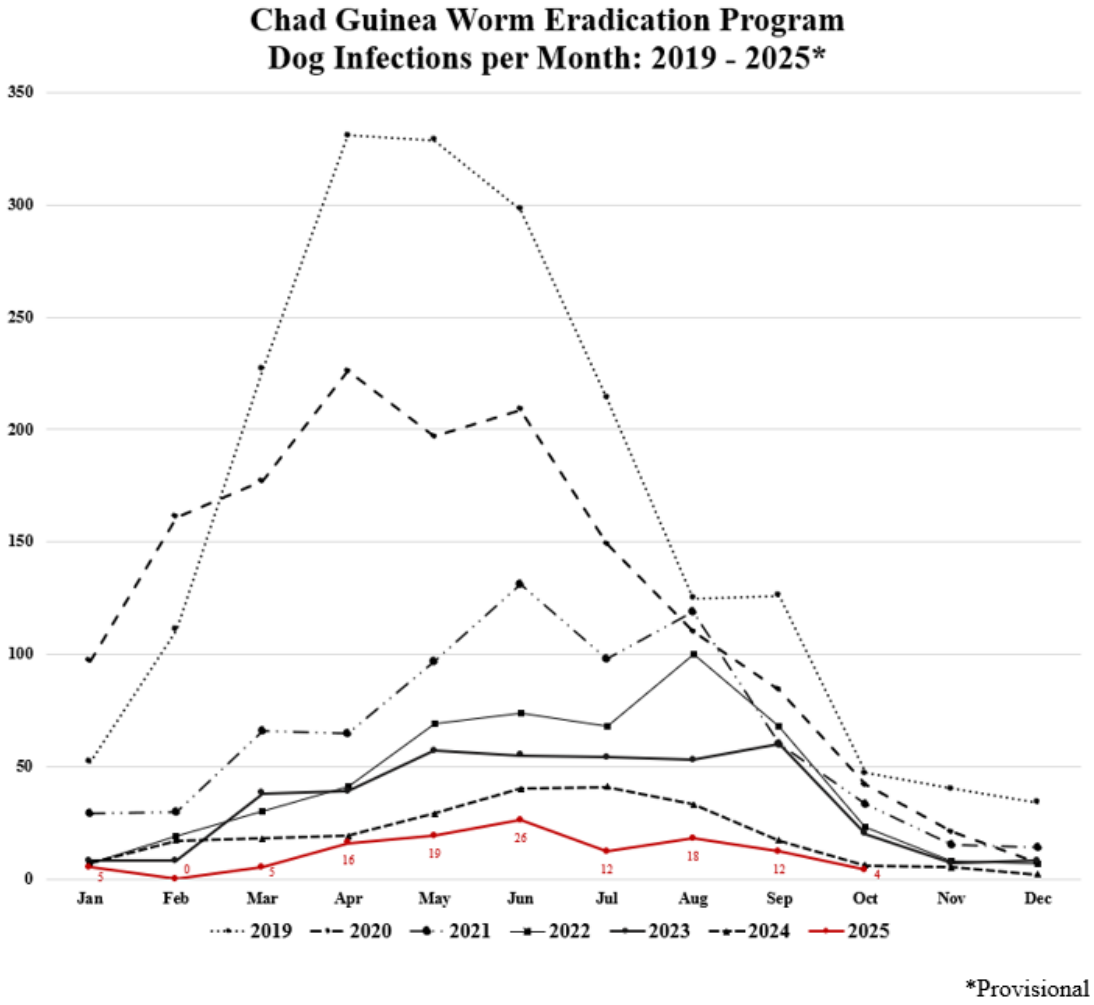
Genetic analysis shows the EDEP was still missing some GW infections as of 2023 (latest comparison available), and baboons seem to be sustaining GW transmission in Ethiopia now, but most or all the undetected GW infections probably occur near or in the same areas where known infections were detected and control measures applied, which may have reduced the numbers of undetected GW cases/infections there also. The current challenge is ensuring adequate Abate coverage and treatment quality in water sources accessed by baboons in at-risk areas. In the rainy season, which is the peak GW transmission season and farming season, most baboon troops move toward farm areas and roadsides where transient water points are difficult to treat regularly with Abate. During January – October 2025, field officers of the EDEP physically inspected 502 dead wild animals: 435 baboons, 34 servals, 15 wild cats, 12 leopards, 5 civets, and 1 genet that villagers reported to the program. Of those, one deceased baboon from the Ablen troop in Gog district had one *un-emerged* provisional Guinea worm detected in August (see issue #315 re: significance of un-emerged Guinea worms). Ablen troop is one of 15 troops that were already being monitored by the Baboon Study Group in 2025, and the Project is tracking new troops in response to confirmed and provisional GW cases in 2025.

