Memorandum

Date: May 29, 2025

From: Guinea Worm Eradication Program, The Carter Center

Subject: GUINEA WORM WRAP-UP #320

To: Addressees

## WORLD HEALTH ASSEMBLY ADOPTS GW RESOLUTION

On May 24, 2025, the Seventy-eighth World Health Assembly adopted a new resolution, WHA 78.14, "Accelerating the eradication of dracunculiasis (Guinea worm disease)". Proposed by Chad and co-sponsored by Angola, Burkina Faso, Cameroon, China, Japan, Russia, South Sudan, United Arab Emirates, and the United Kingdom, the resolution endorses the multi-prong strategy for eliminating Guinea worm disease, including active surveillance, proactive tethering of domestic dogs and cats, burying aquatic waste, health education and distribution of cloth and pipe filters, application of Abate, and provision of safe drinking water. It urges member states to recommit to eradicating Guinea worm and calls on countries with endemic or at-risk populations to conduct ministerial visits to endemic communities, intensify cross-border collaboration, collaborate with international partners to address political instability, animal infections and resource constraints, and prioritize access to safe water, among other provisions.

In his report to the Opening Plenary Session of the WHA on May 19th, World Health Organization Director General Dr. Tedros Ghebreyesus described recent achievements in WHO's goal to promote health and prevent disease and in an exceptional nod to the Guinea Worm Eradication Program's progress, among other accomplishments Dr. Tedros noted that last year only 15 cases of Guinea worm disease were reported from 12 villages in Chad and South Sudan. He also acknowledged the strong commitment of the late U.S. President Jimmy Carter and The Carter Center in that effort. When the Guinea worm resolution was considered at a plenary session of the Assembly five days later, Carter Center GWEP Director Adam Weiss, MPH acknowledged the historic moment with a formal statement of support on behalf of the Center, and delegates from the Dominican Republic, Ethiopia, Ghana, Japan, Republic of Korea, Tunisia, and the United Kingdom gave messages of support. This resolution comes fourteen years after the most recent previous GW resolution, WHA64.16, was adopted in 2011.

## GUINEA WORM RECEPTION AT WORLD HEALTH ASSEMBLY

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WHO Director General Dr. Tedros Ghebreyesus joined The Ministers of Health of Central African Republic (Dr. Pierre Somse), Chad (Dr. Abdelmadjid Abderahim Mahamat), Mali (Dr. Assa Badiallo Toure), and

Sudan (Dr. Heitham Mohamed Ibrahim Awadalla); Ambassadors from Chad (H. E. Dr. Jean-Pierre Baptiste) and South Sudan (H. E. Alier Deng); the Director General of the Ethiopia Public Health Institute (Dr. Hailu Mesay); a six-person Carter Center World Health Assembly delegation led by CEO Paige Alexander, Vice President Dr. Kashef Ijaz, and GWEP Director Adam Weiss, MPH; and others, including WHO Eradication/Elimination Team Lead Dr. Dieudonne Sankara, Unit Head/Prevention Treatment and Care Dr. Argaw Dagne, Technical Officer Ms. Farah Junerlyn Agua, and Unit Head A.I. Strategic Information and Analytics Dr. Albis Gabrielli; at the Guinea Worm Reception organized by The Chad Permanent Mission and The Carter Center in Geneva on May 21, 2025, during the Seventy-eighth World Health Assembly. In his opening remarks at the reception, Dr. Tedros stressed that the achievements of the GWEP have been driven by "the dedication of national programs, the support of international partners and, most importantly, by the leadership and hard work of local communities and health workers". He noted that the progress "would not have been possible without the strong partnership of the late President Carter and The Carter Center", and that "a new resolution for dracunculiasis eradication-championed by Chad and other Member States-is poised for adoption". The work of Guinea worm eradication is made possible by the generous support of foundations, corporations, governments, and individuals, including Gates Foundation, BASF, and the Permanent Mission of Japan to the United Nations in Geneva, whose representatives attended the reception.

