November 15, 1995

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

GUINEA WORM WRAP-UP #51

To

Addressees

DRACUNCULIASIS ERADICATION: ALMOST A REALITY - (EDITORIAL)

Now the numbers are beginning to speak for themselves. With less than two months remaining before the December 1995 target date for eradicating dracunculiasis (Guinea worm disease), it appears that by the end of 1995, the number of cases of the disease will have been reduced by 97% over the past decade [Figure 1, Table 1]. This achievement of the 19 endemic countries and their international partners is all the more remarkable since national Guinea Worm Eradication Programs only got underway in most endemic countries in 1990 or later. India began its program in 1980 and Pakistan in 1986. Elsewhere, the initial nationwide case searches were conducted in Ghana and Nigeria in 1988; in Benin, Burkina Faso, Cameroon, Côte d'Ivoire, and Senegal in 1990; in Mali, Mauritania, Niger, Togo, and Uganda in 1991; in Ethiopia and Sudan in 1992; in Chad and Kenya in 1993; and in Yemen in 1994.

Figure 1


Target Date: for Zero Cases

* Estimated by S. Watts
** WHO Global Surveillance summary
*** Estimated
### Table 1

MONTHLY REPORTING OF CASES OF DRACUNCULIASIS IN 1995  
(COUNTRIES ARRANGED IN DESCENDING ORDER OF INCIDENT CASES IN 1994)

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NO. OF CASES IN 1994</th>
<th>NUMBER OF CASES REPORTED IN 1995</th>
<th>TOTAL 1995*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JAN</td>
<td>FEB</td>
<td>MAR</td>
</tr>
<tr>
<td>SUDAN*</td>
<td>53271</td>
<td>288</td>
<td>60</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>39774</td>
<td>1882</td>
<td>1860</td>
</tr>
<tr>
<td>NIGER</td>
<td>18562</td>
<td>75</td>
<td>42</td>
</tr>
<tr>
<td>UGANDA</td>
<td>10425</td>
<td>215</td>
<td>225</td>
</tr>
<tr>
<td>GHANA</td>
<td>8432</td>
<td>1971</td>
<td>1986</td>
</tr>
<tr>
<td>BURKINA FASO</td>
<td>6861</td>
<td>136</td>
<td>222</td>
</tr>
<tr>
<td>MALI</td>
<td>5581</td>
<td>29</td>
<td>20</td>
</tr>
<tr>
<td>COTE D'IVOIRE</td>
<td>5061</td>
<td>498</td>
<td>676</td>
</tr>
<tr>
<td>TOGO</td>
<td>5044</td>
<td>349</td>
<td>132</td>
</tr>
<tr>
<td>MAURITANIA</td>
<td>5029</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>BENIN</td>
<td>4302</td>
<td>439</td>
<td>170</td>
</tr>
<tr>
<td>ETHIOPIA</td>
<td>1252</td>
<td>19</td>
<td>8</td>
</tr>
<tr>
<td>CHAD</td>
<td>640</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>INDIA</td>
<td>371</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>SENEGAL</td>
<td>195</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>YEMEN</td>
<td>94</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>KENYA</td>
<td>53</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CAMEROON</td>
<td>30</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>TOTAL</td>
<td>164977</td>
<td>5903</td>
<td>5422</td>
</tr>
</tbody>
</table>

* PROVISIONAL NUMBERS.  
* CASES REPORTED FROM ACTIVE AND PASSIVE SURVEILLANCE.  
* IMPORTED CASE (S)
Most endemic countries have reduced the numbers of cases reported in 1995 by one-third or more, compared to the cases reported in 1994. The exceptions are Côte d'Ivoire (27% reduction), Sudan (25%, but reporting is especially incomplete), Burkina Faso (7%), and Ghana (41% increase following civil disturbances in the highest endemic area in 1994) [Figures 2, 3; Table 2, p. 6]. The progress in Nigeria is particularly noteworthy, since that country began its program with over 653,000 cases recorded in 1988/89 and is realizing additional dramatic reductions in incidence this year as compared to 1994. Globally, at least two or three interventions are in place in most endemic villages [Figures 4, 5 (color inserts), and 7]. In addition, during 1995, all endemic countries have begun to implement case containment, and nearly 33% of cases reported so far this year are reported to have been fully contained [Figure 6 (color insert); Table 3, p. 6]. This suggests that many fewer cases should occur in 1996 than in 1995.

