




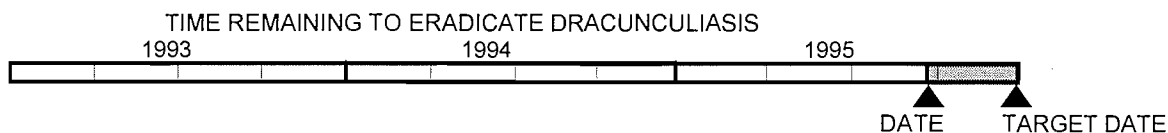
# Memorandum

Date November 15, 1995

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

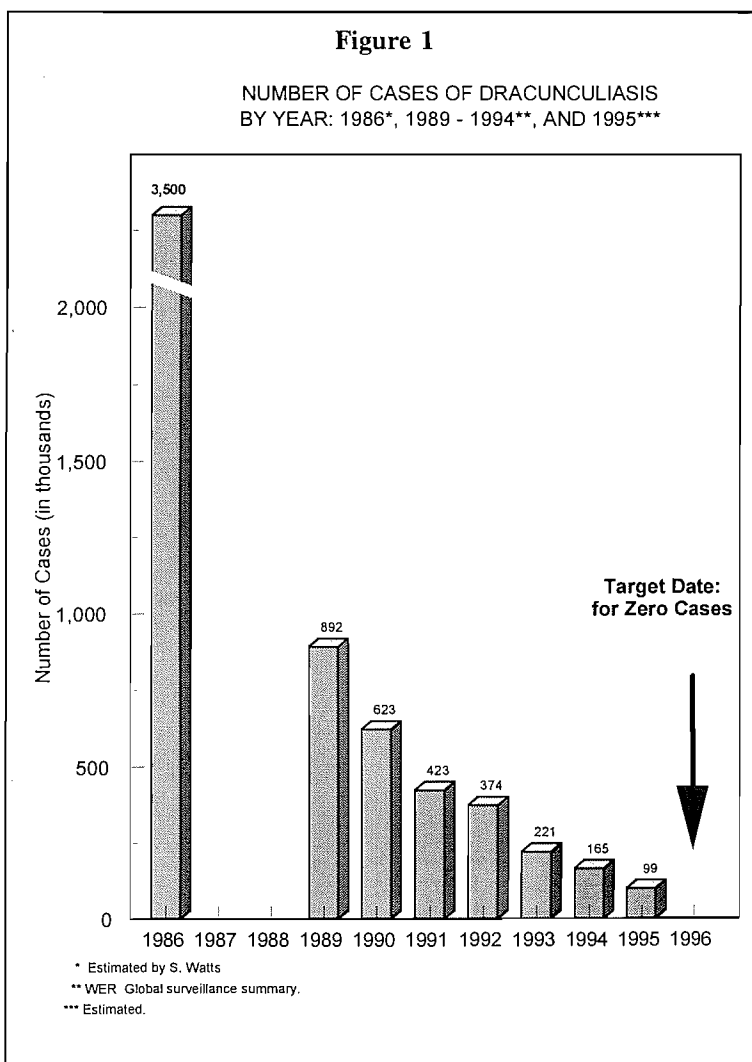
Subject GUINEA WORM WRAP-UP #51

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.



**Table 1**

Updated: November 15, 1995

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

COUNTRY	NO. OF CASES IN 1994	NUMBER OF CASES REPORTED IN 1995												TOTAL 1995*			
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC				
SUDAN*	53271	288	60	307	265	10060	7022	9564	3867	4631	11						36075
NIGERIA	39774	1882	1860	1394	1357	843	1802	1642	1134	667							12581
NIGER	18562	75	42	69	274	1040	2997	3351	2883	1961	691						13383
UGANDA	10425	215	225	295	1114	924	891	440	260	162	3						4529
GHANA	8432	1971	1986	1517	1004	862	579	341	125	70							8455
BURKINA FASO	6861	136	222	112	168	284	932	1751	1301	700							5606
MALI	5581	29	20	107	255	185	335	470	1054	604							3059
COTE D'IVOIRE	5061	498	676	576	446	310	177	105	131	87							3006
TOGO	5044	349	132	85	132	154	92	95	144	84							1267
MAURITANIA	5029	0	0	3	30	65	77	113	253	83							624
BENIN	4302	439	170	58	62	95	36	37	36	175							1108
ETHIOPIA	1252	19	8	12	86	94	101	106	26	31							483
CHAD	640	1	20	22	21	3	13	9	15	6	12						122
INDIA	371	0	0	2	3	3	14	20	13	4							59
SENEGAL	195	0	0	0	0	0	2	8	16	8							34
YEMEN	94	1	1	1	10	8	9	14	34								78
KENYA	53	0	0	0	0	0	0	21 <sup>+</sup>	0	0							21
CAMEROON	30	0	0	1	0	0	0	2 <sup>+</sup>	4 <sup>+</sup>	1	0						8
PAKISTAN	0	0	0	0	0	0	0	0	0	0							0
TOTAL	164977	5903	5422	4561	5227	14930	15079	18089	11296	9274	717	0	0	0	0	0	90498

