

Date: July 14, 1999

From: WHO Collaborating Center for  
Research, Training and Eradication of Dracunculiasis

Subject: GUINEA WORM WRAP-UP #92

To: Addressees

## **Detect Every Case, Contain Every Worm!**

NIGERIAN GOVERNMENT DONATES \$1 MILLION FOR GUINEA WORM ERADICATION

The Federal Government of Nigeria has donated US\$1 million to The Carter Center for Guinea worm eradication. The funds are to be used over the next two years to help complete eradication of dracunculiasis in Nigeria. The award was made at the request of former Nigerian Head of State, General Abdulsalam Abubakar and his successor, President Olusegun Obasanjo in response to an appeal by former United States President Jimmy Carter on behalf of Global 2000/The Carter Center.

This award is the second such substantial funding provided by the Government of Nigeria for eradication of dracunculiasis. Ten years ago, then Nigerian Head of State General Ibrahim Babangida donated \$1 million to the

The minister and his delegation visited two endemic villages which have received assistance from the Government of Japan for drilling borehole wells. The minister also attended a health education session held in a market by a Peace Corps Volunteer and his Nigerian counterpart, as well as a slide show that was presented by Japanese Volunteers in support of the Zinder Guinea worm health education program. On the final afternoon of his visit, during an important meeting held in the endemic village of Baoucheri, in Mirria District, the minister issued a “Baoucheri Appeal” (L’Appel de Baoucheri): “Consequently, from the village of BAOUCHERI, I launch a vibrant call towards health workers, hydrologists, valiant community workers, associations, non-governmental organizations, partners in development, administrative and traditional authorities and populations, to join their efforts for the final assault.”

The minister’s successful visit was broadcast widely on national television, and on local, national and foreign radio networks.

#### LESS EXPENSIVE FILTER DESIGN

Donations of nylon cloth by DuPont Corporation and Precision Fabrics Group to The Carter Center ended in December 1997. Up to that time, national Guinea worm eradication programs had distributed filters, mostly made entirely of donated nylon cloth, at little or no cost to the programs. Since 1998, all national eradication programs or their supporters have had to purchase the nylon cloth from commercial vendors at approximately US \$4 per square meter (including air shipment costs). However, many national programs continue to make filters made entirely of nylon cloth measuring 18-20 inches (45-50 centimeters) in diameter which, at current wholesale prices, cost approximately US \$1.00 each, not including the costs of sewing a hem and providing a draw string (cinch) to make the filter user-friendly. Only about 4 such filters can be made from a square meter of nylon cloth.

Figure 2 shows a filter design which substantially reduces the cost of each filter and permits about a 10-fold increase in the number of filters which can be made from each square meter of nylon cloth purchased. The key to cost savings is the use of a 6 x 6 inch (15 x 15 centimeters) piece of nylon cloth (costing about US \$0.10), sewn to a round piece of cotton cloth by two rows of stitching to ensure the integrity and durability of the seam. Approximately 40 pieces of nylon cloth (6 x 6 inches; 15 x 15 centimeters) can be obtained from each square meter of nylon cloth, instead of only about 4 if a filter this size were to be made entirely of nylon cloth. Cotton muslin, i.e., a type of “gray baft”, or if affordable, some other higher quality cotton cloth can be used.

Based on actual cost of manufacturing this filter design in Ghana and Nigeria, national programs can make savings of 40 - 65% in the cost of each filter.

| Component                  | Approximate Cost in US \$ per filter |              |
|----------------------------|--------------------------------------|--------------|
|                            | Ghana                                | Nigeria      |
| Nylon Cloth (6 x 6 inches) | 0.10                                 | 0.11         |
| Cotton Cloth Gray Baft     | 0.20                                 | 0.15         |
| Sewing                     | 0.20                                 | 0.10         |
| Draw String (Cinch)        | <u>0.02</u>                          | <u>0.02*</u> |
| Total                      | \$0.52                               | \$0.38       |

\* Cost not provided, but assumed to be similar to that in Ghana.

The concept of this filter design is not new, as similar ones using larger pieces of nylon cloth than recommended here have been used in Benin, Ghana and Togo during the eradication campaign. The design is user-friendly, does not reduce the rate of filtration, and one size can fit over many types/sizes of water storage vessels. Moreover, the Guinea worm program logo can be stamped on one side of the cotton cloth to facilitate teaching persons how to use the filter, particularly how to back-wash it.

