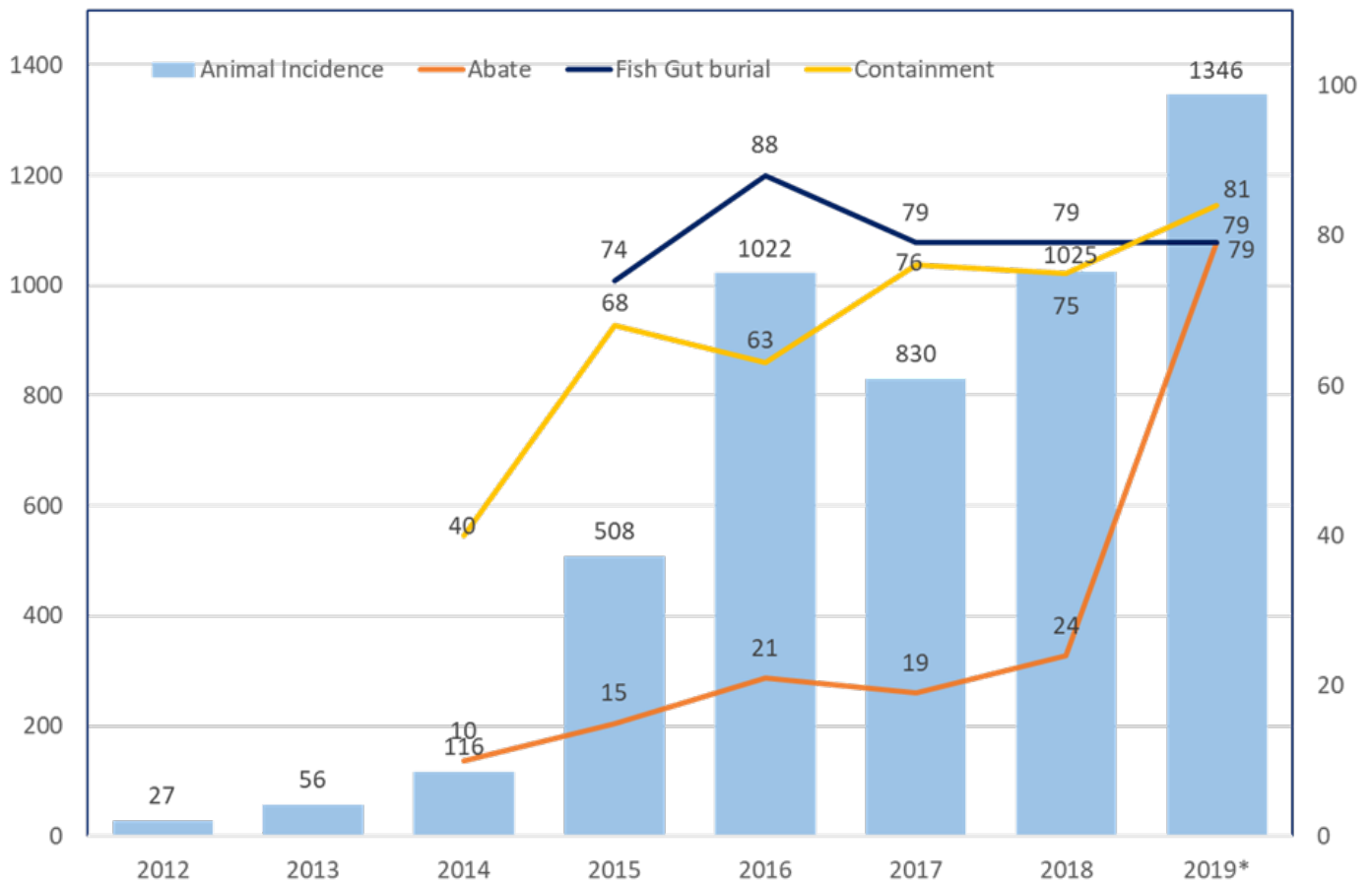




Date: October 10, 2019
From: WHO Collaborating Center for Dracunculiasis Eradication, CDC
Subject: GUINEA WORM WRAP-UP #263
To: Addressees

“In life’s small things be resolute and great to keep thy muscle trained; Know’st thou when fate shall say to thee, “I find thee worthy; do this deed for me.” James Russell Lowell

Chad: Incidence of GW Infection in Animals, 2012 - 2019*
 % Coverage** with Key Interventions



* provisional through June 2019. The animal infections are mostly dogs.

** Definition of coverage Abate = % cumulative villages treated in 2018-2019 1+ villages same year;
 Burial of fish guts = % people surveyed in VAS level 1 with demonstrated fish burial practices;
 Containment = % infected humans or animals contained or tethered.



CHAD: 42 HUMAN CASES, 1,798 INFECTED ANIMALS

Chad's Guinea Worm Eradication Program (CGWEP) reported 41 humans, 1,798 dogs and 39 cats with Guinea worm infections in January-September 2019, which represents increases of 215%, 95%, and 77% from the infections of humans (13), dogs (923) and cats (22) respectively, in the same period of 2018. About half (18) of the human cases reported in 2019 are from an unusual (for Chad) waterborne common source outbreak in the village of Bogam, in Salamat Region. Except for that outbreak, Chad has reported between 9 and 16 human cases since Guinea worm disease was re-discovered there in 2010. Unlike Mali and Ethiopia (see below), Guinea worm cases in humans in Chad have not yet declined while animal infections are on-going, perhaps due to the high level of dog infections in Chad (Table 1).