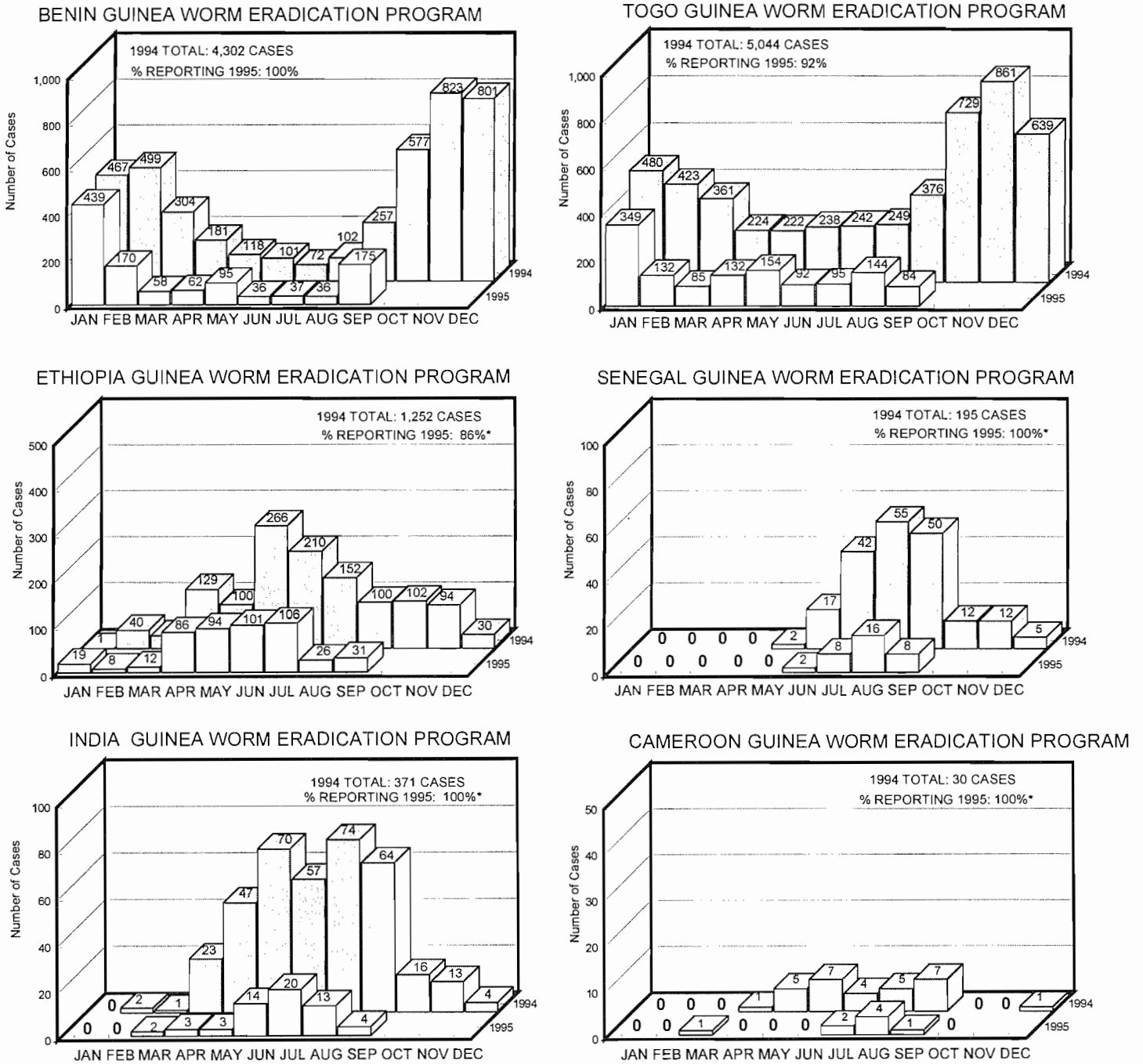
\* PROVISIONAL NUMBERS.