Figure 1

GOVERNMENT OF THE NETHERLANDS RENEWS SUPPORT FOR SUDAN

Table 1

**Number of cases contained and number reported by month during 1999\*  
(Countries arranged in descending order of cases in 1998)**

| COUNTRY | NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED |             |             |       |     |      |      |        |           |         |          |          | TOTAL* | CONT. | % |  |  |
|---------|--|-------------|-------------|-------|-----|------|------|--------|-----------|---------|----------|----------|--------|-------|---|--|--|
|         | JANUARY  | FEBRUARY    | MARCH       | APRIL | MAY | JUNE | JULY | AUGUST | SEPTEMBER | OCTOBER | NOVEMBER | DECEMBER |        |       |   |  |  |
| SUDAN   | 1066 / 2159  | 1425 / 2588 | 1229 / 2183 |       |     |      |      |        |           |         |          |          |        |       |   |  |  |



Figure 2

**Percentage of Endemic Villages Reporting  
and Percentage Change in Number of Indigenous Cases of Dracunculiasis  
During 1998 and 1999 \*, by Country**

|                         |       |     |       |       |
|-------------------------|-------|-----|-------|-------|
| CHAD (6)                | 1     | 100 | 2     | 0     |
| MAURITANIA(4)           | 57    | 100 | 4     | 0     |
| COTE D'IVOIRE (6)       | 175   | 98  | 1069  | 248   |
| BURKINA FASO (5)        | 236   | NR  | 479   | 110   |
| UGANDA (6)              | 188   | 100 | 584   | 210   |
| MALI (5)                | 152   | 60  | 47    | 23    |
| NIGER (6)               | 282   | 100 | 591   | 315   |
| ETHIOPIA (6)            | 46    | 100 | 235   | 129   |
| TOGO (6)                | 211   | 100 | 648   | 381   |
| BENIN (6)               | 196   | 87  | 207   | 142   |
| NIGERIA (6)             | 1386  | 97  | 7760  | 7821  |
| SUDAN (5)               | 6573  | 33  | 10240 | 11589 |
| GHANA (5)               | 907   | 86  | 3185  | 4700  |
| TOTAL*                  | 10410 | 55  | 25051 | 25668 |
| TOTAL (without Sudan )* | 3837  | 93  |       |       |