CHAD: -50% HUMAN CASES, -47% ANIMAL INFECTIONS BETWEEN 2024 & 2025

Chad reported more GW infections in dogs and domestic cats than any other country after it discovered GW in dogs in 2012 but has steadily reduced animal GW infections since reporting 1,935 infected dogs in 2019. Chad has reported 145 animal GW infections (117 dogs, 28 cats; 62% contained) so far in 2025, compared to 274 animals in the same period of 2024: a provisional 47% reduction in animal GW infections, and it has detected GW in 83 localities in 2025, vs. 183 in 2024: a provisional 55% reduction in known localities with GW. Figure 2 shows the reduction of dog GW infections in Chad since 2019. The rate of reduction in dog infections is increasing: -22% in 2022-2023, -42% in 2023-2024, -50% in 2024-2025. *Chad has achieved this with strong political support, Abate, proactive tethering, and managing fish waste.*

Chad's on-going reduction of dog GW infections and their associated environmental contamination with GW larvae since 2019 appears to finally be impacting human GW cases in Chad in 2025. After averaging about 10-15 human GW cases annually since 2010, Chad has reported only 4 confirmed human cases (0 contained) of GWD so far in 2025, compared to 8 cases reported during the same period of 2024: a provisional 50% reduction in human GW cases between 2024 and 2025. Details of Chad's first human case were described in *Guinea Worm Wrap-Up* #318. The second case is a six-year-old Massa girl whose single worm emerged on August 16 and was contained. She is a resident of Kotcholel, a fishing village along the Chari River in Guelendeng district of Mayo Kebbi-Est Province. Her village has five functional wells and has not had any recent known GW in humans or animals. The likely source and mode of her GW infection are not clear. Details of cases 3 and 4 will be included in the next issue.

Figure 2



SPOTLIGHT ON CAMEROON

Cameroon eliminated GWD in 1997 and was certified as GW-free by the World Health Organization in 2007, but it discovered GW again, imported from adjacent Chad, six years ago. GW infections increased to a provisional total of 444 animals (417 dogs and 27 cats) in January-September 2025, which is a **43% increase between 2024 and January-September 2025,** with re-established indigenous transmission in Cameroon. Line lists in *Guinea Worm Wrap-Up* #310 & #323 show the status of reported containment, health education, Abate treatments, filter distribution, proactive animal tethering, and fish gut management in 18 Cameroonian communities with GW infections during January-May 2024 and 21 localities with GW infections during January-June 2025. All the implicated communities have at least one source of safe drinking water. The substantial increases in infected animals in the top eight endemic communities during 2025 do not reflect the high levels of Abate treatments, proactive animal tethering, and infected animal containment that Cameroon reported in 2024. Carter Center in-country technical assistance to Cameroon rose from 14 person-months in 2022 to 34.5 person-months in 2023 and 65.5 person-months in 2024.

Cameroon is the largest remaining focus of Guinea worm in the world, reporting 65% of all known GW so far in 2025. The peak GW transmission season is January-April. *Cameroon's GWEP urgently needs stronger political support from the governmental at all levels, including initiatives such as a "Yaoundé Declaration on Guinea Worm Eradication", and a ministerial visit to an endemic area.*

SPOTLIGHT ON ANGOLA

Angola discovered GW for the first time ever seven years ago but is not yet fully mobilized to combat the infection. Seventy (70) animal infections-all dogs-reported in January-September 2025 is a **79% increase compared to 39 infections reported in 2024**. Angolan National Coordinator for NTDs Dra. Maria Cecilia de Almeida and Carter Center Country Representative Lucia Verzotti were in Cunene November 23-27 for meetings with Provincial Director of Public Health Dra. Georgina Nunes and others to prepare for Angola's First Annual Guinea Worm Program Review early next year. Genetic analysis of worm specimens shows that the Angolan program is missing many GW infections as of 2023 (latest comparison available.). The peak GW transmission season is January-May. *Angola's GWEP urgently needs stronger political support from the government at all levels, including initiatives such as a "Luanda Declaration on Guinea Worm Eradication", and a ministerial visit to an endemic area.*