**Why do dogs *get* Guinea worm?**

- Humans *let* dogs roam freely and forage.
- Humans *take* dogs to collective fishing and hunting.
- Humans *give* dogs raw fish, raw fish guts, or unsafe water.

**Why do infected dogs *spread* Guinea worm?**

- Humans don't *detect* infected dogs in time.
- Humans don't *tether* dogs at risk proactively.
- Humans don't *contain* infected dogs.

## CHAD: REDUCING GW IN DOGS

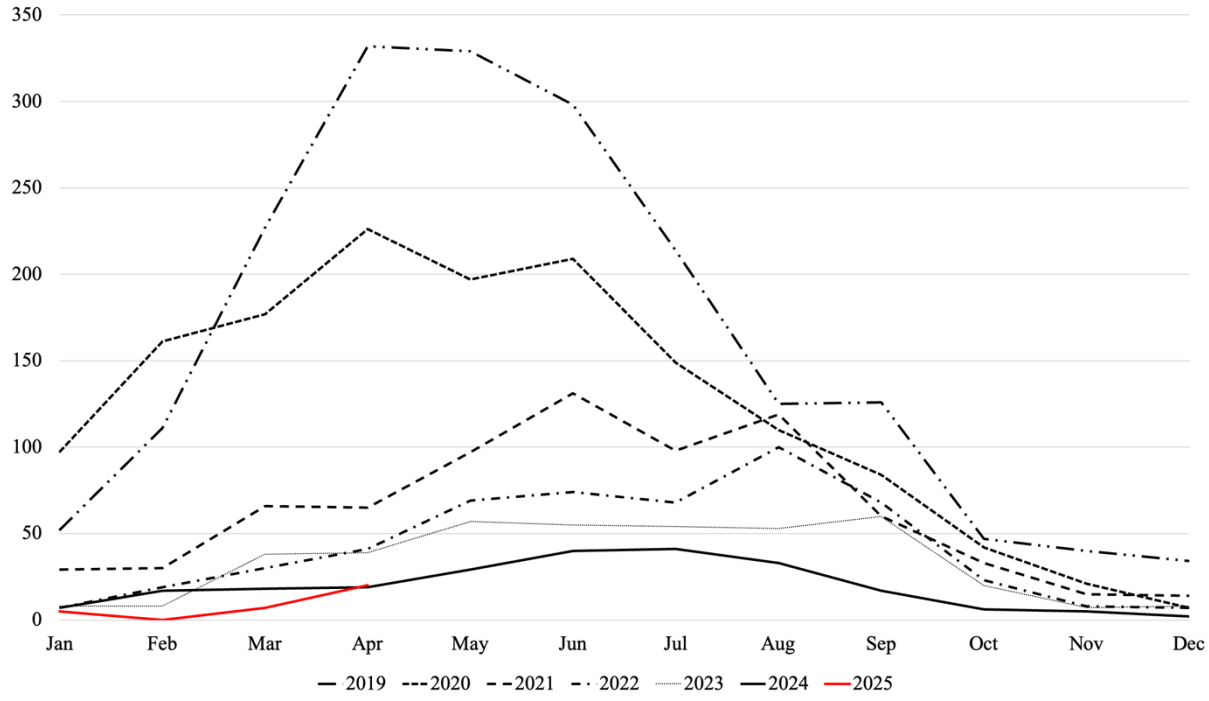
Chad reported Guinea worm infections in 9 humans, 234 domestic dogs and 47 domestic cats in 2024, which was a 43% reduction from Chad's 496 animal GW infections in 2023 and the fifth consecutive year of reduced animal infections since Chad reported 1,935 infected dogs, 47 domestic cats, and 1 infected wild cat in 2019. Guinea worm transmission in Chad is sustained by dog infections, which also were the direct or indirect source of Chad's human GW cases over the past decade, when Chad reported more GW cases (total 149; range 6-48 cases/year) and animal infections than any other country. Except for 48 cases in a waterborne outbreak in 2019, most human GW cases in Chad since the disease was rediscovered there in 2010 appear to have been transmitted to people who ate inadequately cooked aquatic animals such as fish, not by drinking contaminated water. And during 2020-2024, 57% (25) of Chad's 44 human GW cases were males, including 34% (15) who were 5 to 14-year-old boys, which suggests priorities for more behavioral change communication. Reduced GW infections in dogs will decrease environmental contamination with GW larvae sufficiently to reduce human exposure also. Increasing access to safe drinking water in endemic villages will also reduce humans' GW exposure in Chad.