Figure 2

PERCENTAGE CHANGE IN NUMBER OF CASES OF DRACUNCULIASIS REPORTED DURING THE PERIOD JAN. - SEPT. 1994 AND JAN. - SEPT. 1995, BY COUNTRY*

<table>
<thead>
<tr>
<th>Country</th>
<th>% Reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kenya</td>
<td>-100</td>
</tr>
<tr>
<td>Cameroon</td>
<td>-93</td>
</tr>
<tr>
<td>Chad</td>
<td>-81</td>
</tr>
<tr>
<td>Senegal</td>
<td>-80</td>
</tr>
<tr>
<td>India</td>
<td>-77</td>
</tr>
<tr>
<td>Nigeria</td>
<td>-63</td>
</tr>
<tr>
<td>Togo</td>
<td>-55</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>-53</td>
</tr>
<tr>
<td>Uganda</td>
<td>-51</td>
</tr>
<tr>
<td>Benin</td>
<td>-49</td>
</tr>
<tr>
<td>Mali</td>
<td>-36</td>
</tr>
<tr>
<td>Côte d'Ivoire</td>
<td>-27</td>
</tr>
<tr>
<td>Sudan</td>
<td>-25</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>-7</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0</td>
</tr>
<tr>
<td>Ghana</td>
<td>41 +</td>
</tr>
</tbody>
</table>

* NIGER, MAURITANIA AND YEMEN ARE EXCLUDED BECAUSE THESE COUNTRIES RECEIVED NO COMPARABLE DATA IN THE FIRST NINE MONTHS OF 1994.
Figure 3

NUMBER OF CASES OF DRACUNCULIASIS REPORTED IN BENIN, TOGO, ETHIOPIA, SENEGAL, INDIA, AND CAMEROON: 1994 - 1995

BENIN GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 4,302 CASES%
REPORTING 1995: 100%

TOGO GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 5,044 CASES%
REPORTING 1995: 92%

ETHIOPIA GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 1,252 CASES%
REPORTING 1995: 80%*

SENEGAL GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 195 CASES%
REPORTING 1995: 100%*

INDIA GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 371 CASES%
REPORTING 1995: 100%*

CAMEROON GUINEA WORM ERADICATION PROGRAM

1994 TOTAL: 30 CASES%
REPORTING 1995: 100%*

* AVERAGE PROPORTION OF VILLAGES REPORTING CASES IN 1995.
Figure 3 (continued)  NUMBER OF CASES OF DRACUNCULIASIS REPORTED IN NIGERIA, UGANDA, GHANA, COTE D'IVOIRE, MALI, AND BURKINA FASO: 1994 - 1995

**NIGERIA GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 39,774 CASES
- % REPORTING 1995: 78%*

**UGANDA GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 10,425 CASES
- % REPORTING 1995: 93%*

**GHANA GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 8,432 CASES
- % REPORTING 1995: 99%*

**COTE D'IVOIRE GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 5,081 CASES
- % REPORTING 1995: 96%*

**MALI GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 5,581 CASES
- % REPORTING 1995: 99%*

**BURKINA FASO GUINEA WORM ERADICATION PROGRAM**

- 1994 TOTAL: 5,881 CASES
- % REPORTING 1995: 97%*

* AVERAGE PROPORTION OF VILLAGES REPORTING CASES IN 1995.

