DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Centers for Disease Control
and Prevention (CDC)

Memorandum

Date: January 28, 2002

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

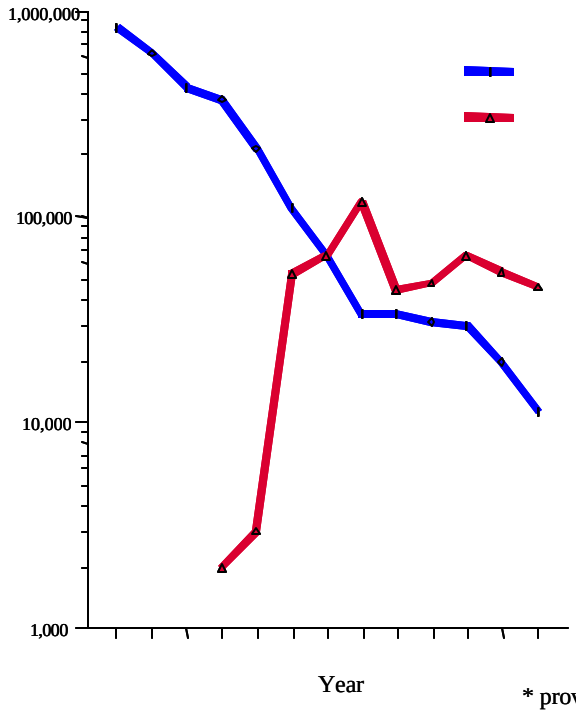
Subject: GUINEA WORM WRAP-UP #120*

To: Addressees

"While others are trying to reach the moon, we are trying to reach the villages."
Julius Nyerere

During 2001 dracunculiasis cases continued to be eliminated in more areas of West Africa, Ethiopia and Uganda. Sudan accounted for 80% of all cases, reported during January - October (provisional data) (Figures 1, 2, and table 2). This is the highest proportion of global cases Sudan has ever reported, following percentages of 57%, 63%, 67%, and 73% in 1997-2000, respectively. The northern states of Sudan did not break transmission or reduce the numbers of indigenous cases occurring there during 2001 (Figures 3,4). However, northern Sudan and neighboring countries continue to receive cases exported from the highly endemic southern part of the country because of persons displaced by the civil war (Table 1).

Figure 1

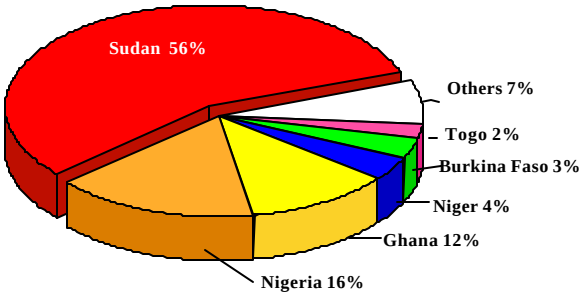


* provisional

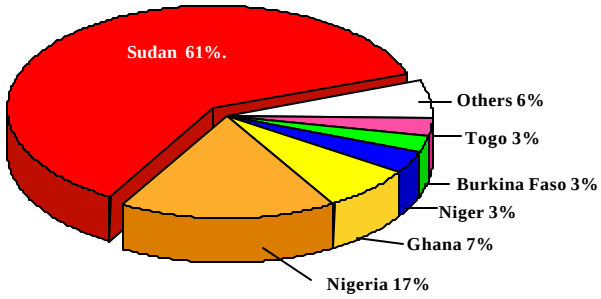
The New Year got off to a good start when Mr. Abdul Gadir El Sid, Mr. Ayman El Sheikh and Dr. Khalid from the national secretariat of the Sudan Guinea Worm Eradication Program (SGWEP) joined a humanitarian rapid assessment team on a mission to the Nuba Mountains. This area of South Kordofan was known to contain several highly endemic villages during surveys conducted by UNICEF/Sudan in 1986, 1987, and 1988, but has been inaccessible to the program for most of the years since then. A team from the SGWEP and UNICEF/Sudan accessed some of these villages and began interventions in June 2000. . This year's mission was composed of over 50 persons in all, under the auspices of the Sudanese government's Humanitarian Aid Commission. The team included participants from the United States Agency for International Development, the World Food Program, United Nations Development Program, WHO, and UNICEF. The team traveled to the area on January 2. A second attempt will be made to complete this mission. Meanwhile, the Sudan National Water Corporation has reached an agreement with the Malaysian African Agricultural Company Ltd, which will donate 25 borehole wells to be drilled in Jongolei State. The exact locations for these wells are being determined based on dracunculiasis endemicity, accessibility, and security.