<sup>+</sup> CASES REPORTED FROM ACTIVE AND PASSIVE SURVEILLANCE. <sup>+</sup> IMPORTED CASE (S)



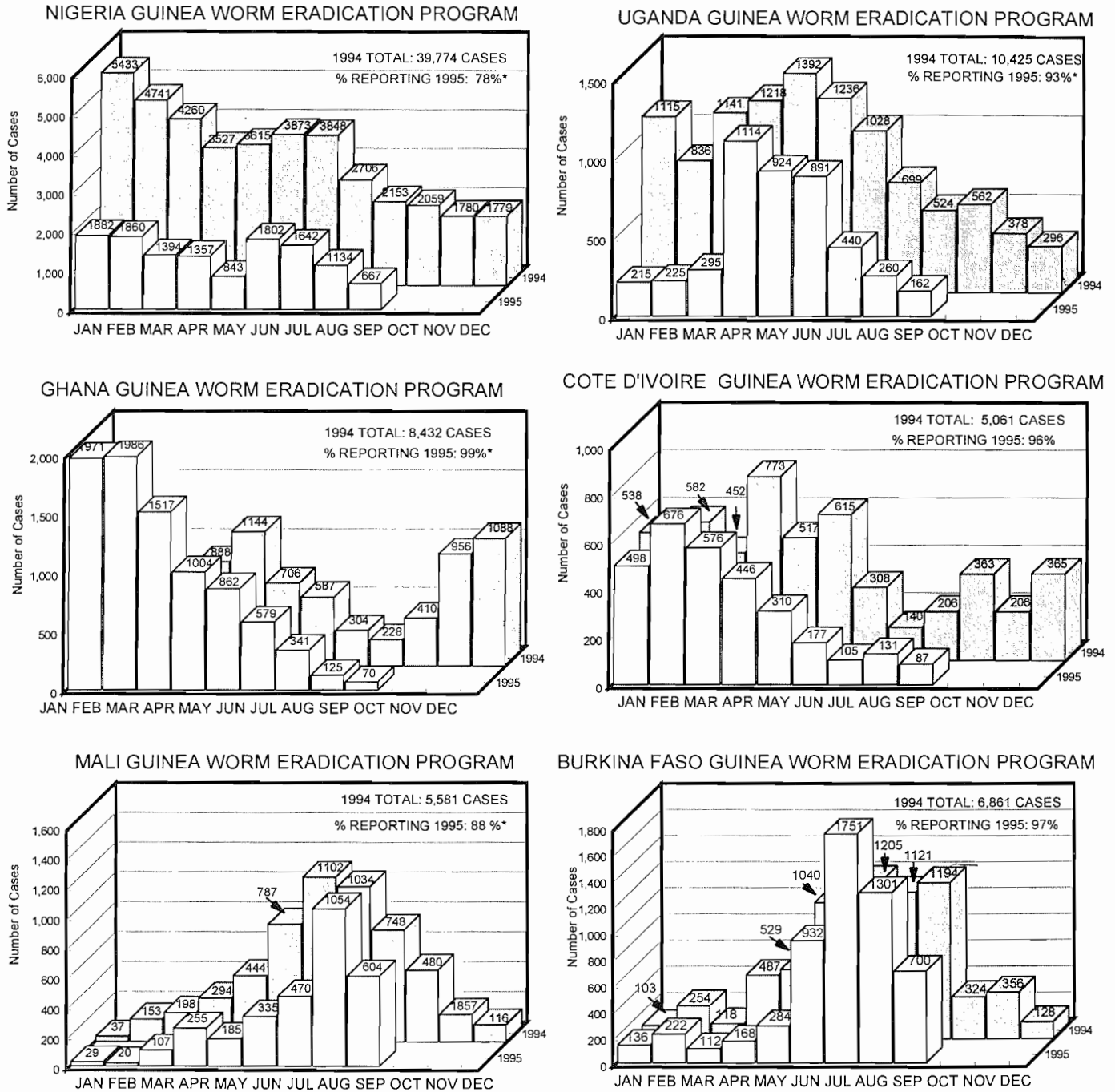
Figure 3

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



\* 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



\* AVERAGE PROPORTION OF VILLAGES REPORTING CASES IN 1995.

N.R. NOT REPORTING.