N.R. NOT REPORTING.
### Table 2
STATUS OF DRACUNCULIASIS ERADICATION

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>NUMBER OF CASES DETECTED</th>
<th>CHANGE (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>JAN.- SEPT., 1994</td>
<td>JAN.-SEPT., 1995</td>
</tr>
<tr>
<td>KENYA</td>
<td>32</td>
<td>0*</td>
</tr>
<tr>
<td>CAMEROON</td>
<td>29</td>
<td>2**</td>
</tr>
<tr>
<td>CHAD</td>
<td>569</td>
<td>110</td>
</tr>
<tr>
<td>SENEGAL</td>
<td>166</td>
<td>33***</td>
</tr>
<tr>
<td>INDIA</td>
<td>256</td>
<td>59</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>34156</td>
<td>12581</td>
</tr>
<tr>
<td>TOGO</td>
<td>2815</td>
<td>1267</td>
</tr>
<tr>
<td>ETHIOPIA</td>
<td>1026</td>
<td>483</td>
</tr>
<tr>
<td>UGANDA</td>
<td>9189</td>
<td>4526</td>
</tr>
<tr>
<td>BENIN</td>
<td>2101</td>
<td>1108</td>
</tr>
<tr>
<td>MALI</td>
<td>4800</td>
<td>3059</td>
</tr>
<tr>
<td>COTE D'IVOIRE</td>
<td>*</td>
<td>4125</td>
</tr>
<tr>
<td>SUDAN</td>
<td>47806</td>
<td>36064</td>
</tr>
<tr>
<td>BURKINA FASO</td>
<td>6053</td>
<td>5606</td>
</tr>
<tr>
<td>PAKISTAN</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>GHANA</td>
<td>5978</td>
<td>8455</td>
</tr>
<tr>
<td>NIGER</td>
<td>*</td>
<td>12650</td>
</tr>
<tr>
<td>MAURITANIA</td>
<td>*</td>
<td>624</td>
</tr>
<tr>
<td>YEMEN</td>
<td>*</td>
<td>78</td>
</tr>
<tr>
<td>**Total</td>
<td>119101</td>
<td>76387**</td>
</tr>
</tbody>
</table>

* denotes no cases reported or incomplete reporting for the period Jan.-Sept., 1994

** This total excludes 13352 cases reported from Niger, Mauritania and Yemen, which recorded no comparable data in the first nine months of 1994.

+ Reported 21 imported cases

++ Reported 6 imported cases

+++ Reported 1 imported case

### Table 3
PERCENT OF ENDEMIC VILLAGES REPORTING AND PERCENT OF CASES CONTAINED IN 1995

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent of endemic villages reporting</th>
<th>Percent of cases contained in 1995</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sudan</td>
<td>14% (Jan.- Sept.)</td>
<td>1% (Jan.-Sept.)</td>
</tr>
<tr>
<td>Nigeria</td>
<td>78% (Jan.- Sept.)</td>
<td>30% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Niger</td>
<td>88% (Jan.- Sept.)</td>
<td>66% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Uganda</td>
<td>93% (Jan.- Sept.)</td>
<td>49% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Ghana</td>
<td>99% (Jan.- Sept.)</td>
<td>75% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>97% (Jan.- Sept.)</td>
<td>57% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Mali</td>
<td>88% (Jan.- Sept.)</td>
<td>49% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Cote d'Ivoire</td>
<td>96% (Jan.- Sept.)</td>
<td>46% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Togo</td>
<td>92% (Jan.- Sept.)</td>
<td>80% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Mauritania</td>
<td>97% (Jan.- Sept.)</td>
<td>32% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Benin</td>
<td>100% (Jan.- Sept.)</td>
<td>32% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>86% (Jan.- Sept.)</td>
<td>83% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Chad</td>
<td>97% (Jan.- Sept.)</td>
<td>12% (Jan.- Sept.)</td>
</tr>
<tr>
<td>India</td>
<td>100% (Jan.- Sept.)</td>
<td>100% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Senegal</td>
<td>100% (Jan.- Sept.)</td>
<td>100% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Yemen</td>
<td>100% (Jan.- Aug.)</td>
<td>22% (Jan.- Aug.)</td>
</tr>
<tr>
<td>Kenya</td>
<td>NR.</td>
<td>---</td>
</tr>
<tr>
<td>Cameroon</td>
<td>100% (Jan.- Sept.)</td>
<td>88% (Jan.- Sept.)</td>
</tr>
<tr>
<td>Pakistan</td>
<td>100%</td>
<td>---</td>
</tr>
</tbody>
</table>

* case management underway

NR = No Report
DISTRIBUTION OF 89,739 CASES OF DRACUNCULIASIS REPORTED DURING JANUARY - SEPTEMBER, 1995

NUMBER OF CASES

- SUDAN: 36,064
- NIGER: 12,650
- NIGERIA: 12,581
- GHANA: 8,455
- BURKINA FASO: 5,606
- UGANDA: 4,526
- MALI: 3,059
- COTE D'IVOIRE: 3,006
- TOGO: 1,267
- BENIN: 1,106
- MAURITANIA: 624
- ETHIOPIA: 483
- CHAD: 110
- YEMEN: 78
- INDIA: 59
- SENEGAL: 33 *
- CAMEROON: 12 **
- KENYA: 0 ***
- PAKISTAN: 0