*Âé¶¹´«Ã½provided support for printing this special issue in color

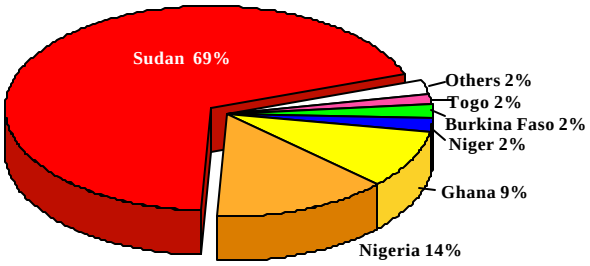
Distribution of 77,852 cases of dracunculiasis reported during 1997



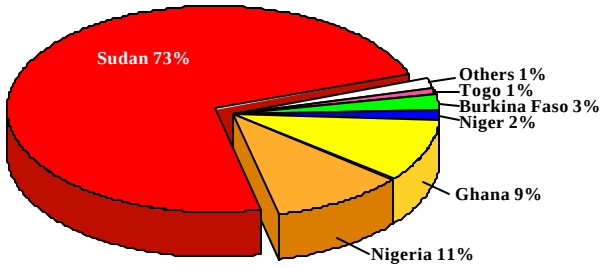
Distribution of 78,522 cases of dracunculiasis reported during 1998



Distribution of 96,262 cases of dracunculiasis reported during 1999



Distribution of 75,120 cases of dracunculiasis reported during 2000



Distribution of 57,551 Cases of Dracunculiasis Reported: Jan. - Oct. 2001*

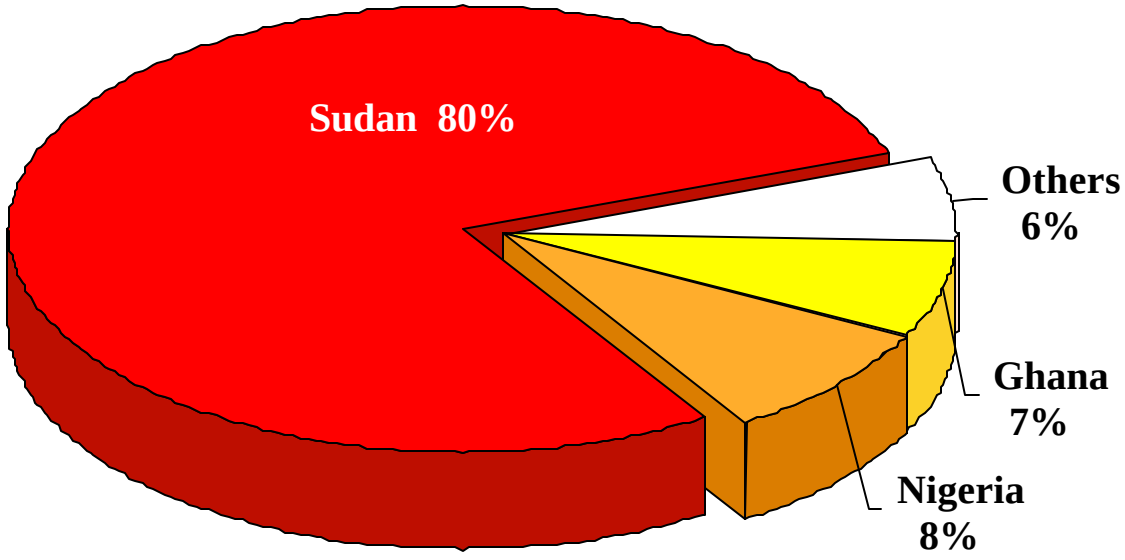
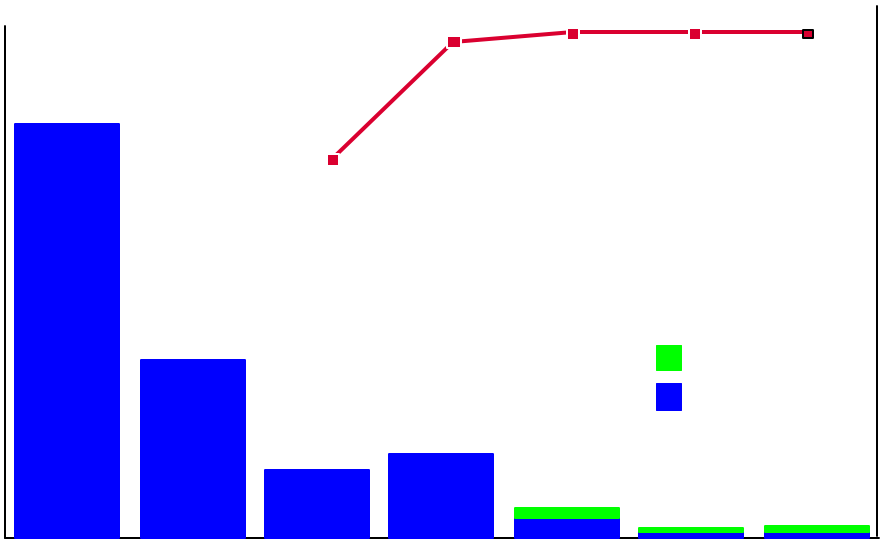
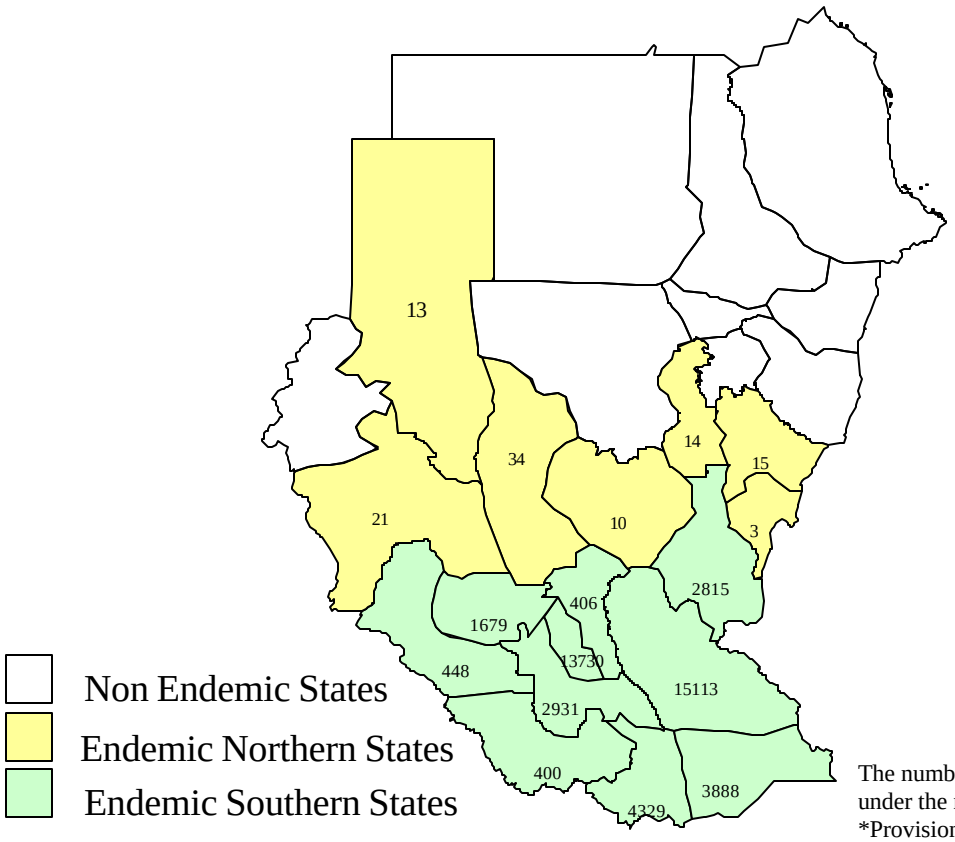