GW transmission among dogs in Chad is abetted by seasonal mass fishing and is associated with free-roaming dogs and dogs that accompany their owners to mass fishing events, both of which enhance dogs' access to raw fish and discarded fish waste. Promoting burial of fish waste since 2013, enhanced Abate usage since 2019, and proactive tethering of dogs and cats since 2020 have been the main interventions against GW transmission in dogs. So far this year, Chad has reported 47% fewer infected dogs in January-April 2025 (32) than in the same period of 2024 (61) (Figure 1). Of the 32 dog GW infections reported in January-April 2025, 21 (66%) are in the two districts (Bongor, Guene) bordering Cameroon's endemic area.

After participating in the Abu Dhabi Guinea Worm Summit in March 2022, the Government of Chad increased political support for Guinea worm eradication at the *local* level by Minister of Health Dr. Abdelmadjid Abderahim visiting an endemic village in August 2023, by governors signing a *national* N'Djamena Declaration in January 2024, followed by *provincial* Declarations that respective administrative heads and traditional authorities down to the district level signed in April-May 2024, and Chad's proposal of the *international* Guinea Worm Eradication resolution at the World Health Assembly in May 2025.

**Figure 1**

**Chad Guinea Worm Eradication Program Dog Infections per Month: 2019 - 2025***




## SOUTH SUDAN: THE WAY FORWARD

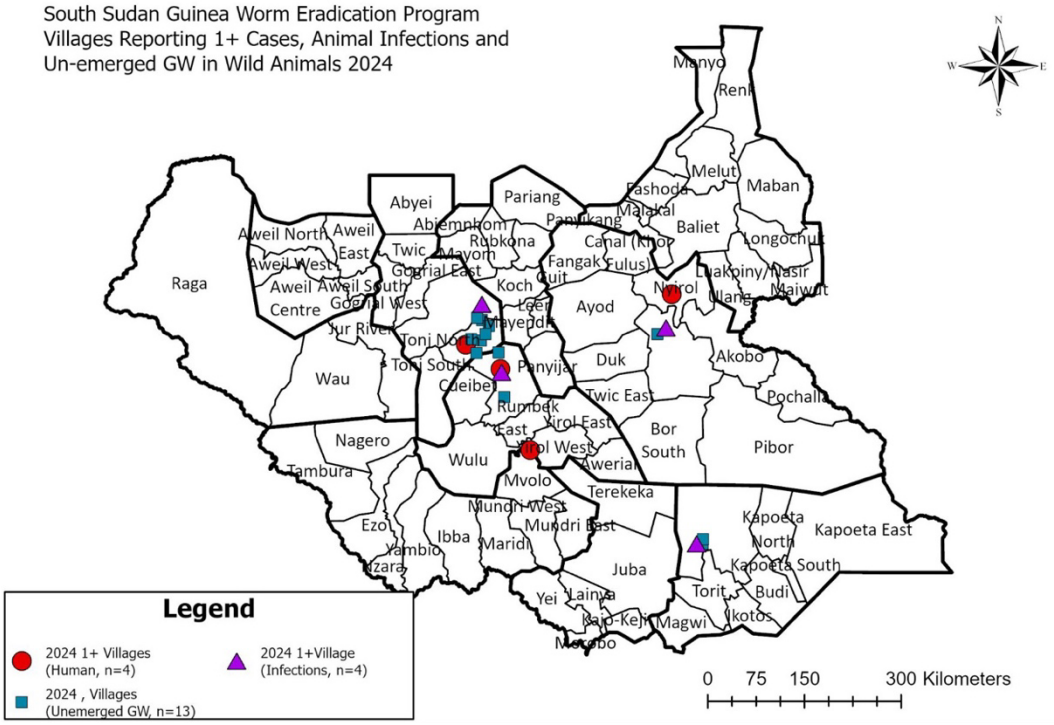
South Sudan's discovery in 2024 of sustained GW transmission in small wild carnivores (serval, African wild cat, genet, African civet) and their apparent link to previously inexplicable sporadic GW cases in humans present a new challenge for South Sudan's Guinea Worm Eradication Program (SSGWEP). After enumerating 20,581 human Guinea worm cases in 2006, the area that five years later became independent South Sudan reported a total of only 43 human cases and 2 domestic dogs with GW during 2015-2023 (range: 0-10 human cases per year). South Sudan detected its first wild animal with GW