* Reported 1 imported case
** Reported 6 imported cases
*** Reported 21 imported cases
Figure 5

Dracunculiasis Eradication Campaign Interventions: October 1995

Sudan

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Ethiopia

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Togo

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Benin

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Ghana

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Nigeria

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Cameroon

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

Yemen

- Trained health workers
- Monthly reporting
- Health education
- Cloth filters
- Water supply
- Vector control
- * Case containment

* Village-based health workers trained and supplied to do case containment
Figure 6

NUMBER AND PERCENTAGE OF CASES OF DRACUNCUULIASIS THAT WERE CONTAINED DURING JANUARY - SEPTEMBER 1995

<table>
<thead>
<tr>
<th>Country</th>
<th>Percent of Cases Contained</th>
<th>Number of Cases Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDIA</td>
<td>100</td>
<td>59</td>
</tr>
<tr>
<td>KENYA</td>
<td>100</td>
<td>21</td>
</tr>
<tr>
<td>SENEGAL</td>
<td>88</td>
<td>34</td>
</tr>
<tr>
<td>CAMEROON</td>
<td>88</td>
<td>8</td>
</tr>
<tr>
<td>ETHIOPIA</td>
<td>83</td>
<td>483</td>
</tr>
<tr>
<td>TOGO</td>
<td>80</td>
<td>1267</td>
</tr>
<tr>
<td>GHANA</td>
<td>75</td>
<td>8455</td>
</tr>
<tr>
<td>NIGER</td>
<td>66</td>
<td>12650</td>
</tr>
<tr>
<td>BURKINA FASO</td>
<td>57</td>
<td>5606</td>
</tr>
<tr>
<td>MALI</td>
<td>49</td>
<td>3059</td>
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<tr>
<td>UGANDA</td>
<td>49</td>
<td>4526</td>
</tr>
<tr>
<td>COTE D'IVOIRE</td>
<td>46</td>
<td>3006</td>
</tr>
<tr>
<td>BENIN</td>
<td>32</td>
<td>1108</td>
</tr>
<tr>
<td>MAURITANIA</td>
<td>32</td>
<td>624</td>
</tr>
<tr>
<td>NIGERIA</td>
<td>30</td>
<td>12581</td>
</tr>
<tr>
<td>YEMEN</td>
<td>22</td>
<td>78</td>
</tr>
<tr>
<td>CHAD</td>
<td>12</td>
<td>110</td>
</tr>
<tr>
<td>SUDAN</td>
<td>1</td>
<td>36064</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>33</td>
<td>TOTAL: 89,739</td>
</tr>
</tbody>
</table>
Figure 5 (continued)

Dracunculiasis Eradication Campaign Interventions: October 1995

**Mauritania**
- TRAINED VHWH 100%
- MONTHLY REPORTING 97%
- HEALTH EDUCATION 9% 97%
- CLOTH FILTERS 97%
- WATER SUPPLY 98%
- VECTOR CONTROL 0%
- "CASE CONTAINMENT" 0%

**Senegal**
- TRAINED VHWH 100%
- MONTHLY REPORTING 100%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 88%
- WATER SUPPLY 63%
- VECTOR CONTROL 0%
- "CASE CONTAINMENT" 0%

**Burkina Faso**
- TRAINED VHWH 100%
- MONTHLY REPORTING 97%
- HEALTH EDUCATION 97%
- CLOTH FILTERS 100%
- WATER SUPPLY 88%
- VECTOR CONTROL 17%
- "CASE CONTAINMENT" 0%

**Cote d'Ivoire**
- TRAINED VHWH 100%
- MONTHLY REPORTING 98%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 100%
- WATER SUPPLY 90%
- VECTOR CONTROL 29%
- "CASE CONTAINMENT" 0%

**Mali**
- TRAINED VHWH 22%
- MONTHLY REPORTING 98%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 100%
- WATER SUPPLY 36%
- VECTOR CONTROL 8%
- "CASE CONTAINMENT" 68%