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

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

\* case management underway

NR = No Report

**Table 2**  
**STATUS OF DRACUNCULIASIS ERADICATION**

COUNTRY	NUMBER OF CASES DETECTED		CHANGE (%)
	JAN.- SEPT., 1994	JAN.-SEPT., 1995	
KENYA	32	0 <sup>+</sup>	-100
CAMEROON	29	2 <sup>++</sup>	-93
CHAD	569	110	-81
SENEGAL	166	33 <sup>+++</sup>	-80
INDIA	256	59	-77
NIGERIA	34156	12581	-63
TOGO	2815	1267	-55
ETHIOPIA	1026	483	-53
UGANDA	9189	4526	-51
BENIN	2101	1108	-47
MALI	4800	3059	-36
COTE D'IVOIRE	4125	3006	-27
SUDAN	47806	36064	-25
BURKINA FASO	6053	5606	-7
PAKISTAN	0	0	0
GHANA	5978	8455	+41
NIGER	*	12650	--
MAURITANIA	*	624	--
YEMEN	*	78	--
<b>Total</b>	<b>119101</b>	<b>76387<sup>**</sup></b>	<b>-36</b>

\* 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.

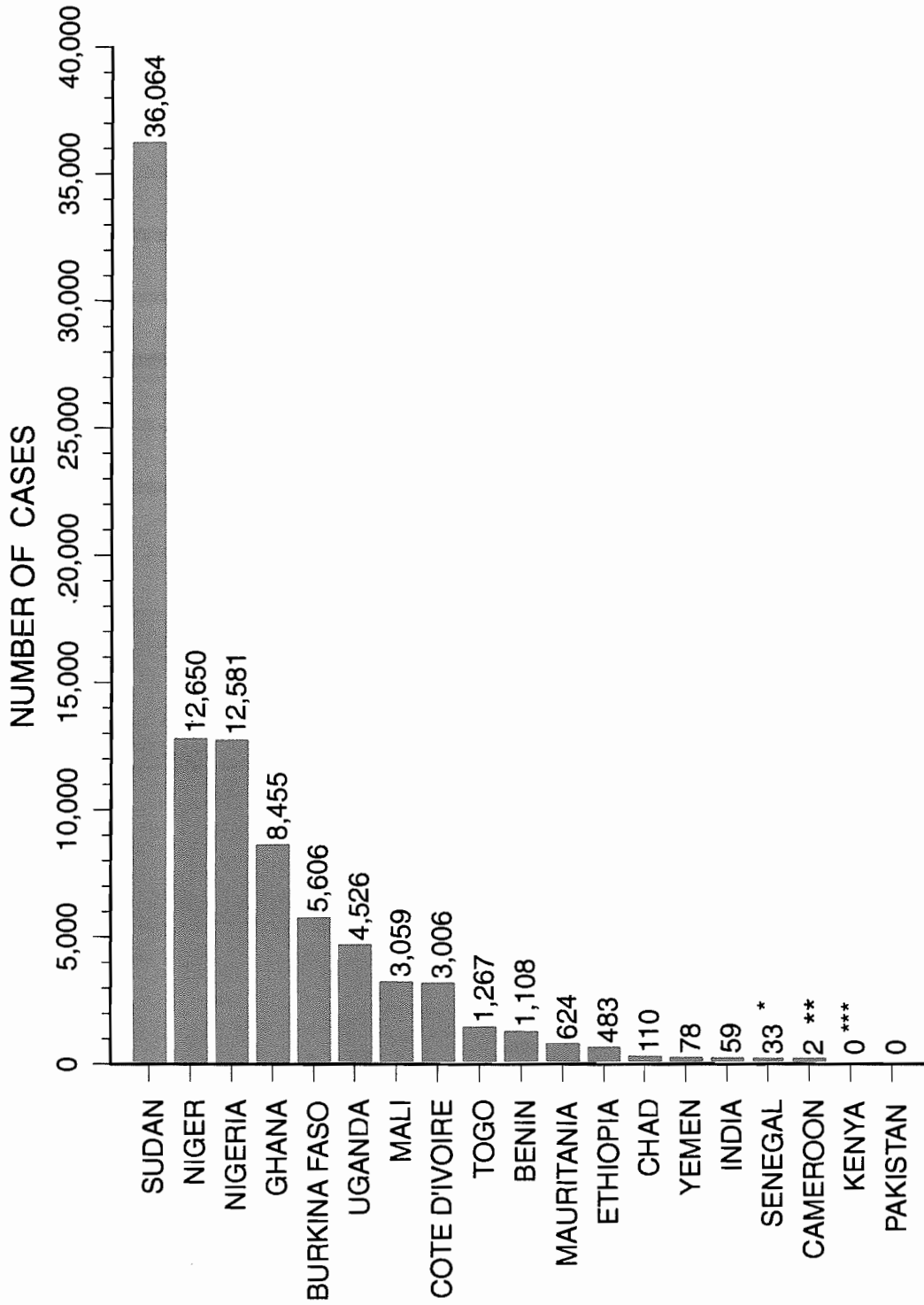
+ Reported 21 imported cases

++ Reported 6 imported cases

+++ Reported 1 imported case

Figure 4

**DISTRIBUTION OF 89,739 CASES OF DRACUNCULIASIS REPORTED  
DURING JANUARY - SEPTEMBER, 1995**