infection, a genet, in November 2023, and the SSGWEP increased GW surveillance among wild animals in 2024. Recent analysis of GW specimens from infected humans and animals in South Sudan in 2024 provides genetic evidence of sustained transmission and of GW spillover risk to humans from infected wild felines. Only one of South Sudan's six human cases in 2024 was genetically linked to any other known specimen (from a serval) however, and most specimens from wild animals were not genetically linked to any other known GW infection either, which suggests South Sudan didn't detect some GWs that infected people or animals in 2023.

The 6 humans and 4 animals with known emerging Guinea worms and the 14 small wild carnivores with *un-emerged* Guinea worms detected in South Sudan in 2024 were found in six counties: Tonj East in Warrap State; Lafon/Eastern Equatoria; Rumbek North and Yirol West/Lakes; and Uror and Nyirol/Jonglei, with almost two-thirds, 63%, in Tonj East (11) and Lafon (4) Counties (Figure 2). The significance of emerged vs. un-emerged Guinea worms is discussed in *Guinea Worm Wrap-Up* #315. Eighty-eight percent (21/24) of South Sudan's known cases and infections in 2024 occurred in June-August. The 6 human cases were evenly divided by gender, ranged from 7 to 50 years old, and 5 were ethnic Dinka (including 3 Dinka from the same village who apparently were infected by drinking unsafe water) and 1 Nuer.

To combat the new challenges in humans and animals, the SSGWEP is stressing active community-based surveillance of people and animals and sustained targeted interventions in the six endemic counties, especially hotspot Tonj East and Lafon Counties. GW transmission among people and animals in South Sudan probably occurs from consuming contaminated drinking water, raw or inadequately cooked aquatic animals such as fish, and/or fish waste discarded by humans. Proactive tethering of wild animals is not an option and in some areas Abate usage may be limited during peak GW transmission in the rainy season. Educating humans and distributing cloth and pipe filters continues in at-risk communities. In 2024 the SSGWEP began introducing aquatic waste management to deny animals access to potentially infected animal waste and is advocating to increase access to safe water in high-risk villages.

**Figure 2**



## MALI: INSECURITY IMPEDES SURVEILLANCE & INTERVENTIONS

Mali reported only 9 human GW cases during 2015-2024, but it detected GW infections in a total of 166 domestic dogs, 17 domestic cats, and 1 donkey during the same decade. A wild jackal detected in 2024 with an *un-emerged* GW is not counted as a GW infection. The scarcity of human cases in recent years is partly because nearly all recent Malian communities with animal infections had at least one source of safe drinking water. Despite >85% awareness in endemic areas in 2024 of the cash reward for reporting a person or animal with GW infection however, genetic analysis of GW specimens from Mali indicates "sustained genetic diversity and few genetic linkages between [tested] infections" in recent years, which suggests that GW surveillance in Mali is missing many GW infections. In Mali as in Chad, sustained GW infections among dogs are associated with riverine ecology and mass fishing but is further complicated by robust commercial trade and transport of dogs in Mali, and inaccessibility of some endemic Malian communities due to on-going insecurity. Insecurity is Mali's main challenge. In February 2025, for example, Mali Guinea Worm Eradication Program (MGWEP)'s access was limited in parts of Djenne, Mopti, Markala, Macina, and Tominian districts, all of which are known to be endemic or high-risk for GW. Of these, the Peace Through Health Project to help improve MGWEP access to endemic areas is operating in parts of Macina and Tominian districts.