Full court press: To counter the increased infections, under the leadership of National Program Coordinator Dr. Tchindebet Ouakou, this year the CGWEP has intensified interventions, surveillance, and research, and is receiving increased support.

- *Interventions.* The CGWEP achieved almost 80% reported coverage of target groups with all three key interventions (Abate, Burial of fish guts, Containment of infected dogs) in 2019 for the first time. Overall, 78% (1334/1719) of Guinea worm infections in Chad in January-August 2019 were contained. The reported containment rate of infected animals and the reported percentage of persons surveyed in villages under active surveillance found to have demonstrable practices of burying fish guts have been relatively high since 2017, but the proportion of villages with infected humans and/or animals where water sources were treated with Abate rose substantially from 24% in 2018 to 79% in 2019 (Figure 1).
- *Surveillance.* Chad increased the number of villages under active surveillance by 13%, from 1,895 in December 2018 to 2,149 as of August 2019. The number of rumors of infected humans and dogs increased from 35,890 in all of 2018 to 65,979 rumors in January-August 2019 alone. The cash reward for reporting a human case remains at the equivalent of US\$100 and for infected dogs at US\$20.
- *Research.* Research to date has shown that unlike at-risk dogs in Ethiopia that travel into the forest with their owners, and at-risk dogs in Mali that are transported long distances to be sold at market, in Chad over 90% of all dog visits are to ponds within 200 meters (~600 feet) of the dogs' households, which are less than 10% of all ponds (Univ. Exeter/UK). We have learned that eating raw fish guts is a risk factor for dogs in Chad (CDC), that *D. medinensis* can use frogs as a paratenic host in the laboratory and can use small fish ("fingerlings") as a transport host in the laboratory, and that *D. medinensis* larvae have been recovered from a few wild frogs in Chad (Univ. Georgia/USA). And we also know now that while Guinea worms in Chad are distinguishable from those in the other endemic countries, the Guinea worms in humans and dogs in Chad are indistinguishable from each other (Vassar College/USA).
- *Support.* To support Chad's intensified efforts, the CGWEP staffing is being increased by 200% and its budget by almost 50% in 2019.

Chadian President Idriss Deby appointed a new Minister of Public Health in August: Prof. Mahmoud Youssouf Khayal. Prof. Khayal was previously rector of the Virtual University of Chad (2017-2019), and managed the National Research Center (CNAR) (2014-2017) and the National Institute of Applied