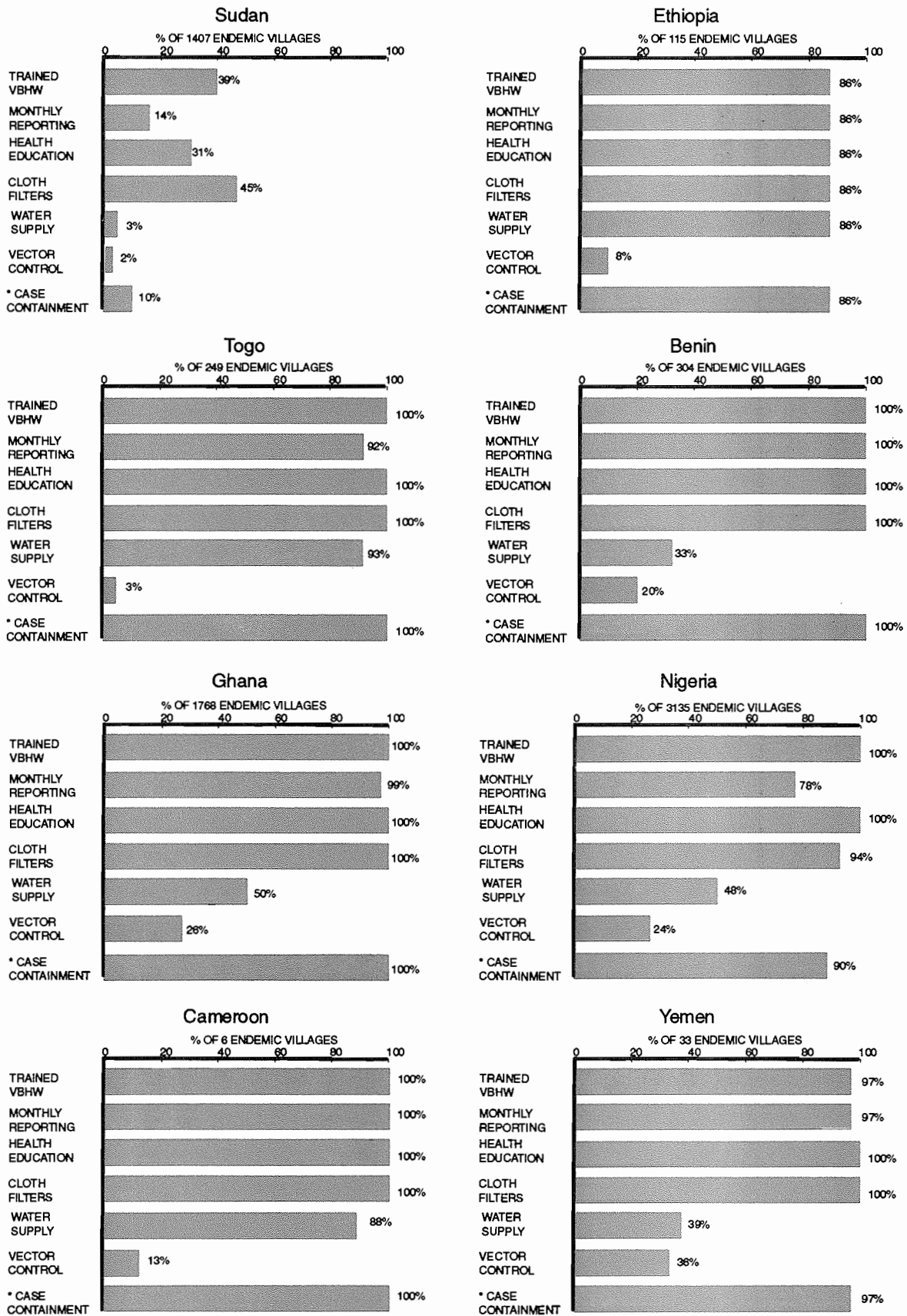
\* Reported 1 imported case

\*\* Reported 6 imported cases

\*\*\* Reported 21 imported cases

Figure 5

# Dracunculiasis Eradication Campaign Interventions: October 1995

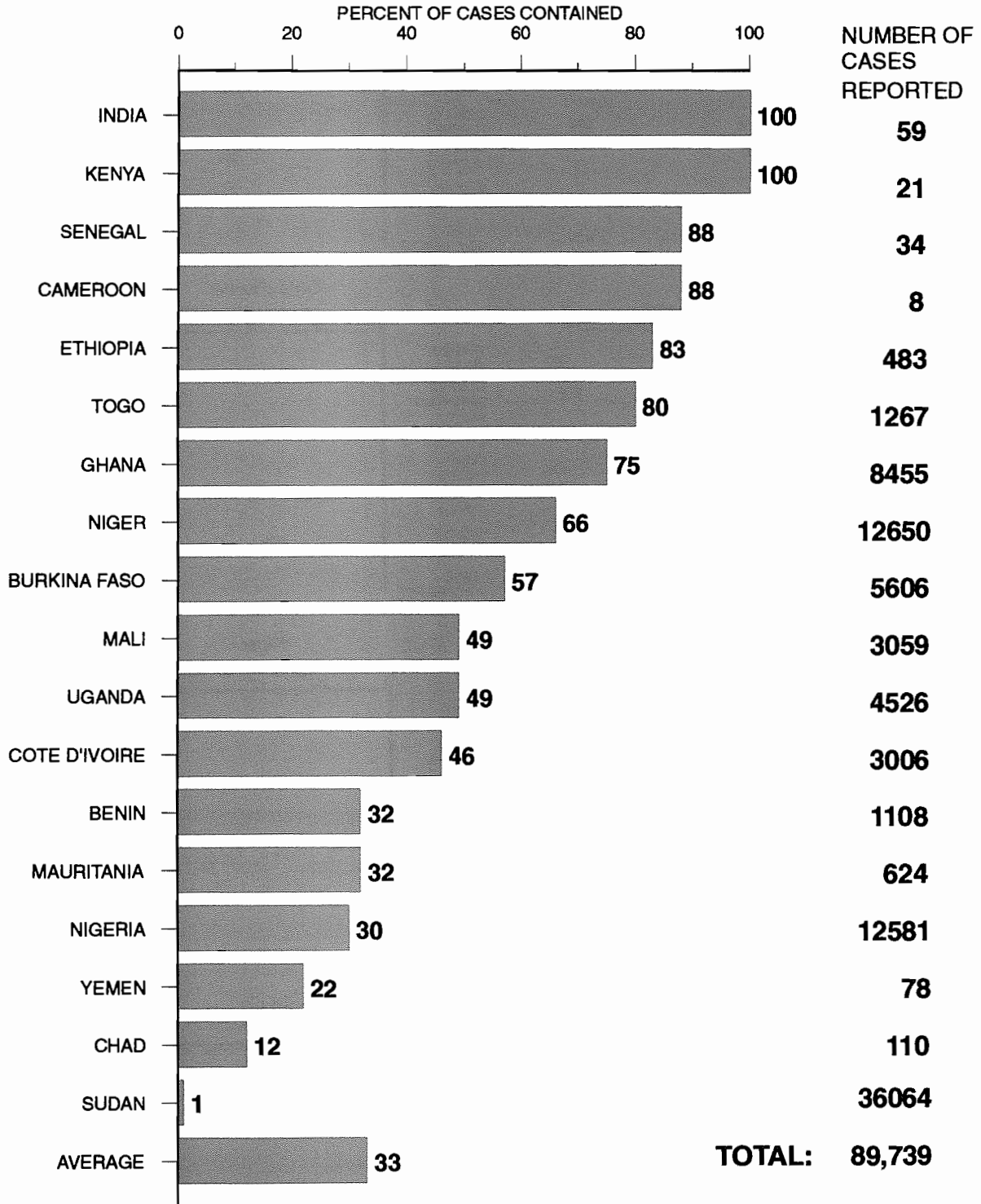


\* Village-based health workers trained and supplied to do case containment

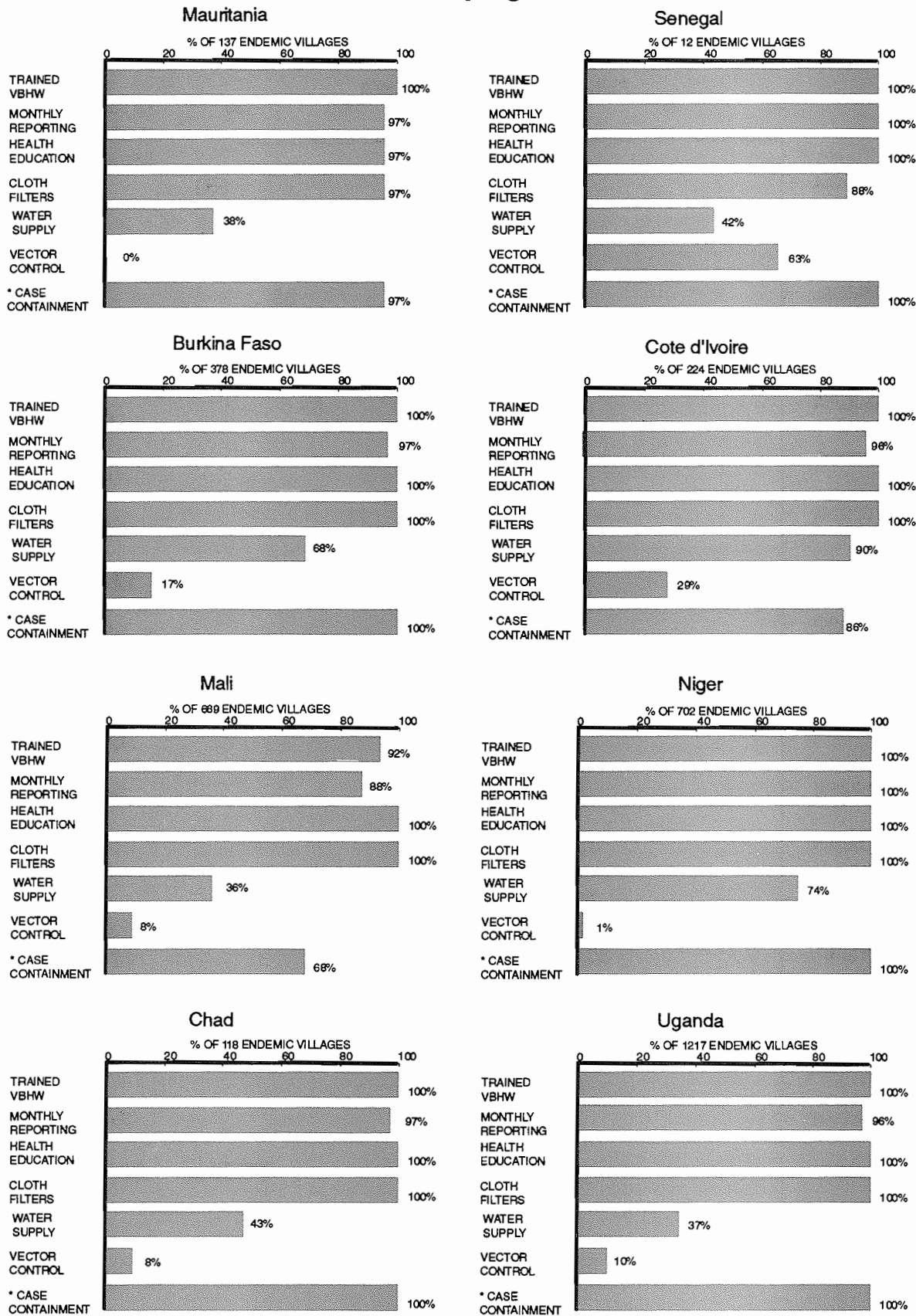


**Figure 6**

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



### Dracunculiasis Eradication Campaign Interventions: October 1995



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

WORLD HEALTH ORGANIZATION



ORGANISATION MONDIALE DE LA SANTE

FORTY-FOURTH WORLD HEALTH ASSEMBLY  
Agenda item 17.2

WHA44.5  
13 May 1991

### 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



Edungbola LD, 1994. Editorial: The significance of dracunculiasis eradication and the 1995 target date. Nigerian J Parasitol, 15:1-6.

Edungbola LD, Ologe JO, 1995. The 1995 target date for the eradication of Guinea worm disease: a reality or an illusion? Nigerian J Parasitol, 16:3-19.