The MGWEP has assisted proactive tethering of domestic dogs and cats in some accessible endemic communities during Mali's usual July-December GW transmission season, beginning late in 2021. It has also promoted safe disposal of fish and other aquatic animal waste since 2021, reaching over 80% of 22 villages with GW infections in 2024, and the MGWEP has applied Abate, distributed cloth and pipe filters, and provided health education about GW prevention in some high-risk endemic areas for several years.

Mali detected an unexpected GW infection in a 14-month-old dog imported from Kolongo Bozo village in Macina district of Segou Region to Lakuy village in Tominian district, where the worm emerged on April 28, 2025, after controlled immersion. The dog's infection was detected two days earlier before worm emergence and is being contained. There is a second dog with suspected contained GW in Macina that also originated from Kolongo Bozo village. The earliest known GW infection in Mali in 2024 was an uncontained dog infection in Touara village of Macina district whose worm emerged on July 18. This suggests the source of this latest infection was undetected in 2024.

## ETHIOPIA: ARE BABOONS THE FINAL GW HOST?

Ethiopia's Dracunculiasis Eradication Program (EDEP), which has shrunk the numbers of GW infections found in people and animals over the past decade (see *Guinea Worm Wrap-Up* #317), only reported confirmed Guinea worm infections in four baboons, including two baboons with *un-emerged* worms, in 2024. Genetic analysis of Guinea worms from recent previous years' baboon infections, however, shows that the EDEP is still missing some GW infections. The Ethiopian program's challenge is to search and apply follow-up interventions in areas with known GW thoroughly enough to break all remaining chains of GW transmission.

The extent of Ethiopia's surveillance for GW in people and domestic animals was summarized in the previous issue. EDEP surveillance also included examinations of 317 dead baboons identified by community-based surveillance and 241 baboons trapped and examined by the Baboon Research Project during 2024. The Baboon Research Project works with the Ethiopian Public Health Institute (EPHI),

Ethiopian Wildlife Conservation Authority, and others to study, track, and monitor 15 baboon troops in areas with recent known GW infections. The EDEP reported no infected baboons in 2023 and 2 infected baboons in 2022. For each known infected baboon, the EDEP aims to learn if any other baboon(s), animals, or people were infected at the presumed time and place of the known baboon's past exposure and whether others were exposed to the baboon's current infection.

1. The first baboon detected in 2024, which was reported by a community member deep in the forest near Eyerus Farm (Yakob Farm) in Perbongo kebele of Abobo district, Gambella Region on April 12, 2024, had 6 nearly mature un-emerged Guinea worms. If left undisturbed, those GWs might have emerged a month or two later or they might have died in the baboon without emerging. This baboon's estimated likely period of infection was about March-August 2023. The home range of a serval cat that was detected about 5 kilometers (~3 miles) away in Perbongo kebele in March 2023 with 3 *un-emerged* Guinea worms could have potentially overlapped with this baboon's home range. This suggests that the two animals might represent different generations of a shared cluster of infection. Genetic analysis may provide more insight into their worms' potential relationship, but so far worms from the two animals do not appear to be related. The EDEP began applying Abate in June 2023 in the infected serval cat's home area, which possibly includes water sources shared by other baboons, domestic animals, and people. Although Perbongo kebele doesn't practice proactive tethering of domestic dogs and cats, the human and animal surveillance has been enhanced in the area. No infected dogs, cats, or humans were detected in the kebele in 2024. Neither of the baboon troops identified in this area were tracked by the baboon research team before the infected baboon was discovered. Three months after the infected baboon was detected, i.e., in July 2024, 25% of the eligible baboons from Lel Nyagn troop were trapped and inspected for GW by the Baboon Research Team and none of those trapped were found with GWD.
2. The second baboon detected during 2024 was from the AK Roadside troop near Akweramero Farm in Gog district of Gambella Region. When trapped and sedated by the Baboon Research Team on **July** 30, 2024, the baboon was found to have 3 emerging Guinea worms. The potential period of this baboon's infection was May-September 2023. Ethiopia found no infected baboon in 2023, only a far distant dog with an emerging GW and a far distant serval cat with *un-emerged* GWs. Aggressive abating was applied to water sources in the area starting soon after discovery of this infection. This AK Roadside troop was tracked for a year and a half during 2018-2020, and with a GPS collar since March 2024. One baboon in the AK Roadside troop was detected with uncontained emerging GW in June 2019 and three infected baboons were also detected with uncontained emerging GWs in the nearby Balak baboon troop in June 2019.
3. The third infected baboon detected during 2024 was from the Balak troop near Akweramero Farm in Gog district/Gambella Region. This baboon had 8 confirmed Guinea worms, some of which were emerging, when it was trapped and examined by the Baboon Research Team on November 19, 2024. The potential period of this baboon's infection was September 2023 to January 2024. This baboon shares water source(s) with baboon #2 of 2024 in the AK Roadside troop. This infection is not likely related to the infected dog of 2023 because that dog lived far from the home range of this baboon. The only previous known GW infections in the Balak troop were in 2019. The Balak troop was being tracked and monitored with GPS collars from March 2024 to May 2025
4. Like the third infected baboon presented above, the fourth infected baboon detected during 2024 was from the Balak troop and was detected on **November** 19, 2024, with 5 *un-emerged* worms. The possible period of infection is likely to be the same as the third baboon infection