Figure 3



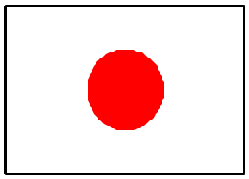
*Number of endemic states: 10 in 1996, 8 in 1999, 7 in 2000
** Provisional

Figure 4



The number of cases reported are shown under the name of each state.
*Provisional

	ND	ND	111	49	47
	0	0	1	2	0
	12	6	0	6	19
	1	7	3	4	7
	15	162	3	4	4



JAPAN

The Government of Japan has informed Âé¶¹´«Ã½of an additional donation of $93,000 for the Guinea Worm Program of Sudan. The award to the Âé¶¹´«Ã½is made under the Grant Assistance for Grassroots Projects program, from the Embassy of Japan in Khartoum. It will be used to purchase and prepare cloth filters for use in areas accessed by the Government of Sudan and by Operation Lifeline Sudan. This is the third such grant for the Sudan Guinea Worm Eradication Program, following previous grants of $150,000 in 1999 and 2001.

The Voice of America began broadcasting Public Service Announcements (PSAs) by General Yakubu Gowon, former head of state of Nigeria, on Guinea Worm prevention in English (starting December 17) and in Hausa (beginning January 8). The inaugural PSAs by former US President Jimmy Carter began on December 11.

Cote d'Ivoire.

In December, UNICEF/Cote d'Ivoire began drilling 16 borehole wells in Tanda District. The first well was drilled in Broukro-Banon, which was the highest endemic village in the country in 2001, with 38 cases reported in January-November (see last month's issue for Cote d'Ivoire's line-listing of endemic villages). This village of 300 persons previously had no source of safe drinking water. Another well has been completed in Lenagnora, the sixth highest endemic village. Thank you UNICEF!

Ghana.

The Embassy of India has donated 31 Mark II hand pumps to complete borehole wells in Saboba-Chereponi and Yendi Districts in Ghana's Northern Region. The wells were drilled by the Church of Christ. Mark II hand pumps were developed and are manufactured in India. Ghana's GWEP and U.S. Peace Corps conducted Worm Weeks in Nanumba (October 6-13), and in East Gonja and West Gonja Districts (October 20-27) late in 2001. These three districts in Northern Region were among the four highest endemic districts in Ghana in 2001, along with Brong Ahafo Region's Atebubu District. The District Assembly in Northern Region's Zabzugu-Tatale District will sponsor a Worm Week there, in February 2002. Of 44 endemic villages in Atebubu District, 15 received new or rehabilitated wells in 2001 as a result of the Gates Foundation grant and the Heisa Company's donation. Those 15 villages reported 812 of Atebubu's 1,891 cases in 2000, and also include 3 of the top 16 endemic villages in Ghana.