IN BRIEF:

Mali detected 17 confirmed GW infections (13 dogs, 4 cats), of which 10 dogs and 4 cats were contained, as of November 2025. That is a **39% reduction in reported Guinea worm** compared to the 22 infected dogs and 6 infected cats that Mali reported in 2024. Genetic analysis suggests Mali is missing some infections. One of Mali's four districts described in the previous issue as reporting Guinea worm infections, Tominian district, has not reported an *indigenous* GW infection for the last three years. Of Mali's 75 districts, only Macina, Markala, and Djenne districts reported indigenous GW infections in 2023-2025. As of mid-October 2025, Macina and Djenne districts tethered all 1,216 dogs and 1,452 cats targeted for tethering and Markala district tethered 77% (234/305) of its targeted dogs and 64% (114/178) of targeted cats. Those three districts also monitor management of fish guts disposal. The main impediment to interruption of GW transmission in Mali is civil unrest and insecurity. *Mali needs "150 Days of Safety" or a "Guinea Worm Cease-Fire" in Macina, Djenne, Markala, and Tominian districts in June – November 2026 to allow intensive GW interventions, active surveillance, and assistance.*

South Sudan has reported 2 confirmed human GW cases in known hotspots Yirol West (uncontained) and Awerial (contained) Counties and no confirmed animal infections so far in 2025. This is an **80% reduction in reported Guinea worm** compared to 6 human cases and 4 GW animal infections in the same period of 2024. South Sudan has also detected *un-emerged* Guinea worms in 3 wild cats (2 from known hotspot Tonj East County, 1 from adjacent hotspot Rumbek North County) and 1 hyena in known hotspot Lafon County. (The significance of animals with un-emerged GWs is discussed in *Guinea Worm Wrap-Up* #315, page 3.)

Sudan has not reported a GW case since 2002, and has never detected GW in an animal, but has not yet been certified as GW-free due to insecurity.

ITFDE MEETING

The International Task Force for Disease Eradication (ITFDE) reviewed the status of the Guinea Worm Eradication Program (GWEP) at its Fortieth Meeting, which was held at The Carter Center on October 28-29, 2025. The meeting included overviews of the status of the Guinea Worm Eradication Program (GWEP) and its research agenda, certification activities and procedures, and presentations on selected research, including copepod population dynamics, GW genomics, animal research, modeling, diagnostics, and therapeutics. ITFDE members concluded that, despite challenges, the GWEP should stay focused on efforts to interrupt GW transmission and on developing new tools to support surveillance. The ITFDE's final report and recommendations will be published in the World Health Organization's *Weekly Epidemiological Record.*

ICCDE MEETING

The International Commission for the Certification of Dracunculiasis Eradication (ICCDE) held its 17th Meeting, virtually on November 25, 2025. Chaired by ICCDE member Dr. Ashok Kumar, participants paid tribute to the memories and Guinea worm-related legacies of former ICCDE chairman Dr. Joel Breman and former United States President Jimmy Carter. The meeting discussed an update on the status of interruption of GW transmission and research by Adam Weiss of The Carter Center, an overview of certification of GW eradication by Dr. Dieudonne Sankara, and an update on the status of certification of Sudan by Dr. Farah Agua, both of the World Health Organization. It discussed an endorsement of WHO's decision to reclassify Cameroon as an endemic country, following reports of laboratory-confirmed indigenous Guinea Worm transmission for at least three consecutive years.

PIONEERING GUINEA WORM WARRIOR CRAIG WITHERS RETIRES

Guinea Worm Warrior P. Craig Withers Jr. retired as Carter Center Vice President for Overseas Operations in October 2025. Craig came to The Carter Center from the Centers for Disease Control and Prevention in 1988 and was The Carter Center's first resident advisor to Nigeria's Guinea Worm Eradication Program from 1988 to 1990. Supported energetically by his wife Vicki Ledet, Craig assisted the first national case search that counted over 650,000 cases during his first six months in the country, establishing Nigeria as the nation with more cases of Guinea worm disease than any other country. He served as regional technical advisor for GWE in the francophone countries based in Burkina Faso for nine months in 1994-1995, and as Carter Center advisor to Sudan's Guinea Worm Eradication Program, based in Khartoum in 1995-1996, before returning to Carter Center headquarters as Senior Associate Director, then Director of Operations for the health programs, and finally being appointed VP for Overseas Operations for all of the Center's programs. The governments of South Sudan and Niger presented him with awards for his work in 2017 and 2023, respectively. THANK YOU, and Happy Retirement, Craig!!!