Table 1

**Chad Guinea Worm Eradication Program
GWEP Line Listing of Confirmed Cases: Year 2019***

| Case # | Age | Sex | Ethnicity | Village of Detection | District / payam / woreda | County / Region | Date of Emergence (D/M/Y) | Nb of worms | Case Contained | Patient contaminated sources of water (Yes/No) | ABATE applied (Yes/No) | Source* of infection established? (Yes/No) | Date sent to CDC (D/M/Y) |
|--------|-----|-----|-------------------|---------------------------------|---------------------------------|--------------------|------------------------------|----------------|----------------|---|------------------------------|---|-----------------------------|
| 1 | 33 | M | Mbao | Ngargue (Quartier Kormada) | Bailli | CB | 1-Jan-19 | 1 | No | Probable | Yes | | 8-Jan-19 |
| 2 | 11 | M | Sara Kaba | Dangala Kanya (Quartier Kibita) | Kyabe | MC | 5-Jan-19 | 1 | No | Probable | Yes | | 31-Jan-19 |
| 3 | 13 | M | Sara Kaba | Marabe 2 (Quartier Dilibi) | Kyabe | MC | 15-Feb-19 | 1 | Yes | No | | | 22-Feb-19 |
| 4 | 64 | F | Sara Kaba | Kyabe (Hors-zone) | Kyabe | MC | 24-Mar-19 | 1 | No | Yes | Yes | | 4-3--19 |
| 5 | M | 4 | Ngambaye | Mourkou | Dourbali | CB | 16-Apr-19 | 1 | Yes | No | | | 8-May-19 |
| 6 | 58 | M | Sara-Goulaye | Gassaou/Ndjourou | Bouso | CB | 23-Apr-19 | 4 | Yes | No | | | 8-May-19 |
| 7 | 19 | F | Torom | Bogam | Aboudeia | SLM | 19-Apr-19 | 2 | No | No | | | 13-May-19 |
| 8 | 24 | F | Torom | Bogam | Aboudeia | SLM | 7-May-19 | 1 | No | No | | | 13-May-19 |
| 9 | 50 | F | Torom | Bogam | Aboudeia | SLM | 9-May-19 | 1 | Yes | No | | | 13-May-19 |
| 10 | 18 | M | Rachid | Kemkian | Sarh | MC | 10-May-19 | 1 | No | Probable | | | 31-May-19 |
| 11 | 22 | F | Torom | Bogam | Aboudeia | SLM | 12-May-19 | 1 | Yes | No | | | 31-May-19 |
| 12 | 9 | F | Torom | Bogam | Aboudeia | SLM | 15-May-19 | 1 | Yes | No | | | 9-Jul-19 |
| 13 | 23 | F | Torom | Bogam | Aboudeia | SLM | 19-Jun-19 | 1 | Yes | No | | | 31-May-19 |
| 14 | 30 | m | Torom | Bogam | Aboudeia | SLM | 23-May-19 | 1 | Yes | No | | | 19-Jul-19 |
| 15 | 8 | F | Torom | Bogam | Aboudeia | SLM | 23-May-19 | 1 | Yes | No | | | 24-Jun-01 |
| 16 | 50 | m | Rachid | Amhabile | Aboudeia | SLM | 31-May-19 | 1 | Yes | No | | | 19-Jul-19 |
| 17 | 15 | M | Torom | Bogam | Aboudeia | SLM | 5-Jun-19 | 2 | Yes | No | | | 24-Jun-19 |
| 18 | 44 | m | Boua | Mama | Korbol | MC | 7-Jun-19 | 1 | No | Probable | Yes | | 28-Jun-19 |
| 19 | 6 | F | Torom | Bogam | Aboudeia | SLM | 10-Jun-19 | 1 | Yes | No | | | 19-Jul-19 |
| 20 | 30 | M | Torom | Bogam | Aboudeia | SLM | 10-Jun-19 | 1 | No | Probable | Yes | | 28-Jun-19 |
| 21 | 6 | F | Sara Kaba /Koulfa | Bemadjirodjo | Sarh | MC | 11-Jun-19 | 1 | No | Yes | | | 24-Jun-19 |
| 22 | 35 | m | Zahawa Arabe | Amhabile | Aboudeia | SLM | 12-Jun-19 | 1 | Yes | No | | | 31-May-19 |
| 23 | 55 | M | Torom | Liwi | Aboudeia | SLM | 18-May-19 | 1 | No | | | | 31-May-19 |
| 24 | 53 | M | Torom | Tarh | Aboudeia | SLM | 25-May-19 | 1 | Yes | No | | | 31-May-19 |
| 25 | 5 | F | Torom | Bogam | Aboudeia | SLM | 25-May-19 | 1 | Yes | No | | | 31-May-19 |
| 26 | 11 | F | Sara Kaba | Ngondei Centre | Kyabe | MC | date unknown (may 2019) | 3 | No | Yes | Yes | | 19-Jul-19 |
| 27 | 5 | F | Torom | Bogam | Aboudeia | SLM | 23-Jun-19 | 1 | Yes | No | | | 19-Jul-19 |
| 28 | 70 | F | Torom | Bogam | Aboudeia | SLM | 28-Jun-19 | 1 | Yes | No | | | 19-Jul-19 |
| 29 | 10 | m | Sara Kaba | Marakouya 2 | Kyabe | MC | 10-Jul-19 | 1 | No | Yes | Yes | | 19-Jul-19 |
| 30 | 35 | M | Sara Kaba | Ngondei Centre | Kyabe | MC | 15-Jul-19 | 1 | No | Yes | Yes | | 9-Aug-19 |
| 31 | 43 | M | Torom | Bogam | Aboudeia | SLM | 22-Jul-19 | 1 | Yes | No | | | 6-Aug-19 |
| 32 | 8 | M | Torom | Bogam | Aboudeia | SLM | 23-Jul-19 | 1 | Yes | No | | | 6-Aug-19 |

*provisional

Science and Technology of Abache (*INSTA*) (1997-2013). Prof. Khayal replaces former minister Aziz Mahamat Saleh, who was appointed in December 2017. The CGWEP National Coordinator Dr. Tchindebet Ouakou worked in refugee camps in Haraze in Salamat Region July 9-16, supported by the World Health Organization (WHO). The Deputy National Coordinator, Mr. Moundai and the CGWEP's monitoring and evaluation team conducted field trips in July to assess the quality of Abate treatments. Dr. Chris Cleveland of the University of Georgia/USA led follow-up studies of little fish as possible transport hosts in-country in August. The CGWEP held its annual mid-year review meetings in Bongor and Sarh on August 20 and 22, respectively. Ms. Sarah Yerian and Ms. Karmen Unterwegner from Carter Center headquarters participated in these reviews. Dr. Sarah Guagliardo and an Epidemic Intelligence System officer from CDC launched an evaluation of the CGWEP's surveillance system in September.



SOUTH SUDAN: 4 HUMAN CASES, NO INFECTED ANIMALS

South Sudan's Guinea Worm Eradication Program (SSGWEP) has reported four laboratory-confirmed cases of Guinea worm disease. Three were detected in a 28-year-old Luo woman, her 43-year old husband and their 14-year old daughter in the village of Akuoyo in Jur River County of former Western Bahr Al-Ghazal State on August 1, September 25, and July 28, respectively, 2019. They reside in Akuoyo village in the same county. Sources of drinking water used by the family are known to the program, which treated the water with Abate and distributed cloth and pipe filters. The source of these three patients' infections is currently unknown but investigations are still underway. There was also one confirmed case in a 24-year old female from Torit. This is an overall reduction of 60% in human cases (Figure 3) from the 10 cases reported during January-September 2018. Only one of the four cases were contained.

The 2019 confirmed cases do not share any known epidemiological link with the 2018 cases, which includes the closest geographical case: the 34-year-old Dinka woman from Wundiu village in Tonj North County (approximately 170 kilometers/105 miles away) whose first worm was uncontained and emerged in July 2018. That patient's chronic infection this year was described in *Guinea Worm Wrap-Up* #262. In South Sudan, the reward for reporting an infection human is the equivalent of US\$400; the reward for a dog is US\$20.