Mali. Former head of state General Amadou Toumani Toure led a " " on a mobilization visit to the endemic districts of Asongo and Gao in Gao Region and Douentza District in Mopti Region on December 23-29. He met with public health, administrative and political leaders in the districts to discuss the recently discovered outbreak of dracunculiasis in Gao Region, to congratulate authorities in Mopti on their progress, and to help both areas prepare for intensified efforts in 2002. During the tour, General Toure distributed 4 motorcycles for the program in Gao and Ansongo Districts, as well as other supplies. Accompanying General Toure were representatives of the ministries of health, water, and communications, and others from the intersectoral group, WHO/Mali, UNICEF/Mali, the national coordinator, Dr. Issa Degoga, and Global 2000/Âé¶¹´«Ã½s resident representatives in Mali (Dr. Mamadou Bathily) and Niger (Mr. Salissou Kane).

Togo/Benin. These two countries have begun conducting joint interventions in adjacent endemic border areas around Kpatala in Ogou, Togo and Tchetti in Zou, Benin. Health workers from the other country will assist in Abate treatments of water sources on the Benin side on the 19th – 21st of each month and on the Togo side on the 27th – 29th of each month. These two areas have been the locations of outbreaks that setback the respective programs in 2001.

Two cases of Guinea worm disease detected in Bama LGA, Borno State, Nigeria illustrate a number of issues confronting Guinea Worm Eradication Programs. The onset of the first incident (Case A) was September 20, 2001 when a person of Nigerian origin and resident in Bama LGA was detected by Nigerian Guinea Worm Eradication Program (NIGEP) staff with an emerging Guinea worm. According to the report, all of the standards for containment of transmission from this person were met and the case declared as contained. However, on October 4th (14 days later) this same person traveled across the border into Cameroon and was detected by the Cameroonian Guinea Worm Eradication Program (GWEP), and considered as an imported case. The second incident (Case B) occurred on October 2, 2001 when a person of Cameroonian origin but resident in Banki Town, Bama LGA, Nigeria, was detected by NIGEP with an emerged Guinea worm. According to the report, all of the standards for containment of transmission from Case B were met and was also declared as contained. However, on October 4th (2 days later) this person also traveled into Cameroon where the GWEP detected the case and considered it as an importation from Nigeria.

Editorial note. It is satisfying that that staff from both the Nigerian and Cameroonian GWEPs were alert and detected these cases promptly. Both of these cases were discussed by the Cameroon and Nigeria GWEPs during their monthly cross-border meeting and were eventually judged not to have been imported into Cameroon, as both had already been detected and cared for by the Bama LGA NIGEP staff. Although it is highly unlikely that the emergent Guinea worm of Case A contained any viable first-stage larvae by the time (14 days) this person was detected in Cameroon, it is striking that this person traveled with an emergent Guinea worm and despite the counseling provided by NIGEP during the containment process. Case B is of greater concern, as this person traveled to Cameroon only 2 days after being detected in Nigeria. Evidently, Case B traveled before the containment process was completed. Both incidents underscore the current weakness of the case containment strategy as persons with emerged Guinea worms are allowed to ambulate at their will after detection and initial occlusive bandages and counseling are provided. There is now an imperative need for national GWEPs to find effective ways of ensuring that patients with emergent Guinea worms are not able to contaminate sources of drinking water nor travel anywhere until the emergent Guinea worm(s) are manually pulled out. Both incidents also underscore the importance of determining the probable origin of any imported cases, be they from another country or from another area within the same country, of prompt cross-notification, and determining when and where that person was infected, i.e., when and where the disease transmission episode occurred.

Table 2

COUNTRY	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	CONT.
SUDAN	897 / 2423	1121 / 2296	959 / 2321	1393 / 3278	2096 / 5488	3376 / 7209	4116 / 7581	3035 / 5719	3581 / 6864	1606 / 2670	/	/	22180 / 45849	48
NIGERIA	675 / 1044	621 / 1031	423 / 730	170 / 270	208 / 250	214 / 323	247 / 371	245 / 332	143 / 195	111 / 147	207 / 283	237 / 368	3501 / 5344	66
GHANA	631 / 906	673 / 954	269 / 543	347 / 474	267 / 379	177 / 208	77 / 105	60 / 63	35 / 39	92 / 134	262 / 438	337 / 495	3227 / 4738	68
BURKINA FASO	18 / 20	25 / 29	35 / 37	38 / 61	117 / 189	141 / 197	89 / 126	64 / 75	72 / 108	93 / 114	51 / 61	6 / 7	749 / 1024	73
NIGER		2 / 2			9 / 13	7 / 12	33 / 62	53 / 101	58 / 105	40 / 66	20 / 33	13 / 19	237 / 417	57
TOGO	111 / 122	61 / 89	67 / 79	43 / 48	16 / 24	25 / 54	25 / 51	26 / 55	21 / 43	135 / 314	162 / 274	109 / 166	801 / 1319	61
MALI	3 / 6				1 / 2	1 / 2	21 / 55	114 / 193	88 / 134	57 / 181	53 / 74	27 / 35	365 / 682	54
COTE D'IVOIRE	18 / 40	18 / 60	11 / 38	5 / 6	4 / 11	7 / 8	4 / 5	8 / 9	8 / 8		14 / 14	32 / 32	129 / 231	56
BENIN	12 / 17	13 / 14	7 / 7	3 / 3			1 / 1		6 / 6	8 / 8	70 / 70	42 / 44	163 / 171	95
MAURITANIA	1 / 1		1 / 1		0 / 1	3 / 3	17 / 25	7 / 21	15 / 29	3 / 7	0 / 1	/	47 / 89	53
UGANDA				3 / 3	6 / 19	15 / 17	5 / 9		3 / 4		1 / 1		35 / 55	64
ETHIOPIA **					2 / 5	4 / 7	1 / 2	2 / 3	5 / 5	4 / 4			20 / 29	69
C.A.R.	0 / 0	0 / 0	0 / 0	0 / 1	0 / 1	2 / 5	2 / 4	1 / 1	0 / 1	/	/	/	5 / 13	38
KENYA	0 / 0	0 / 0	0 / 0		0 / 0				/	/	/	/	7 / 7	100
TOTAL*	2367 / 4581	2534 / 4475	1772 / 3756	2005 / 4148	2727 / 6383	3973 / 8046	4639 / 8398	3620 / 6577	4035 / 7541	2150 / 3646	841 / 1251	803 / 1166	31466 / 59968	52
% CONTAINED	52	57	47	48	43	49	55	55	54	59	67	69	52	