**Niger**
- TRAINED VHWH 100%
- MONTHLY REPORTING 100%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 100%
- WATER SUPPLY 74%
- VECTOR CONTROL 1%
- "CASE CONTAINMENT" 100%

**Chad**
- TRAINED VHWH 100%
- MONTHLY REPORTING 98%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 100%
- WATER SUPPLY 49%
- VECTOR CONTROL 8%
- "CASE CONTAINMENT" 100%

**Uganda**
- TRAINED VHWH 100%
- MONTHLY REPORTING 96%
- HEALTH EDUCATION 100%
- CLOTH FILTERS 100%
- WATER SUPPLY 37%
- VECTOR CONTROL 10%
- "CASE CONTAINMENT" 100%

* Village-based health workers trained and supplied to do case containment
ERADICATION OF DRACUNCULIASIS

The Forty-fourth World Health Assembly,

Recalling resolutions WHA39.21 and WHA42.29;

Having considered the report of the Director-General on the eradication of dracunculiasis;

Encouraged by the considerable progress achieved in many countries toward elimination of the disease;

Aware that country-by-country elimination of dracunculiasis is considered to be the last step before global eradication can be declared;

Recognizing the support to national control activities provided by the international community;

Deploring, none the less, the continuing adverse effects of dracunculiasis on health, including that of mothers and children, as well as its constraining effects on agriculture, sustainable development and education in endemic areas of Africa and Asia, where over 100 million persons remain at risk of infection;

Aware that in the face of such problems a number of countries have set national goals aimed at ensuring that by the end of 1995 they have no more indigenous cases;

1. EXPRESSES its satisfaction with the progress made by affected Member States in eliminating dracunculiasis;

2. DECLARES its commitment to the goal of eradicating dracunculiasis by the end of 1995, this being technically feasible given appropriate political, social and economic support;

3. ENDORSES a combined strategy of provision of safe water, active surveillance, health education, community mobilization, vector control, and personal prophylaxis;

4. CALLS ON all Member States still affected by dracunculiasis to determine the full extent of the disease and elaborate regional plans of action; establish intersectoral steering committees; initiate certification of elimination; coordinate the contributions of the international community, including multilateral and bilateral agencies and nongovernmental organizations; and explore possibilities for mobilizing additional resources to eradicate the infection within the context of primary health care;

5. INVITES donors, including bilateral and international development agencies, nongovernmental organizations, foundations and appropriate regional organizations, to continue to support countries’ efforts to eradicate dracunculiasis by helping to ensure that funds are available to accelerate and sustain them;

6. URGES the Director-General:

(1) to immediately initiate country-by-country certification of elimination so that the certification process can be completed by the end of the 1990s;

(2) to support global efforts to eradicate dracunculiasis during the 1990s particularly by the certification by WHO of the elimination of the disease country by country;

(3) to support Member States in surveillance, programme development and implementation;

(4) to continue to seek extrabudgetary resources for this purpose;

(5) to keep the Executive Board and the Health Assembly informed of progress.
- **First Meeting of International Certification Commission**

  The first meeting of the International Commission for the Certification of Dracunculiasis Eradication is tentatively scheduled to be held at WHO headquarters in Geneva, Switzerland, on March 1996.

- **Sixth African Regional Conference on Dracunculiasis Eradication**

  The Sixth African Regional Conference on Dracunculiasis Eradication is tentatively scheduled to be held in Accra, Ghana, on March 26-28, 1996.

**RECENT PUBLICATIONS**


* * * * *

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

**The GW Wrap-Up is published in memory of BOB KAISER.**

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CDC is the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis.
Sudan. 36,031 cases have been reported provisionally in the first nine months of 1995, vs. 47,806 cases reported during the same period of 1994. This suggests a reduction of 25% in the cases reported this year as compared to last year, but monthly surveillance of the disease has been very incomplete (less than 25% of known endemic villages) in both years. About 1,400 endemic villages are known, but that list is being refined. All interventions are underway in parts of Sudan, including case containment and vector control. The levels of implementation given in Figure 4 are underestimates, since data on interventions from areas assisted by Operation Lifeline Sudan are not yet available. A more specific map of known endemic areas and villages was developed during the Program Review in Khartoum in September 1995 and will be included in the next issue of Guinea Worm Wrap-Up. This program advanced considerably during the four-month long “Guinea Worm Cease-Fire” in March-July 1995, but large-scale fighting reportedly resumed in parts of the south in October.