The SSGWEP Director Mr. Samuel Makoy Yibi and Carter Center GWEP Director Mr. Adam Weiss visited Udici payam to investigate the infected mother and daughter at the Angon Case Containment Center and Akuoyo village from August 26-29. Most families in Akuoyo village, including the patients' family, own dogs. No infected animal was detected in these two patients' village this year or anywhere in South Sudan since a single dog had a confirmed Guinea worm in the same household as an infected girl in Angon village of Udici County (former Jur River County) in July/August 2015.

The SSGWEP is continuing to investigate all possible routes of transmission in Akuoyo, including what might explain the low-level, isolated transmission dynamics accounting for the repetitive outbreaks in Jur River in recent years. This includes understanding the movement and settlement dynamics of the Fulani nomads, who routinely transverse many parts of South Sudan from Central and West Africa.

ETHIOPIA: NO HUMAN CASE, 9 INFECTED ANIMALS



Ethiopia's Dracunculiasis Eradication Program (EDEP) has reported no human case of Guinea worm disease for over one and a half years, since December 2017. Animals with Guinea worm infections continue, with 6 baboons, 2 domestic dogs and 1 leopard found in January-September 2019, which is, however, a reduction of 47% in infected animals from the 17 animal infections (11 dogs, 5 cats, 1 baboon) detected in January-September 2018 (Figure). The Guinea worms detected in the leopard and in three of the baboons had not emerged from the animals but were found by dissection. The reduction in infected domestic dogs from 11 to 2 and domestic cats from 5 to zero, which follows the decision of villagers in the areas of highest risk to tether dogs and cats proactively since mid-2018, is noteworthy. Ethiopia increased its reward for reporting a human case of GWD to the equivalent of US\$360 in 2019 and the reward for infected animals to US\$40. After achieving impact of control measures on Guinea worm transmission to humans, dogs and cats in Ethiopia's Gog district, impact on transmission to baboons remains to be seen.

MALI: NO HUMAN CASE, 9 INFECTED ANIMALS



Mali has detected no human with Guinea worm disease for almost four years, since November 2015. Mali reports 8 domestic dogs and 1 cat with Guinea worm infections (67% contained) in January-September 2019, compared with 13 dogs and 2 cats infected during the same period of 2018, for a reduction of 40% in infected animals (Figure). Six (67%) of the 9 infected animals were contained. Three of the infected dogs were detected in Djenne district of Mopti Region, four were detected in Tominian district of Segou Region; one infected dog and the cat were detected in Macina district of Segou. Six of the 9 animals originated and were probably infected in Mopti Region (Djenne and Tenenkou districts), the other three appear to have originated and been infected in Segou Region (Tominian and Macina districts). With improved security, health workers in Mali's Guinea Worm Eradication Program have better access to some affected areas of Mopti Region in 2019 compared to 2018, but they still do not have safe access to all of the areas where infected dogs appear to originate. Insecurity remains the main challenge to complete elimination of Guinea worm infections in dogs in Mali. Mali increased its reward for reporting a human case of GWD to the equivalent of US\$340 in 2019; the reward for dogs is US\$20. Except for continued infections in dogs and cats, Mali would be considered for certification of Guinea worm eradication by now.

Table 2

Mali Guinea Worm Eradication Program
Listing of Animal Infections: 2019*

| Animal Serial No. | Region | District | Health Area | Village | Ethnicity of Animal Owner | Occupation of Animal Owner | No. of GWs | Animal | Containment ^ (Yes/No) | Date of detection | Date GW emergence | Water Source Contamination? (Yes/No/likely) | Abate applied (Yes/No) | Lab Confirmed |
|-------------------|--------|-----------|--------------|----------------|---------------------------|----------------------------|------------|--------|------------------------|-------------------|-------------------|---|------------------------|---------------|
| 1 | Segou | Touminian | Fangasso | Sokoura | Bobo | farming | 1 | dog | Yes | 7-May-19 | 07-mai-19 | No | No | Yes |
| 2 | Mopti | Djenne | CSCOM centra | Kanafa(Djenne) | Bamanan | metal joiner | 1 | dog | Yes | 28-Jun-19 | 4-juil.-19 | No | Yes | Yes |
| 3 | Segou | Touminian | Fangasso | Masso | Bobo | Farming | 2 | dog | Yes | 26-Jul-19 | 27-juil.-19 | No | Yes | Yes |
| 4 | Segou | Touminian | Fangasso | Masso | Bobo | Farming | 1 | dog | Yes | 18-Aug-19 | 19-août-19 | No | Yes | Yes |
| 5 | Mopti | Djenne | Gomitogo | Soa | Bobo | Farming | 1 | dog | No | 20-Aug-19 | 25-août-19 | likely | Yes | Yes |
| 6 | Segou | Macina | CSCOM centra | Gueda | Bozo | Fishing | 1 | dog | Yes | 28-Aug-19 | 28-août-19 | No | Yes | Yes |
| 7 | Segou | Touminian | Togo | Kerebere | Bobo | Farming | 2 | dog | No | 27-Aug-19 | 27-août-19 | likely | Yes | Yes |
| 8 | Mopti | Djenne | Gomitogo | Gomitogo | Bozo | Trader | 2 | dog | No | 29-Aug-19 | 13-août-19 | No | No | Yes |
| 9 | Segou | Macina | Kokry | Kokry Bozo | Somono | housewife | 1 | cat | Yes | 12-Sep-19 | 12-sept.-19 | No | No | Yes |

October 7th,2019

^ All of the containment criteria must be met:

1. The animal must be detected and tethered with in 24 hours of worm emergence.
2. The animal must not have entered a source of water with an emergent GW.
3. The animal is tethered prior to GW emergence until all worms are extracted, and owners received health education.
4. A supervisor confirms the infection with GW within 7 days of worm emergence.
5. Abate is applied to water sources to prevent the possibility of transmission of GWs within 15 days of the contamination event.