* PROVISIONAL

** 1 case reported in April, 5 cases in May, 6 in June, 2 in July, 5 in September, 4 in October, and 2 in November were imported from Sudan.
Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported that month.

Table 3

Kotido	Panyangara	Loletio	Rikitae	31	16	284	568	100	10	10	1	1
Kotido	Panyangara	Loletio	Illa/Nawuapoet	12	7	278	556	100	9	9	1	1
Kitgum	Pajule	Ogole	Jaka central	1	1	108	108	100	1	1	2	2
Arua	Olupi	Lugbari	IMVEPI Refugees camp*	1	1							
Moroto	Ngoleriet	Nawaikorot	Lomerimong	1	1	140	280	100	3	3	1	1
Moroto	Namalu	Loperot	Naabore*	1	1	150	300	100	0	0	0	0
Moroto	Nabilatuk	Kosike	Natengerebet	1	1	209	418	100	0	0	0	0
Arua	Midia		Ombachi*	1	1							
Moroto	Matany	Morulinga	Lomariamong*	1	1	356	700	100	5	5	1	1
Moroto	Lolachat	Lotaruk	Namoni	1	1	150	300	100	6	6	0	0
Arua	Koboko Town	Nyangilia	Gbukutu Prisons*	1	1							
Masindi	Kiryandongo	Kiryandongo	Nyinga 2*	1	1							
Gulu	Atiak	Pupwonya	Pairo*	1	1	97	0	0	0	0	0	0
Gulu	Atiak	Pacilo	Akanonguti	1	1	65	0	0	0	0	0	0
				55	35	1837	3230		34	34	6	6

Table 4

Woreda / Region	Village	No. of households	No. of new cases	No. of cases contained	No. of filters distributed	No. of ponds treated	No. of safe water points	No. of health education sessions	Medical kits	Supervision Month	Comments
Refugee Camps											
Gambella / Gambella	Bonga	15,000	2*	0	0	0	14				
Gog / Gambella	Pugnido	30,000	9*	8	0	49	17				
Dima / Gambella	Dima	14,000	2*	0	0	0					treated river water
Itang / Gambella	Pelang	110	3*	1	210	0	1	4	1	1	
Gambella / Gambella	Apen	140	1	0	400	0	1	4	1	1	
Abobo / Gambella	Chuckchala	108	1	1	235	9	0	4	1	1	
Gog / Gambella	Dembong	75	1	1	177	7	0	4	1	1	
Gog / Gambella	Akumed	65	1	1	185	16	1	4	1	1	
Gog / Gambella	Awukoul	68	1	1	226	16	1	4	1	1	
Gog / Gambella	Chaynack	37	1	1	115	19	0	4	1	1	
Gog / Gambella	Kutbudi	53	1	1	120	0	0	4	1	1	
Gog / Gambella	Metaget D.	103	1	1	136	14	0	4	1	1	
Gog / Gambella	Utuyu	65	1	1	319	35	0	4	1	1	
Gog / Gambella	Wichini	36	1	1	210	25	0	4	1	1	
Kuraz / S. Omo	Lopiding	27	1*	1	241	0	0	4	1	1	
Kuraz / S. Omo	Toro	59	1*	1	335	0	0	4	1	1	
Kuraz / S. Omo	Kakerziang	608	1*	1	1340	3	0	4	1	1	

