



Date: April 12, 2004

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

Subject: GUINEA WORM WRAP-UP #142

To: Addressees

**Are Village Volunteers Searching Daily for Cases of Guinea Worm Disease?****PRESIDENT TOURE OPENS PROGRAM COORDINATORS MEETING IN BAMAKO**

President Amadou Toumani Toure of Mali opened the Ninth Meeting of National Program Coordinators of Dracunculiasis Eradication Programs, which met at *the Palais des Congres* in Bamako, Mali from March 29 to April 1, 2004. President Toure, a vigorous champion of Guinea worm eradication since 1992, stated that despite his many duties and obligations as head of state, he was at the Opening Ceremony “out of personal conviction”, having “never left this subject”. Mali’s Minister of Social Affairs, Mdme Keita Rokiadou N’Diaye, and representatives of WHO, UNICEF, and The Carter Center also addressed the Opening Ceremony.

Reports presented at this meeting confirmed that most countries advanced substantially toward eradication of dracunculiasis in 2003. Overall, cases were reduced by –41%, to less than 33,000. Sudan and Ghana accounted for 63% and 26% of the cases, respectively. Less than 1,300 endemic villages remain outside of Sudan. The Central African Republic reported that it had found no cases in that country since January 2002. Cameroon, Central African Republic, Chad and Kenya are now in the pre-certification stage, while Democratic Republic of Congo, Liberia, and Sierra Leone are in the verification phase, according to WHO. This was the first international meeting on dracunculiasis attended by the new national program coordinators from Cote d’Ivoire (Dr. Brou Aka Noel) and Ethiopia (Dr. Daddi Jima).

The review discussed the problem of surveillance in no longer endemic areas at length (see page 11). While Niger has been implementing integrated surveillance for dracunculiasis and some other diseases for several years, the inadequacy of surveillance for dracunculiasis in the newly-freed areas of Ghana, Nigeria, Mali, and Togo is concerning and dangerous. The need for all remaining endemic countries to implement daily surveillance for cases in endemic villages in order to be able to detect cases within 24 hours of emergence of the worm was stressed at this meeting, as was the need to improve the quality of interventions, such as targeting of ponds for ABATE@ larviciding and of specific populations to receive pipe filters, for example. Information presented by the respective endemic countries is summarized in Table 3 and below. The General Recommendations from the meeting are also recorded in this issue.

**Sudan.** The 20,299 cases (18% contained) reported from 3,407 villages (66% reporting rate) is a –51% reduction from the 41,493 cases reported in 2002 (74% reporting rate). Seventy-two percent of all cases were reported from 2 states: Warab (41%) and Jongoli (31%). This program is now intervening in more villages than ever. The northern states have interrupted transmission of the disease, with all 29 cases reported in 2003 judged to have been imported from southern Sudan. Ninety percent (26/29) of those cases were reportedly contained in case containment centers. The Sudan program’s objectives for 2004 are summarized on page 15. The title of Sudan’s report was “Chasing Ghana”.

**Ghana** reported 8,290 cases (59% contained) from 975 villages in 2003, which was a 48% increase over the 5,611 cases reported in 2002. Fifteen districts, mostly in Northern, Volta and Brong Ahafo Regions, reported 95% of all cases. The increase in cases is mainly due to improved surveillance, several unexpected outbreaks (led by Volta Region’s Nkwanta District, with 1,296 cases), and inadequate interventions in known endemic villages in 2002 (the 739 villages where the program intervened in 2002 reduced their cases by only –2%, from 5,611 in 2002 to 5,508 in 2003). The

Government of Ghana has begun drilling 180 borehole wells in endemic villages, and recently allocated the equivalent of over \$111,000 for program activities in 2004.

**Nigeria** reported 1,459 cases (74% contained) from 280 villages in 2003, a –62% reduction from the 3,820 cases reported in 2002. Of the country’s 774 Local Government Areas (LGAs), only 56 reported cases in 2003. Five of those LGAs reported 61% of all cases in 2003.