ANGOLA

The Angolan Ministry of health is continuing to strengthen surveillance for Guinea worm nationwide with emphasis on Cunene province where Guinea worm infection was reported in 2018 and 2019. This includes making the most of all available opportunities such as polio surveillance activities, mapping and mass drug administration to control Neglected tropical diseases. Guinea worm disease is now integrated into the national surveillance system and reporting on Guinea worm disease is mandatory.

To further increase the sensitivity of Guinea worm surveillance in Cunene province, training of health, social mobilization, community awareness creation on guinea worm and the cash reward were undertaken.

In August 2019, case searches for Guinea worm disease were performed through mapping of schistosomiasis in 226 villages in 44 districts (municipalities) of six provinces including Cunene province. One rumor was detected in Ovale village, Cuanhama district in Cunene province. The rumor was investigated immediately, and Guinea worm was ruled out.

In preparation for the next transmission season, 29, 000 filters are poised to be distributed in the coming weeks in and around the three villages that reported Guinea worm infections – 2 persons and 1 dog- 2018 and 2019.



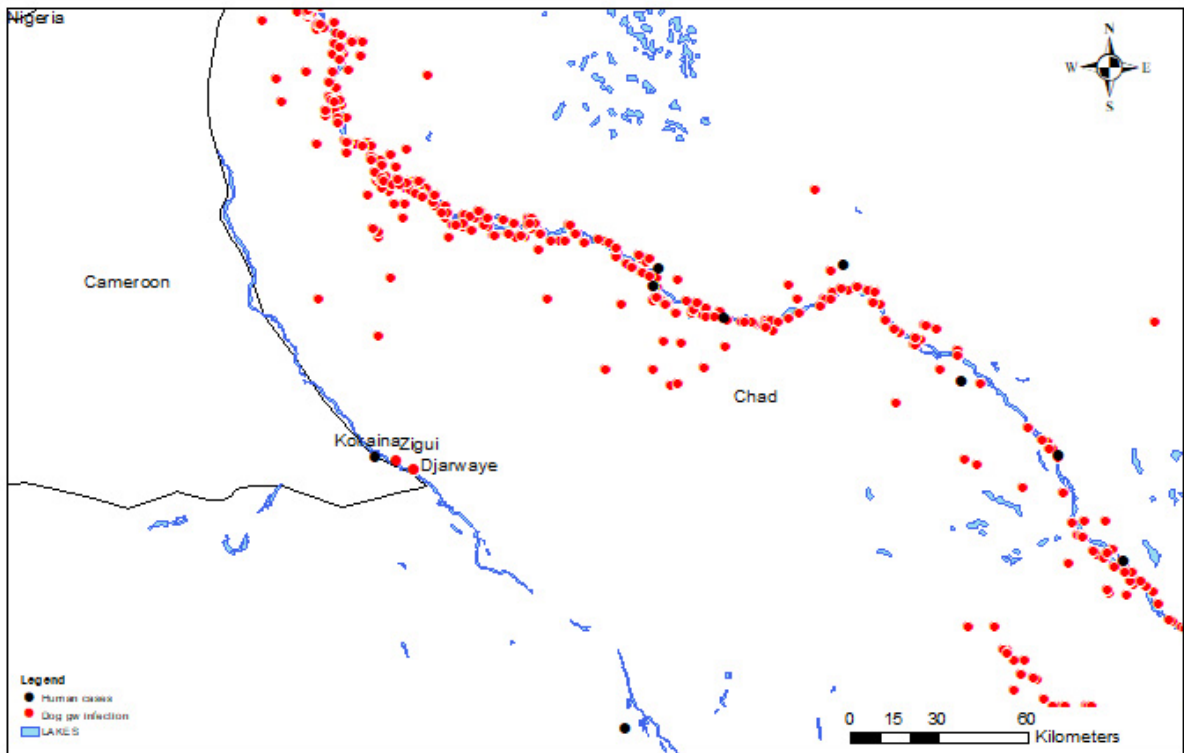
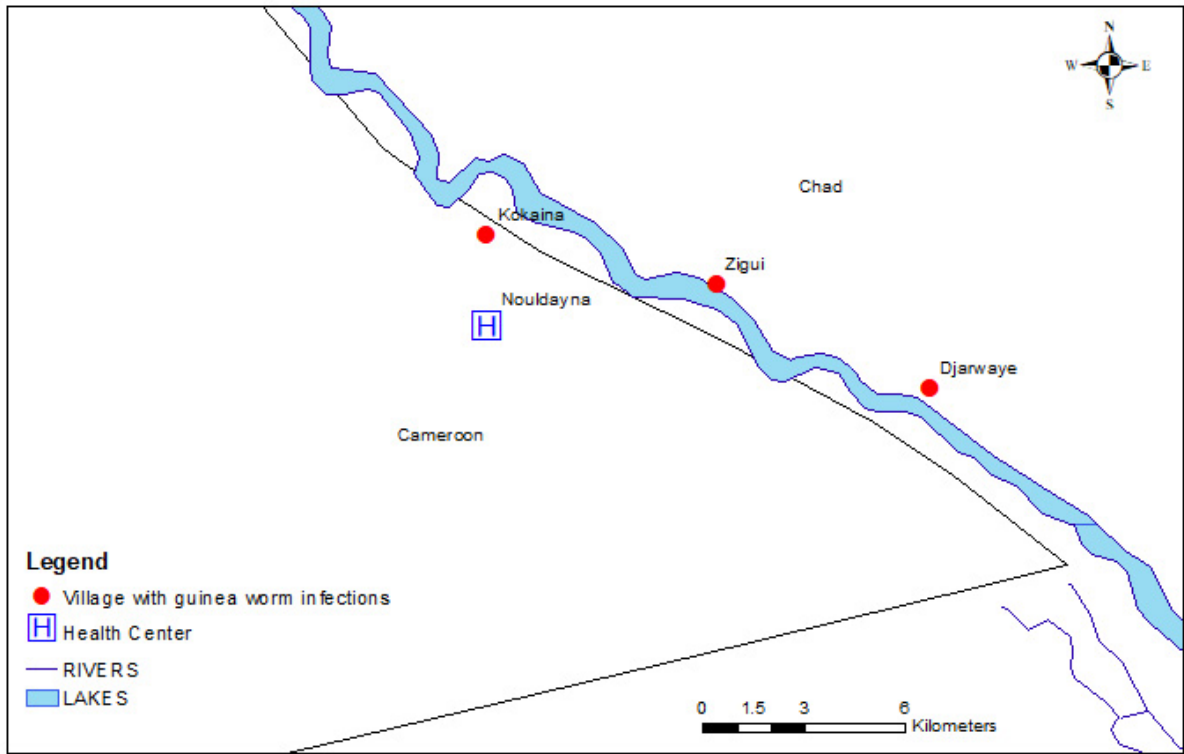
CAMEROON