* Imported from Sudan

Table 5

Country	Month of Report	# Villages reporting 1+ cases in 2001	% of Endemic Villages					
			Reporting Monthly	100% hh with Filters	Using Abate	1+ source safe water	H.E. & C.M.	% Case Containment
Sudan	Sept	3238	43%	32%	1%	45%	54%	48%
Nigeria	Nov	695	97%	84%	54%	45%		66%
Ghana	Oct	537	99%	74%	6%	43%	63%	73%
Burkina Faso	Sept	125	88%	100%	87%	78%		71%
Togo	Sept	112	100%	100%	100%	52%		61%
Mali	Sept	73	92%	88%	15%	NR		50%
Niger	Sept	54	100%	100%	78%	25%		56%
Cote d'Ivoire	Sept	26	100%	100%	73%	89%		45%
Mauritania	Sept	21	100%	100%	43%	76%		55%
Uganda	Nov	14	100%	100%	43%	43%		64%
Benin	Sept	19	94%	58%	74%	79%		89%
Ethiopia	Sept	15	100%	75%	75%	45%	100%	74%
Central Af. Rep.	Sept	8						34%
Total		4937	59%					

* Provisional

H.E. & C.M. = Health education and community mobilization

Figure 5

NIGERIA GUINEA WORM ERADICATION PROGRAM
MONTHLY DISTRIBUTION OF CASES OF DRACUNCULIASIS REPORTED DURING 2000 - 2001*