MEETINGS

• 1995 Program Reviews

The 1995 Program Review for Ghana, Ethiopia, Kenya, Nigeria, Sudan, Uganda, and Yemen was held in Khartoum, Sudan, on September 17-21. Also attending the final day of this Program Review was Mr. Abdul Gadir El Sid, the Sudanese sanitarian whose epic leadership of the Sudanese team of smallpox vaccinators into Ethiopia was described in Guinea Worm Wrap-Up #48. The 1995 Program Review for Benin, Burkina Faso, Cameroon, Chad, Côte d’Ivoire, Mali, Mauritania, Niger, Senegal, and Togo was held in Yaounde, Cameroon, on October 18-24. A brief presentation was also made on the status of a few imported and potentially indigenous cases in Central African Republic. This review was also attended by former head of state General A.T. Toure, president of the Intersectorial Group for Guinea Worm Eradication in Mali, and by former minister of health Dr. N’Diaye Kane, who chairs the intersectoral committee of the eradication program in Mauritania. The Proceedings from the first of these two Program Reviews are available in English from Global 2000 or from the WHO Collaborating Center at CDC. The French version of that report will be available shortly, as will the French and English versions of the Proceedings from the review in Cameroon.

• December 4 Celebration in Washington, DC

On Monday, December 4, ambassadors and ministers of health from endemic countries will join representatives of their international partners to celebrate the accomplishments of the international campaign to eradicate dracunculiasis (Guinea worm disease), and in a rededication to complete what remains to be done. A Press Conference to include the heads of UNICEF (Ms. Carol Bellamy), WHO (Dr. Hiroshi Nakajima), CDC (Dr. David Satcher), and Global 2000/The Carter Center (former President Jimmy Carter) is planned. It will be hosted by the head of USAID, Mr. Brian Atwood, and include former president General A.T. Toure of Mali. Following the Press Conference, there will be a luncheon and the unveiling of an exhibit about the dracunculiasis eradication campaign. This celebration will precede by one day the official launching of the new African Program for Onchocerciasis Control, at The World Bank.
Benin. 1,108 cases reported so far this year, in less than 400 endemic villages or localities. "100%" of endemic villages said to be reporting monthly; 32% of cases were contained. Reduced cases by 47% since same period of 1994. The minister of health, Dr. Veronique Lawson, visited an endemic village in each of the country's six departments between May and September 1995.

Togo. 1,267 cases reported in 1995, in less than 390 endemic villages. 92% of endemic villages reporting monthly; 80% of cases contained. Cases have been reduced by 55% since the same period in 1994.

Côte d'Ivoire. 3,006 cases reported in the first nine months of 1995, which is a reduction of 27% since the same period of 1994. 244 endemic villages remain. 96% of endemic villages reporting; 46% of this year's cases were reportedly contained.

Mali. 3,059 cases reported in 1995 (including almost 100 unconfirmed cases newly reported from Gao Region). Reduced cases overall by 36% since same period of 1994. Kayes Region on border of Senegal and Mauritania reduced its cases by 68%. 88% reporting; 49% of cases contained. 637 endemic villages. Timbukto Region to be searched in December 1995. General A.T. Toure visited every endemic district in 1995 to help mobilize the population.

Uganda. 4,256 cases reported through September 1995, a reduction of 51% since 1994. 93% reporting, 49% of cases contained. 1,237 endemic villages. Eleven cases in Sudanese refugees. Sporadic insecurity in three of the five most highly endemic districts: Arua, Gulu, and Kiryandongo.

Ghana. 8,455 cases reported in January-September 1995, an increase of 41% since the same period of 1994, following severe disruptions of the program in association with civil disturbances in Northern Region early in 1994. After an increase in cases of 115% in the first four months of 1995, compared to the same months in 1994, incidence in May-September 1995 has been reduced by 33% from 1994. Only 70 cases were reported in the entire country in September 1995, with 6 of the 10 regions having no indigenous case that month. Less than 1,200 endemic villages.