Following the detection and confirmation of Guinea worm in a 49-year-old Massa woman from the village of Kokaina (Dabana neighborhood) in Guere health district of Cameroon's Far North Region (worm emerged in March 2019), preliminary investigations show that it is likely that the infection detected in Cameroon is an importation from Chad. The village of Kokaina shares with the two endemic villages of Djarwaye and Zigui in Bongor district of Chad, the same Massa ethnic group with strong family and socio-economic ties. As a result of this there is continued and important population movements among these villages across the border of Cameroon and Chad. The 3 villages are located at less than 10 km from each other; only the Logone river separates Kokaina village in Cameroon from the two villages in Chad (Figure 2).

In 2019 so far the village of Zigui reported 5 infected dogs, two of which had their first worm emergence in March 2019. Two of the 5 dogs reported in Zigui were said to meet the containment criteria. In October 2018, Djarwaye village reported one infected dog-uncontained. The infections reported in Zigui in Chad and Kokaina village in Cameroon could not be linked to the one detected in Djarwaye in October 2018, however since several dogs are reported infected in Zigui in 2019 due to extended and improved surveillance, Guinea worm infections were likely undetected in Zigui in 2018 or before.

The investigations are being pursued. Surveillance measures and community awareness creation are being strengthened in both sides of the Cameroonian-Chadian border, so as to detect and contain transmission.