Figure 1

**Ghana Guinea Worm Eradication Program**  
Number of Cases of Dracunculiasis Reported: 1995 -2003

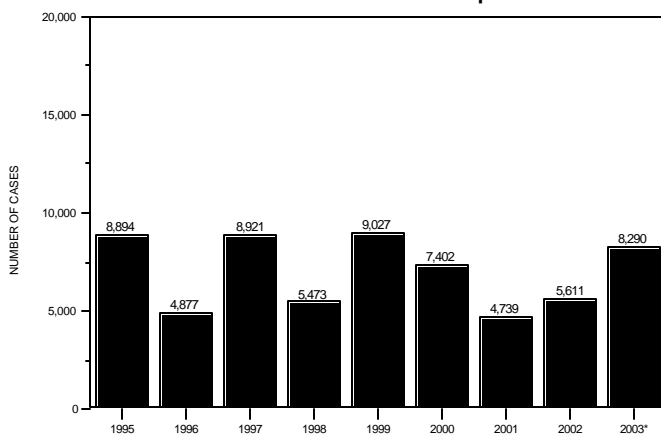
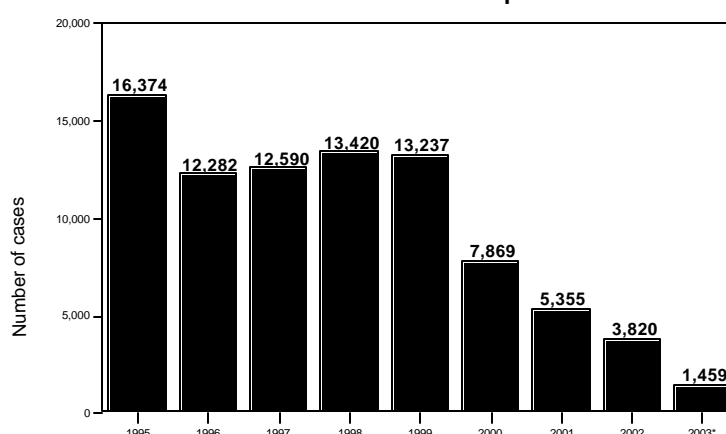


Figure 2

**Nigeria Guinea Worm Eradication Program**  
Number of Cases of Dracunculiasis Reported: 1995 -2003



**Mali** reported 829 cases (54% contained) from 188 villages in 2003, a reduction of only –4% from the 861 cases reported in 2002. Three districts (Gao, Ansongo, Gourma Rharous) reported 92% of all cases. Recent studies are ascertaining the precise sites where transmission is occurring among the nomadic, mainly black Tuareg populations of these three districts and adjoining endemic areas of Niger and Burkina Faso (map). The Mali program’s objectives for 2004 are summarized on page 15. The Government of Mali has recently announced it will allocate the equivalent of \$154,000 for program activities in 2004.

**Togo** reported 669 cases (74% contained) from 158 villages in 2003, a reduction of –58% from the 1,502 cases reported in 2002. Forty-seven of the cases were imported from Ghana, including 22 cases from Nkwanta District.

**Niger** reported 293 cases (49% contained) in 78 localities in 2003, which was an increase of 20% over the 248 cases reported in 2002. Eighty-nine percent of all cases occurred in three districts of Tillaberi Region, whose nomadic population adjoins those of Mali and Burkina Faso (map). Black Tuaregs accounted for 72% of cases. The program plans to establish its first 6 containment centers in 2004.

**Burkina Faso** reported 203 cases (59% contained) in 69 villages in 2003, a –66% reduction from the 591 cases reported in 2002. The 203 cases in 2003 included 28 cases imported from Mali, Ghana, Niger and Cote d’Ivoire. Seventy-four percent of cases were reported from only 3 districts, including 2 adjoining the remaining endemic areas of Niger and Mali (map). For the first time since the program began, Burkina Faso’s GWEP recorded zero indigenous cases in January 2004 and again in February. The Government of Burkina Faso has allocated the equivalent of \$137,000 for program activities in 2004.

**Cote d’Ivoire** reported 42 cases (48% contained) in 12 villages in 2003, a reduction of –78% from the 208 cases reported in 2002. Under new leadership, this program has conducted investigations into the status of suspected cases on the rebel-held side of the political conflict, without finding any confirmed cases there, and held a Guinea Worm Week in the endemic districts of Tanda and Boudoukou.