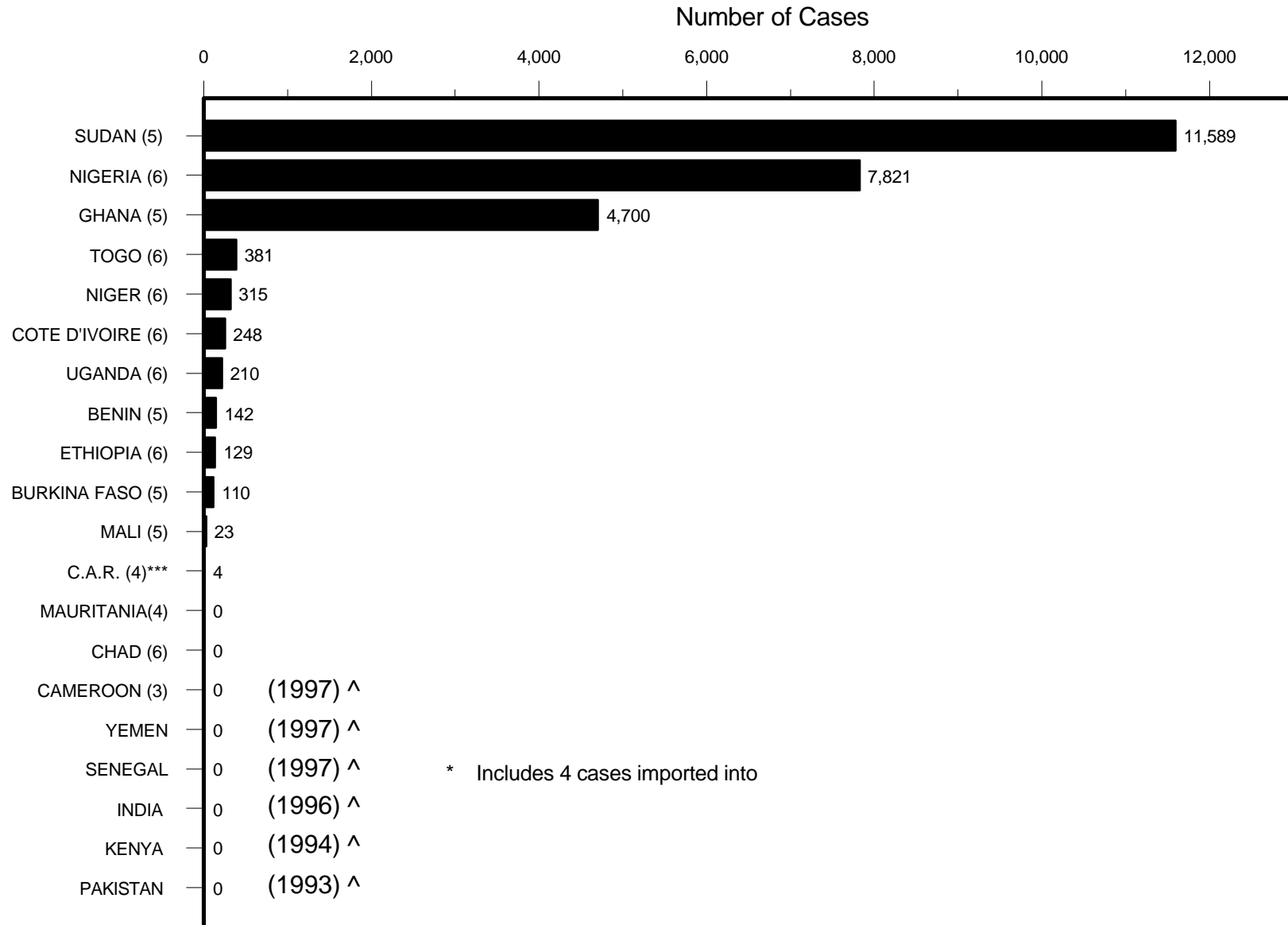
\* Provisional. Totals do not include imported cases.

(5) Denotes number of months for which reports were received, e.g., Jan. - May, 1999

NR Countries with unknown or low rate of reporting.

Figure 3

## Distribution by Country of 25,694\* Cases of Dracunculiasis Reported: January - June 1999\*\*



## DRACUNCULIASIS UNLIKELY TO OCCUR IN LIBYA



At the request of Libya's Government an International Certification Team (ICT) visited areas of the country during February 1999 that were formerly endemic for Guinea worm disease.

Cases of dracunculiasis had been reported in 1993 in the Nafusah Highlands, Sabha and Murzuq which are important gateways to Libya for people traveling from sub-Saharan Africa. In addition Al Kofrah is located on a major route for migrants from neighboring Sudan. In each of these areas the team visited the health facilities, collected information on the health system and communicable disease surveillance, and evaluated the water supply system. Almost all villages have a health facility run by a medical doctor who reports to the Ministry of Health on a monthly basis. Generally, the reporting is done regularly and timely. Safe drinking water is available to almost each household through piped water. In Libya all immigrants are screened and a medical record is established for each of them.

The team concluded that reintroduction of the parasite and establishment of the transmission cycle is unlikely in Libya. The ICT will report its detailed findings to the international Commission for the Certification of Dracunculiasis Eradication at its next meeting in WHO Headquarters.

### IN BRIEF:

Benin. US\$20,000 have been allocated to the Guinea Worm Eradication Program (GWEP) by WHO to evaluate the Guinea Worm comic book developed in Geneva by the Dracunculiasis Eradication Team. The evaluation will take place in schools in Zou, Atlantique, Mono and Ouémé Departments. The funds will also permit the distribution of filters in the households of the young students.

Ten of the 12 cases reported from Benin in May 1999 were imported from Togo into Zou Department (Table 2). Only two cases, reported from Mono Department, were indigenous. In May 1998, Benin reported a total of 26 indigenous cases, 13 of which were in Zou. Benin reports only 3 cases in June 1999. **Getting close!**

Burkina Faso. Emergency funding of US\$ 5,000 has been provided to the GWEP by the WHO Dracunculiasis Eradication Team to support the logistics for the application of Abate during the transmission season.