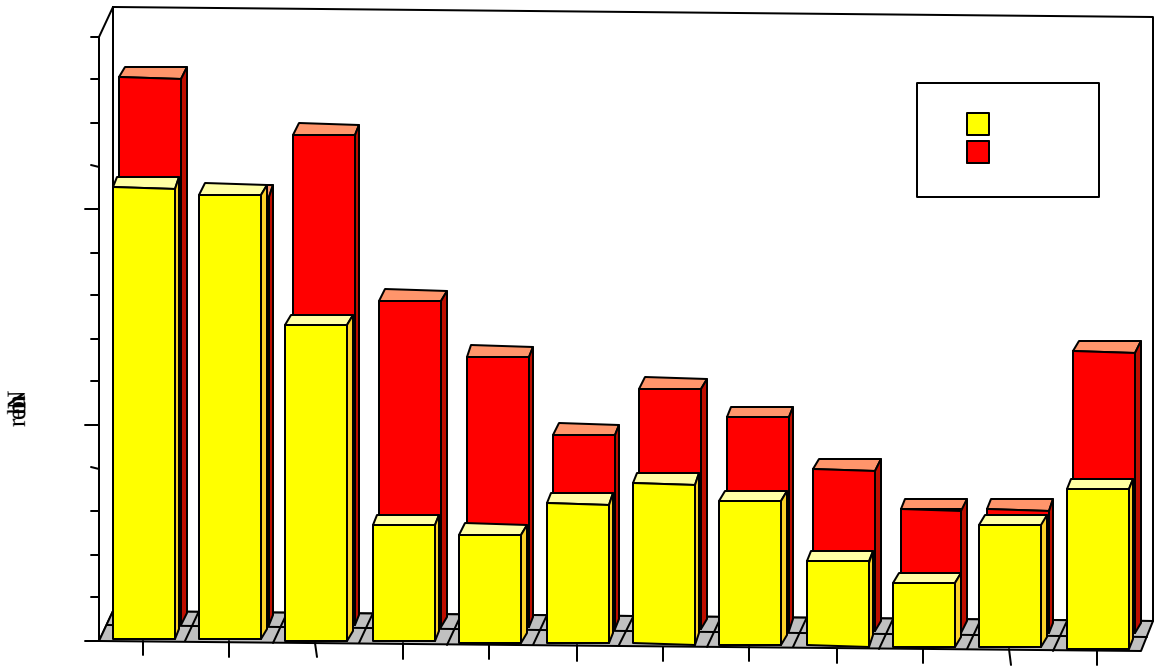


Figure 6

GHANA GUINEA WORM ERADICATION PROGRAM
MONTHLY DISTRIBUTION OF CASES OF DRACUNCULIASIS REPORTED DURING 2000 - 2001*

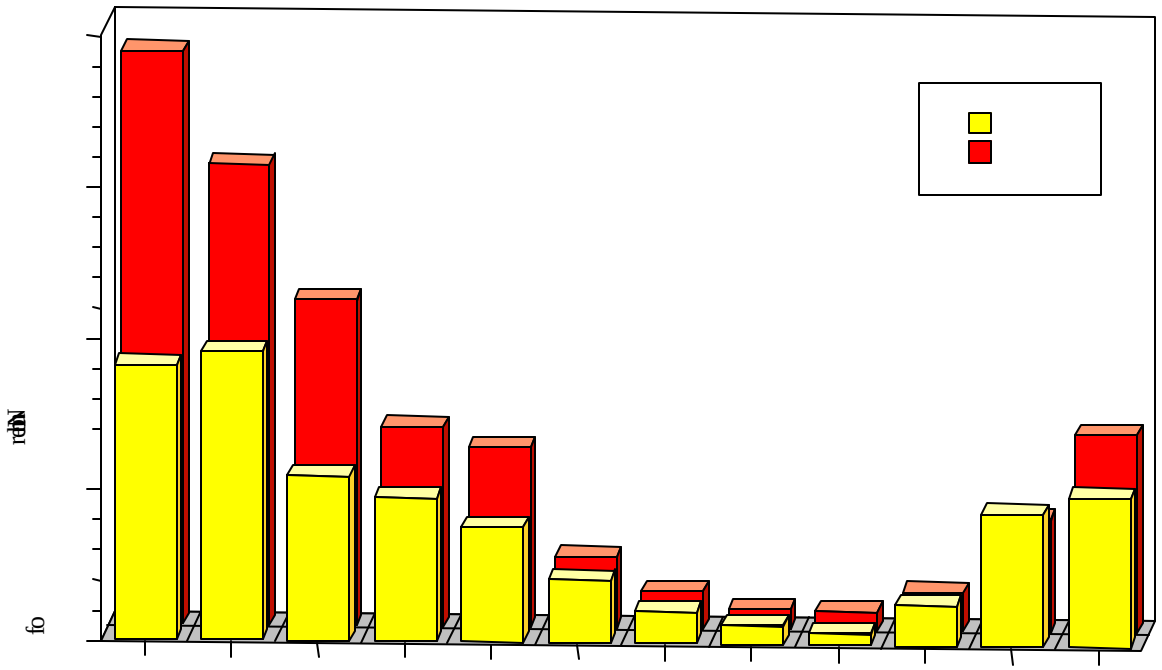
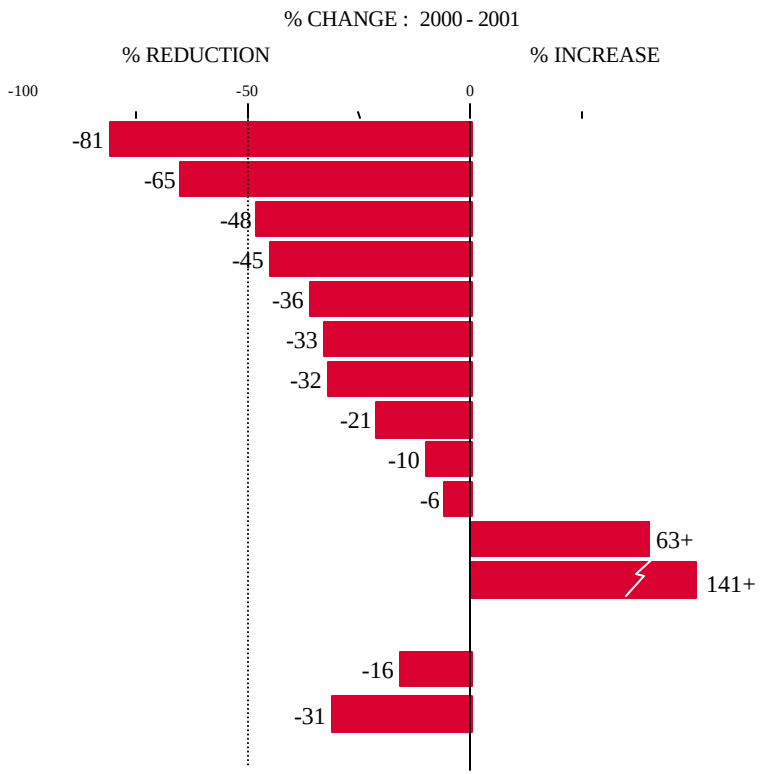


Figure 7

Percentage of Endemic Villages Reporting and Percentage Change in Number of Indigenous Cases of Dracunculiasis During 2000 and 2001*, by Country

COUNTRY	ENDEMIC VILLAGES		CASES REPORTED	
	REPORTING 1+ CASES 2000	% REPORTING**	2000	2001
ETHIOPIA (12)	18	100%	54	10
NIGER (12)	95	100%	1156	408
BURKINA FASO (12)	336	90%	1953	1013
UGANDA (12)	39	100%	92	51
GHANA (12)	981	98%	7401	4738
MAURITANIA (11)	22	100%	133	89
NIGERIA (12)	906	99%	7869	5344
COTE D'IVOIRE(12)	54	100%	285	226
SUDAN^ (10)	3386	45%	51120	45849
BENIN (12)	61	95%	166	156
TOGO (12)	147	100%	811	1318
MALI (12)	62	85%	282	680
CENT.AFR.REP (8)	NR	NR	32	13
TOTAL*	6129	60%	71354	59895
TOTAL (- Sudan)*	2743	99%	20234	14046