Reed SK, Breu G, 1995. The Terminator. People, 44 (Oct 30):119-121.

WHO, 1995. Dracunculiasis, Central African Republic. Wkly Epidemiol Rec, 70:317-318.

\* \* \* \* \*

*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.*

*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: (404) 488-4532.*



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 Intersectoral 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 Washinton, 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 300 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 Kitgum.

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.

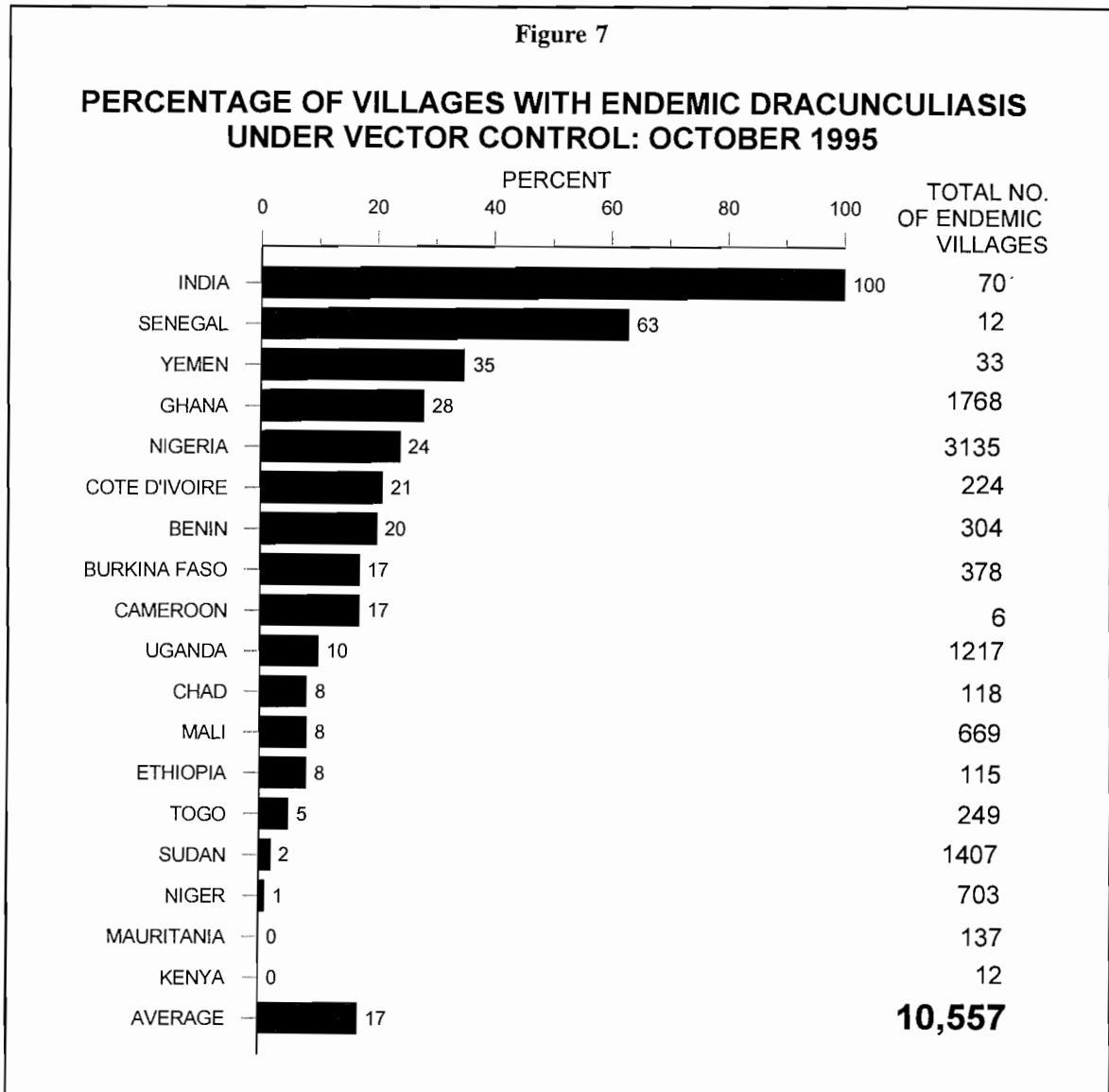
Senegal. 34 cases so far this year, including 1 imported case from Mauritania. 88% of cases were fully contained. Considering offering a cash reward for reporting of a case, starting in 1996.

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 Hollom 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.