Côte d'Ivoire. Global 2000 has provided a grant of \$14,400 for support of Abate treatment teams, \$3,500 for repair of a vehicle, and purchased 2000 square yards of additional nylon filter material (about \$8, 000).

Ethiopia. Dr. Michael Kramer of CDC began a one month consultation in South Omo in mid-July. This follows earlier consultations to Gambella in April/June by Dr. Jason Weisfeld on behalf of Global 2000 and Dr. Rachel Barwick of CDC. The Ethiopian health workers recently sent into Naï ta report that four local health promoters are working in the area, and are being supplied from The Carter Center sub-office in Lokichokio, Kenya via the Diocese of Torit in Eastern Equatoria, Sudan. All 16 cases detected in Naï ta in April and May were reportedly contained.

Ghana. On July 1<sup>st</sup>, Mr. Emmanuel Puplambu replaced Mr. Keith Hackett as Global 2000's Resident Technical Advisor in Ghana. Mr. Puplambu, who is a Ghanaian-born U.S. citizen, holds a Masters Degree in Administration with concentration in public health. He is on loan to Global 2000 from CDC, where he has worked as a public health advisor since 1991. Mr. Puplambu had previously consulted with Guinea Worm Eradication Programs in Ghana, Mauritania, and Nigeria on behalf of Global 2000. In separate letters, Ghanaian Minister of Health the Honorable Samuel Nuamah Donkor expressed his ministry's "sincere thanks and gratitude" for Mr. Hackett's "effort and devotion", and warmly welcomed Mr. Puplambu as a "son of the soil". Mr. Hackett returned to the United States to pursue further graduate studies.

Mauritania. The WHO Dracunculiasis Eradication Team has agreed to provide US\$20,000 to the GWEP to enhance surveillance and reinforce its Village Volunteer training and re-training. Part of the funds will also serve to perform a survey to assess the dracunculiasis transmission levels among the nomadic population.

## MEETINGS

The 38<sup>th</sup> Meeting of the Interagency Coordinating Group for Dracunculiasis Eradication will be held on August 26, 1999 at The Carter Center.

## RECENT PUBLICATIONS

Mann J, 1999. Seeking total victory over a terrible disease. The Washington Post. June 30, p. C15.

Table 2

|              |               |          | Cases  |           |           |
|--------------|---------------|----------|--------|-----------|-----------|
|              |               | Month    | Number | Contained | Notified* |
| Benin        | Togo          | January  | 1      | ?         | 1         |
|              |               | February | 1      | 1         | 1         |
| Burkina Faso | Niger         | May      | 3      | ?         | 3         |
|              | Cote d'Ivoire | June     | 1      | 0         | ?         |
| Ghana        | Togo          | January  | 2      | 2         | ?         |
|              | Cote d'Ivoire | January  | 1      | 0         | 1         |
| Nigeria      | Cameroon      | January  | 1      | 1         | 1         |
| Sudan        | Ethiopia      | January  | 1      | 1         | 1         |
|              |               | January  | 1      | 1         | 1         |
|              |               | April    | 1      | 1         | 1         |
|              |               | June     | 1      | 1         | 1         |
| Togo         | Benin         | January  | 1      | 0         | 1         |
|              |               | February | 1      | 0         | 1         |
|              |               | May      | 10     | 3         | 10        |
| Total        |               |          | 26     | 11        | 23        |

\* Notified to country of origin through WHO.

*Inclusion of information in the Guinea Worm Wrap-Up does not constitute "publication" of that information.  
In memory of BOB KAISER.*

For information about the GW wrap up, contact Trenton K. Ruebush, MD, Director, WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, NCID, Centers for Disease Control and Prevention, F-22, 4770 Buford Highway, NE, Atlanta, GA 30341-3724, U.S.A. FAX: (770) 488-4532.

The GW Wrap-Up is also available on the web at [http://www.cdc.gov/ncidod/dpd/list\\_drc.htm](http://www.cdc.gov/ncidod/dpd/list_drc.htm).



CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.