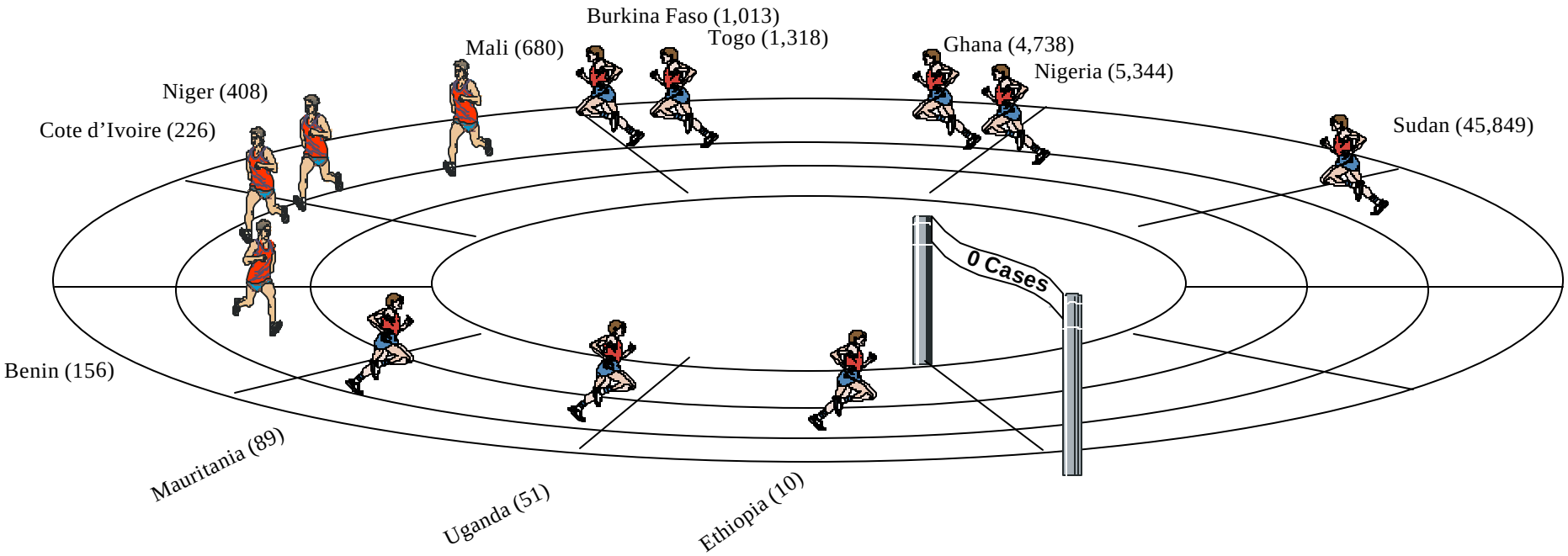
* provisional

** 2,523 (31%) of 8,269 endemic villages are not accessible to the program

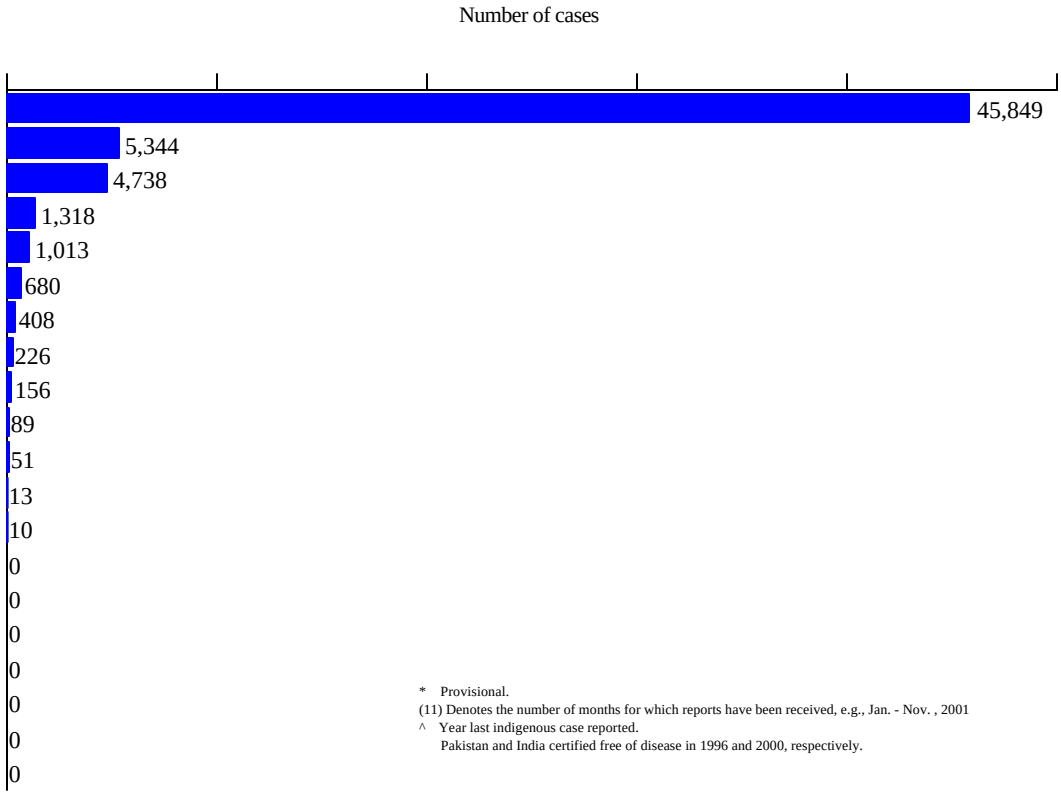
(10) Indicates month for which reports were received, i.e., Jan. - Oct. 2001

NR No Report

Figure 8



* Indigenous cases. Provisional Data.



Eberhard ML, Melemoko G, Zee AK, Weisskopf MG, Ruiz-Tiben E. Misidentification of Onchocerca volvulus as guinea worm.

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