Figure 2



Guinea Worm Infections in Humans and Animals, 2018-2019

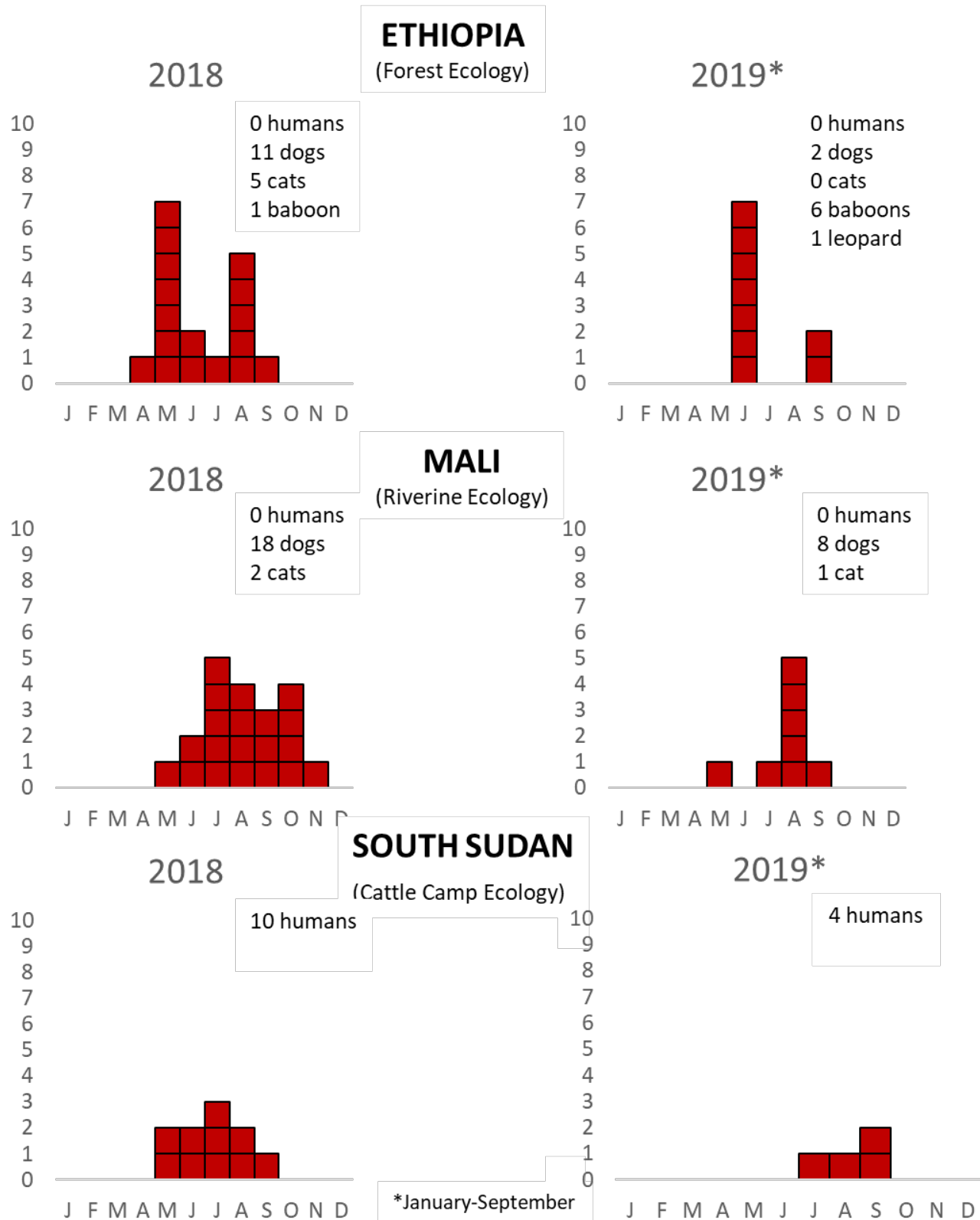


Table 3

Number of Laboratory-Confirmed Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2019* †
(Countries arranged in descending order of cases in 2018)

| 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 / 2 | 1 / 1 | 0 / 1 | 2 / 3 | 8 / 12 | 6 / 9 | 3 / 5 | 1 / 5 | 2 / 4 | / | / | / | 23 / 42 | 55% |
| SOUTH SUDAN | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 1 | 0 / 1 | 1 / 2 | / | / | / | 1 / 4 | 0% |
| ANGOLA | 0 / 1 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | / | / | / | 0 / 1 | 0% |
| ETHIOPIA | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | / | / | / | 0 / 0 | 0% |
| MALI § | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | / | / | / | 0 / 0 | 0% |
| TOTAL* | 0 / 3 | 1 / 1 | 0 / 1 | 2 / 3 | 8 / 12 | 6 / 9 | 3 / 6 | 1 / 6 | 3 / 6 | 0 / 0 | 0 / 0 | 0 / 0 | 24 / 47 | 51% |
| % CONTAINED | 0% | 100% | 0% | 67% | 67% | 67% | 0% | 17% | 50% | | | | 51% | |

*Provisional

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

Shaded cells denote months when one or more cases of GWD did not meet all case containment standards.

§Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Timbuktu and Gao Regions; contingent on security conditions during 2018, the GWEP continued to deploy one technical advisor to Kidal Region to oversee the program.

†Cameroon reported one case in March that was likely infected in Chad.

Number of Laboratory-Confirmed Cases of Guinea Worm Disease, and Number Reported Contained by Month during 2018*
(Countries arranged in descending order of cases in 2017)

| 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 | 1 / 1 | 1 / 1 | 1 / 1 | 0 / 0 | 1 / 1 | 0 / 0 | 1 / 5 | 1 / 4 | 0 / 0 | 0 / 1 | 0 / 0 | 1 / 3 | 7 / 17 | 41% |
| 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 | 0% |
| SOUTH SUDAN | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 0 | 0 / 2 | 0 / 2 | 1 / 3 | 1 / 2 | 1 / 1 | 0 / 0 | 0 / 0 | 0 / 0 | 3 / 10 | 30% |
| 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 | 0% |
| ANGOLA^ | / | / | / | 0 / 1 | / | / | / | / | / | / | / | / | 0 / 1 | 0% |
| TOTAL* | 1 / 1 | 1 / 1 | 1 / 1 | 0 / 1 | 1 / 3 | 0 / 2 | 2 / 8 | 2 / 6 | 1 / 1 | 0 / 1 | 0 / 0 | 1 / 3 | 10 / 28 | 36% |
| % CONTAINED | 100% | 100% | 100% | 0% | 33% | 0% | 25% | 33% | 100% | 0% | 100% | 33% | 36% | |

*Provisional

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

Shaded cells denote months when one or more cases of GWD did not meet all case containment standards.

§Reports include Kayes, Koulikoro, Segou, Sikasso, and Mopti, Timbuktu and Gao Regions; contingent on security conditions during 2018, the GWEP continued to deploy one technical advisor to Kidal Region to oversee the program.

^ Investigation of the origin of this case is ongoing. Preliminary outcomes indicate there is no current or historical evidence of human or animal infections in the district of residence.

THE CARTER CENTER ANNOUNCES CHALLENGE FUND FOR GW ERADICATION

THE
CARTER CENTER



ALWALEED
PHILANTHROPIES
الوليد للإنسانية

On September 26, 2019, The Carter Center's Board of Trustees announced the launch of a US\$40 million fundraising campaign, including a US\$20 million Carter Center Challenge Fund, toward the eradication of Guinea worm disease. The

announcement was made at a meeting convened by Mr. Jason Carter, chair of the Carter Center Board of Trustees, and World Health Organization Director-General Dr. Tedros Adhanom Ghebreyesus at the Millennium Hilton New York hotel near the annual meeting of the United Nations General Assembly. The Carter Center Challenge Fund will match, dollar for dollar, donations to the Guinea Worm Eradication Program, up to US\$10 million per year in 2019 and 2020, for a total of US\$20 million in matching funds. Her Royal Highness Princess Lamia Bint Majeed Saud Al Saud, Secretary-General of Alwaleed Philanthropies, announced that Alwaleed Philanthropies, a global philanthropic foundation, would invest the first US\$1 million in matching support.