PROVISIONAL SCHEDULE FOR ANNUAL GW PROGRAM REVIEWS

Cameroon: December 16 – 19, 2025, at Douala

Chad: January 13 – 14, 2026, at N'Djamena

Ethiopia: February 3 – 4, 2026, at Gambella

South Sudan: February 10 – 12, 2026, at Juba

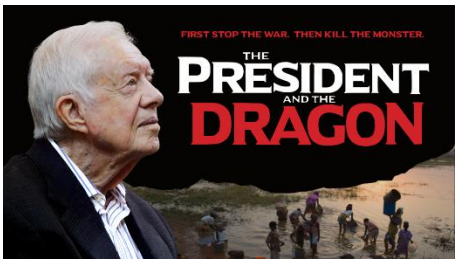
Mali: February 12 – 13, 2026, at Bamako

Angola: February 24 – 25, 2026, at Cunene

GUINEA WORM WARRIOR JAMES SULLIVAN

It is with great sadness that we note the passing of Guinea Worm Warrior Dr. James J. Sullivan, 80, of Lilburn, Georgia. Jim was heavily involved in the laboratory rearing of copepods and identification of their susceptibility to serve as vectors of Guinea worm at the Centers for Disease Control and Prevention during the early years of the Guinea Worm Eradication Program. He also performed studies in Ghana to evaluate effectiveness of Abate against copepods. We extend our condolences to his family.

NEW GUINEA WORM DOCUMENTARY



A new documentary, *The President and the Dragon*, describes challenges and achievements of the South Sudan Guinea Worm Eradication Program. The film is a collaboration between The Carter Center, Touchline Productions, The Brave Road, and Buffalo 8. Sudanese filmmaker Waleed Gubara directed the film, along with Ian D. Murphy. Communications team member Emily Staub led the effort on behalf of The Carter Center. This 92-minute-long documentary is available for streaming on-demand on Amazon, Hoopla, and Verizon Fios since October 1, 2025, with other platforms to follow. A link to one of the on-demand platforms is below:

https://www.amazon.com/gp/video/detail/B0D5HCTZQL/ref=atv_dp_share_cu_r

Table 2

Number of Laboratory-Confirmed Human Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2025*

(Countries arranged in descending order of cases in 2024)

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 / 1**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 2**	**0 / 1**	**0 / 0**	**0 / 0**		**0 / 4**	**0%**
SOUTH SUDAN	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**1/ 2**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**		**1 / 2**	**50%**
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**
ETHIOPIA	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**1 / 1**	**2 / 2**	**0 / 1**	**0 / 0**	**0 / 0**	**0 / 0**		**3 / 4**	**75%**
TOTAL*	**0 / 1**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**1 / 1**	**3 / 4**	**0 / 3**	**0 / 1**	**0 / 0**	**0 / 0**		**4 / 10**	**40%**
% CONTAINED	**50%**	**N / A**	**N / A**	**N / A**	**N / A**	**100%**	**75%**	**0%**	**0%**	**N / A**	**N / A**		**40%**	

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 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**	**0 / 1**	**4 / 9**	**44%**
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 / 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**	**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**	**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**	**0 / 0**	**N / A**
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**
TOTAL*	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 0**	**0 / 1**	**0 / 2**	**0 / 6**	**1 / 1**	**1 / 2**	**1 / 1**	**1 / 1**	**0 / 1**	**4 / 15**	**27%**
% CONTAINED	**N / A**	**N / A**	**N / A**	**N / A**	**0%**	**0%**	**0%**	**100%**	**50%**	**100%**	**100%**	**N/A**	**27%**	

Cells shaded in black denote months when zero indigenous cases were reported. Numbers indicate how many cases were contained and reported that month.4

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

Are the right people receiving the Guinea Worm Wrap-Up?

We remind leaders of National Guinea Worm Eradication Programs to make sure all appropriate persons are receiving the Guinea Worm Wrap-Up directly, by email. With frequent turnover of government officials, representatives of partner organizations, and recruitment of new Guinea worm program staff, keeping desired recipients up to date is challenging. Frequent review of who is receiving the newsletter directly is advised. To add an addressee, please send their name, title, email address, and preferred language (English, French, or Portuguese) to Adam Weiss at The Carter Center (adam.weiss@cartercenter.org).

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:

www.cartercenter.org/GuineaWormWrap-Up