

Public Health Service  
Centers for Disease Control  
And Prevention (CDC)  
Memorandum

**Date:** February 23, 2022

**From:** WHO Collaborating Center for Dracunculiasis Eradication/CDC

**Subject:** GUINEA WORM WRAP

## CHAD HOLDS ANNUAL PROGRAM REVIEW

The Chad Guinea Worm Eradication Program (CGWEP) held its annual Program Review on 23-24 November 2022. The meeting, which was opened by Dr. Ishmael Barh Bachar, Secretary General, Ministry of Public Health and National Solidarity, was attended by approximately 70 persons including Vice President Dr. Kashef Ijaz and P. Craig Withers, Joint Guinea Worm Eradication Program Director, Adam Weiss of The Carter Center, Dr. Dieudonné Sankara (virtually), Drs. Ibrahim Djeomboro and Honoré Djimrassenga of the World Health Organization and Dr. Jordan Tappero of the Bill & Melinda Gates Foundation. CGWEP National Program Coordinator Dr. Tchindebet Ouakou reported that the CGWEP provisionally reduced the number of human Guinea worm cases by 49% (from 12 to 7) and the number of animal infections by 7% (from 1,571 to 82) in 2021. Five (71%) of the human cases were contained and the presumed sources of infection were determined for five (71%) of them. Eighty percent (623/767) of the dog infections and 74% (48/65) of the cat infections were contained. Eighty-nine percent of the dog infections occurred in only three provinces: Moyen Chari (329), Chari Baguirmi (209), and Mayo Kebbi Est (84).

As part of the strengthening of surveillance in refugee camps, the capacities of 363 community relays were strengthened on Guinea worm disease surveillance, 3650 people were sensitized, and 130 camp leaders were briefed in 20 camps.

In October 2021, researchers from The Carter Center and the University of Georgia/USA traveled to the *Institut de Recherche en Elevage pour le Developpement* (IREDE) to initiate a new trial investigating the efficacy of Flubendazole for the prevention and/or treatment of Guinea worm infection in dogs. The new trial uses a single subcutaneous injection of a concentrated formulation of the drug. Flubendazole was administered to 649 dogs in 29 villages; 561 dogs in 27 other villages did not receive the drug, serving as controls.

### CAMEROON-CHAD BORDER

Cameroon ended indigenous transmission of Guinea worm disease in 1997, certified by WHO as Guinea worm free in 2007 and reported no Guinea worm infections in 2008-2018. It has since reported 1 human case of Guinea worm disease (uncontained) in 2019, 1 human case (uncontained), 5 infected dogs (0 contained), and 1 infected cat (uncontained) in 2020; and 10 infected dogs (10 contained) in 2021 (Figure 1). All 18 infections (56% contained) occurred during the dry season, in November-March, in Nouldaina (8), Dabana (5), and Bastebe (5) villages of Guere health district of Extreme North Province, Cameroon. Cameroon reported no Guinea worm infections in animals before 2020. This area of Cameroon has had few security concerns due to Boko Haram and is mostly accessible during the dry (transmission) season, but harder to access during the rainy season because of road conditions.

Figure 1

Chad detected cases of Guinea worm disease in 2010 after reporting no cases in the decade before that. It reported Guinea worm infections in dogs for the first time in 2012. Dog infections have greatly exceeded Guinea worm cases in humans since then. Bongor health district in Chad Kebbi Est Region reported 1 infected dog (contained) in 2019, 5 infected dogs (2 contained) in 2020, and 13 infected dogs (7 contained) in 2021 (Figure 1). These 19 infections (53% contained) in Bongor health district occurred in 3 villages (10 in Djarwaye, 7 in Zigui, 2 in Tougoude) Guinea worm infections in Bongor health district occur mostly late in the dry season and insecurity has not been a problem for conducting Guinea worm activities.

The villages reporting Guinea worm infections in Cameroon are part of a local epidemiological cluster of communities comprising families living on both sides of the Chad-Cameroon border in this area. All of the villages with known Guinea worm infections are located close to the Logone River, which is the border between Guere health district in Cameroon and Bongor health district in Chad (Figure 2). The two human cases in Cameroon (a 49-year-old woman and a 4-year-old girl) and owners of the known infected animals in the three border communities on each side all belong to the Massa ethnic group and are fishermen/farmers except for the child, who had a history of staying in Chad during the ten months prior to her worm emerging in Cameroon in November 2020.

Figure 2

**Known Guinea worm-affected villages in border area of Bongor district/  
Chad and Guere district/Cameroon, 2019-2021**





## MALI HOLDS ANNUAL PROGRAM REVIEW



The Mali Guinea Worm Eradication Program (MGWEP) held its annual Program Review meeting in Bamako, with some participants joining virtually, on February 8-9, 2021. The meeting was opened by Dr. GUINDO Abdoulaye, the Minister of Health, or, representing the Minister of Health. Among others, the meeting was attended by The Carter Center Country Director Sadi Moussa. The Carter Center representative from Atlanta, Ms. Karmen Unterwegner, Dr. Aboubacar Sidibé, NPO WHO Mali, Dr. Dieudonné Sankara (virtually), WHO HQ as well as National Certification Commission members, including Dr. Alhousseini Maiga, National Program Coordinator, Dr. Cheick Oumar Coulibaly, summarized the status of the program as of the end of 2021. Mali reported 2 Guinea worm cases (one contained, presumed sources of infection unknown for both) in humans and 17 confirmed animal infections (16 dogs, 1 cat) 17 (65%) contained in 2021, which is a 90% increase from the 1 human case and 9 infected dogs reported in 2020. The review meeting briefly discussed the pilot testing of proactive tethering of 200 dogs and cats in Djenne town/Mopti Region, and the Peace through Health Initiative in Tenenkou Sanitary district/Segou Region as a catalyst for improved surveillance, investigations of Guinea worm cases, and access in the district. Thirty dogs were also proactively tethered in Kolongo Bozo village of Macina district/Segou Region in December where both human infections occurred in 2021. MGWEP staff in Macina, Tominian, and Ségou districts of Segou Region met with dog traders in Table 2.











## RECENT PUBLICATIONS

Goodwin CED, Lechenne M, Wilson Aggarwal JK, Koumetio SM, Swan GJF, Moundou Ouzella L, McDonald RA, 2021. Seasonal fishery facilitates a novel transmission pathway in an emerging animal reservoir of Guinea worm. *Curr Biol* Dec 9;S0960-9822(21)01609-2.  
<https://doi.org/10.1016/j.cub.2021.11.050>

World Health Organization, 2022. Monthly report on dracunculiasis cases, *J December, 2021. Wkly Epidemiol Rec* 97:47-48.  
<https://www.who.int/teams/disease-prevention-and-control/dracunculiasis>

Inclusion of information in the Guinea Worm Wrapup does not

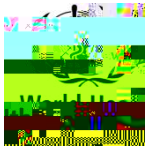
In memory of BOB KAISER

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. The editorial board for this issue were: the national Guinea Worm Eradication Program, Dr. Donald Hopkins, Adam Weiss, and Andrew Nute of The Carter Center, Dr. Sharon Roy of CDC, and Dr. Dieudonné Sankara of WHO.

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[http://www.cartercenter.org/news/publications/health/guinea\\_worm\\_wrapup\\_francais.html](http://www.cartercenter.org/news/publications/health/guinea_worm_wrapup_francais.html)



CDC is the WHO Collaborating Center for Dracunculiasis Eradication