Dr. Mark Siddall of the American Museum of Natural History moderated a panel discussion by Dr. Donald Hopkins of The Carter Center, WHO Director of Department of Neglected Tropical Diseases Dr. Mwelecele Ntuli Malecela, and Dr. Mona Hammami, Senior Director of the Office of Strategic Affairs of the Crown Prince Court of Abu Dhabi, United Arab Emirates. Also on hand for the announcement and discussion were Carter Center CEO Ambassador (ret.) Mary Ann Peters, Carter Center Vice President-Health Dr. Dean Sienko, Carter Center Guinea Worm Eradication Program Director Mr. Adam Weiss, Dr. Trevor Mundel and Dr. Jordan Tappero of the Bill & Melinda Gates Foundation, International Commission for the Certification of Dracunculiasis Eradication Vice-chair Dr. Joel Breman, Ms. Caroline Read, Director International Relations Division, U.K. Department for International Development, and Mr. Nassar Al Mubarak, Director of the Crown Prince Court of Abu Dhabi, among others.

TRANSITIONS



Dr. James Zingesser, veterinarian epidemiologist, retired from The Carter Center on September 30, 2019. Dr. Zingesser re-joined The Carter Center in March 2016 with almost two decades of experience in public health and veterinary medicine at the U.S. Centers for Disease Control and Prevention, The Carter Center, and the United Nations' Food and Agriculture Organization. He was The Carter Center's resident advisor to the Guinea Worm Eradication Program of Niger from 1995 to 1997. Since re-joining the Center in 2016, he focused on helping to study and understand Guinea worm transmission among animals, especially domestic dogs in Chad as well as domestic dogs and wild baboons in Ethiopia. Since 2018 he was Principal Investigator for The Carter Center on the research project entitled *Epidemiology and disease ecology of Dracunculiasis medinensis infection in baboons and dogs in Gog woreda, Gambella regional state, Ethiopia*. We wish you an enjoyable and satisfying future, Jim! The program continues to receive technical support from staff veterinarians Drs. Fekadu Shiferaw, John Bryan II, Sidouin Metinou and Sentayhu Menda.



Ms. Giovanna Steel joined the Guinea worm eradication team at Carter Center headquarters in Atlanta as Associate Director in August. She has worked with the Guinea Worm Eradication Program in South Sudan on behalf of The Carter Center since 2014, serving as Technical Advisor, Regional Advisor, and most recently as the Deputy Country Representative. Ms. Steel holds a Bachelor of Arts in International Studies from Loyola University Chicago, and a Master of Arts in Conflict Resolution from Georgetown University in Washington, D.C. Welcome Giovanna!

MEETINGS

The South Sudan Guinea Worm Eradication Program will hold its annual Program Review in Juba on December 12-13, 2019.

Ethiopia's Dracunculiasis Eradication Program will hold its annual Program Review meeting on December 17-18, 2019.

Chad's GWEP will hold its annual Program Review in N'Djamena on January 22-23, 2020 (pending ministerial approval).

Mali's GWEP will hold its annual Program Review in Bamako on January 29-30, 2020 (pending ministerial approval).

The 24th International Review Meeting of Guinea Worm Eradication Program Managers will be convened at The Carter Center in Atlanta, USA on March 16-17, 2020.

RECENT PUBLICATIONS

Roberts, L, 2019 (30 Sept.). Exclusive: battle to wipe out debilitating Guinea worm parasite hits 10 year delay. Nature.

McDonnell, T. 2019 (4 Oct.) The end of Guinea worm was just around the corner. Not anymore. NPR.

World Health Organization, 2019. Monthly report on dracunculiasis cases, January-June 2019. Wkly Epidemiol Rec 94:378-379.

World Health Organization, 2019. Monthly Report on dracunculiasis cases, January-July 2019. Wkly Epidemiol Rec 94:438-439

LABORATORY CONFIRMATION OF WORM SPECIMENS

All worm specimens from patients suspected of having Guinea worm disease or infected animals should be sent to the (slightly revised) address below for laboratory and/or molecular confirmation of *Dracunculus medinensis* (Guinea worm):

Vitaliano Cama
Centers for Disease Control and Prevention
RDSB/STAT
ATTN: Laboratory 52
1600 Clifton Road, NE
Atlanta, Georgia 30329 USA
PI's Telephone Number: 404-718-4131

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. Dieudonne Sankara of WHO.

WHO Collaborating Center for Dracunculiasis Eradication, Center for Global Health, Centers for Disease Control and Prevention, Mailstop A-06, 1600 Clifton Road NE, Atlanta, GA 30329, USA, email: gwwrapup@cdc.gov, fax: 404-728-8040. The GW Wrap-Up web location is

<http://www.cdc.gov/parasites/guineaworm/publications.html#gwwp>

Back issues are also available on the Carter Center web site English and French 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



CDC is the WHO Collaborating Center for Dracunculiasis Eradication