(September 2023 to January 2024), as they are from the same troop and hence are likely to share the same source(s) of infection.

The three infected baboons are close to each other in Gog district; the infected baboon in Abobo district is about 25 miles (42 km) distant from the others.

**IN BRIEF:**

**Angola** has provisionally reported 19 animal GW infections (58% contained), all dogs, in January-April 2025, compared to 36 animal infections (10 contained) in January-April 2024. This is a reduction of 47% so far in 2025, following a reduction of 55% in Angola's dog GW infections between 2023 and 2024. Angola's typical GW transmission season is January – April. *This program should keep an updated line list showing the status of coverage with proactive tethering, Abate usage, safe drinking water supply, cloth & pipe filters, health education, fish waste burial, and containment of GW infections in each of its 25 villages with one or more GW infections, ranked in order from the highest number of infections in 2024 to lowest.*

**Cameroon** has provisionally reported 229 animal GW infections (79% contained), all dogs, in January-April 2025, compared to 198 animal infections (78% contained) in January-April 2024; an increase of 16% in animal GW infections so far in 2025, following an increase of 13% in Cameroon's animal GW infections between 2023 and 2024. Cameroon's typical GW transmission season is January – July. *This program should keep an updated line list showing the status of coverage with proactive tethering, Abate usage, safe drinking water supply, cloth & pipe filters, health education, and containment of GW infections in each of its 15 villages with one or more GW infections, ranked in order from the highest number of infections in 2024 to lowest.*

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

Table 1

**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 / 1** | **0%** |
| SOUTH SUDAN | **0 / 0** | **0 / 0** | **0 / 0** | **0 / 0** | | | | | | | | | **0 / 0** | **N / A** |
| CAMEROON | **0 / 0** | **0 / 0** | **0 / 0** | **0 / 0** | | | | | | | | | **0 / 0** | **N / A** |
| MALI | **0 / 0** | **0 / 0** | **0 / 0** | **0 / 0** | | | | | | | | | **0 / 0** | **N / A** |
| TOTAL* | **0 / 0** | **0 / 0** | **0 / 0** | **0 / 0** | | | | | | | | | **0 / 1** | **0%** |
| % CONTAINED | **0%** | **N / A** | **N / A** | **N / A** | | | | | | | | | **0%** | |

***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** |
| 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.

## RECENT PUBLICATIONS

World Health Organization, 2025. Dracunculiasis eradication: global surveillance summary, 2024. Wkly Epidemiol Rec 100:165-191. http://www.who.int/wer

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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:

*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*