Burkina Faso. 5,626 cases reported through September 1995, a reduction of only 7% since the same period of 1994. In the peak transmission months of July and August, more cases were reported in 1995 than in 1994. 57% of cases were contained. About 400 endemic villages. Delayed funding for case containment and poor targeting of filter material were two major problems encountered in 1995.

Niger. 12,650 cases reported through September 1995, vs. 18,562 cases in all of 1994. Cases reported in the peak transmission months of August and September this year were down 54% from the same two months of 1994. 88% of endemic villages reporting; 66% of cases were contained. About 800 endemic villages. The program is establishing a sub-office in Zinder Department, which has over two-thirds of all cases. A program evaluation is scheduled for December 4-15, 1995.

Nigeria. 12,581 cases reported through September 1995, as compared to 34,156 cases reported for the same period of 1994; a reduction of 63%. 78% of endemic villages reported in 1995. 30% of all 1995 cases were contained, and rising; 55% of cases were contained in August; 56% in September. About 1,500 endemic villages remain. Intensified social mobilization underway in the Southeast and Northwest Zones of the country.
In doing so, leaders of those programs should remember to revise their lists of endemic villages at the end of 1995, so that beginning in January 1996, they can focus their control measures efficiently on the currently endemic villages (i.e., those villages that have had one or more cases of dracunculiasis during 1995). It is especially important that nylon filter material and medical kits for treatment of persons with Guinea worm disease be distributed only in villages which have had a case of the disease in the past year. Programs should also seek to raise the standard of case containment implementation to as high a level as available resources will allow.

COUNTRY-BY-COUNTRY REVIEW

It now appears that there will be no indigenous cases in 1996 in Cameroon, India, Kenya, Pakistan, and Senegal. Most or all other endemic countries should interrupt transmission in the next year or two, but Niger, Nigeria, and Sudan are likely to be the last to do so.

Pakistan. No cases since October 1993. Offering a cash reward for reporting of a case.

Kenya. No indigenous cases since May 1934. Imported cases from Sudan (20) and Uganda (1) in 1995. Planning to begin offering a cash reward for reporting of a case in 1996.

Cameroon. Two indigenous cases so far in 1995. Also 5 imported cases from Nigeria and 1 from Niger. Offering a cash reward for reporting of a case.

India. 59 cases in 1995, in 14 endemic villages of Rajasthan State. 100% case containment reported. Independent evaluation scheduled for December 1995. Offering a cash reward for reporting of a case.

Senegal. 34 cases so far this year, including 1 imported case from Mauritania. 88% of cases were fully contained. Considering offering a cash reward for reporting of a case, starting in 1996.

Yemen. 78 cases so far this year, in 34 endemic villages. 22% of cases fully contained. Recent confirmed cases were first discovered in November 1994, after a cash reward for reporting of any case was offered and publicized.

Chad. 122 cases reported so far this year, in 35 endemic villages. Percentage of cases contained is 12. Two well-defined foci remain in Chad: 40% of cases in the Canton of Holom in the District of Fianga, Mayo Kebbi Prefecture, and 25% of cases in the Canton of Alako in the District of Kyabe, Moyen Chari Prefecture.

Ethiopia. 483 cases in 99 endemic villages so far this year. 86% of endemic villages reporting; 83% of cases were contained. Eleven cases imported from Sudan. Continuing problem of impeded accessibility because of insecurity in endemic Akobo District in Gambella Region. Considering offering a cash reward starting in 1996.

Mauritania. 624 cases so far this year, in 137 endemic villages. 32% of the cases were contained; 97% of endemic villages reporting. Mauritania reported 5,029 cases for all of 1994, from retrospective surveys conducted at the end of that year.
The challenge now is to eradicate the remaining 3% of cases, which are to be found in less than 8,000 endemic villages (as compared to 23,000 endemic villages at the end of 1992) [Figure 4 (color insert)]. It will not be easy, but we dare not rest until the last cases are fully contained, since failure to do so would jeopardize all that has been accomplished so far. As stated in the previous issue (GW Wrap-Up #50), programs should now give first priority:

- to improving containment of cases and supervision of health workers,
- to intensifying active surveillance for new cases of dracunculiasis, and
- to raising the level of social awareness about this disease and its prevention.