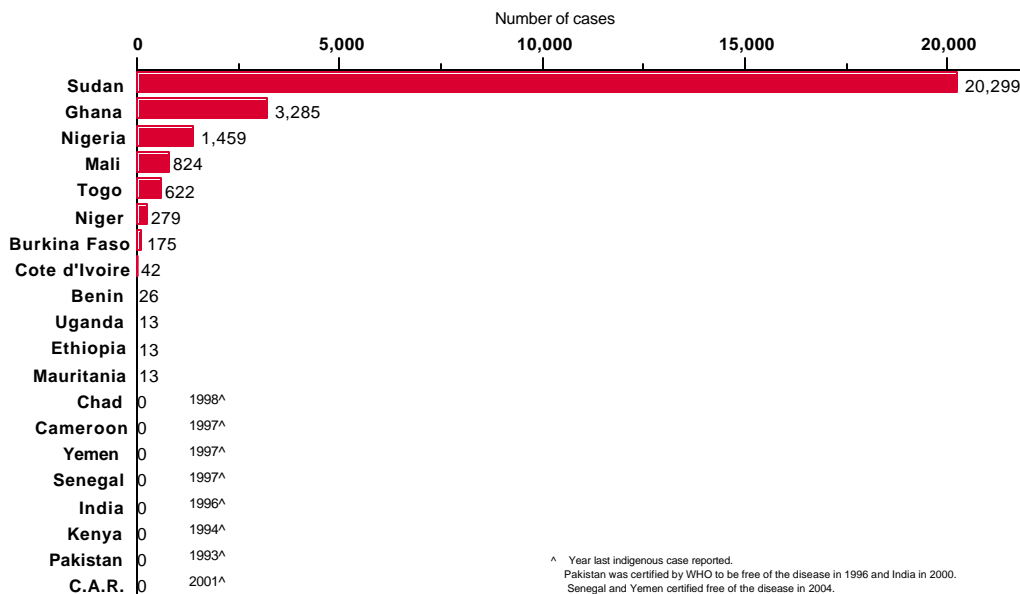
**Benin** reported 30 cases (100% contained) in 13 villages in 2003, a reduction of –83% from the 181 cases reported from 36 villages in 2002. The 30 cases included 4 imported cases, and 25 of the cases were reported from Savalou District. All 30 cases were reportedly detected within 24 hours and contained. This program recorded eight consecutive months (February through September) with zero indigenous cases in 2003.

**Uganda** reported 13 indigenous cases, all from one village, in 2003, which is an increase of 117% from the 6 indigenous cases in 2002. It also reported 13 cases imported from Sudan in 2003. The one endemic village remaining was fully covered with safe water for the first time, nylon filters for household use, health education, and ABATE® larviciding in 2003. Of the 26 cases reported, 19 (73%) were reportedly detected within 24 hours and contained. Insecurity and imported cases from Sudan remain the most important challenges to this program.

**Ethiopia** reported 13 indigenous cases from 2 villages, all in Gambella Region. This is a reduction of –46% from the 24 indigenous cases reported in 2002. Another 15 cases were imported from Sudan. Of the 28 cases, all but one were reportedly detected within 24 hours and contained. Insecurity in Gambella Region is a major impediment to this program.

**Mauritania** reported 13 cases (77% contained) in 9 localities in 2003. There were no imported cases. Of the 9 localities, 6 reported only one case each. This is a reduction of –69% from 42 cases reported in 2002.

Figure 3



### Distribution by Country of 32,050 Indigenous Cases of Dracunculiasis Reported during 2003

#### NIGER HONORS HOPKINS, RUIZ, ZINGESER & KANE



On behalf of the President of the Republic of Niger, His Excellency Mamadou Tandja, the Minister of Public Health of Niger, the Honorable Mamadou Sourghia, recently conferred the Medal of Honor of Public Health of Niger on four employees of The Carter Center: Dr. Donald R. Hopkins (associate executive director) and Dr. Ernesto Ruiz-Tiben (technical director, Guinea worm eradication) [gold], and Dr. James Zingeser (technical director, trachoma control) and Mr. Mohammed S. Kane (resident technical advisor) [silver]. The awards were made in acknowledgement of their services to the Guinea Worm Eradication Program in Niger. These medals of the National Order were awarded during a ceremony at the ministry of foreign affairs in Niamey, Niger on April 3, 2004.

Table 1

Number of cases contained and number reported by month during 2003  
(Countries arranged in descending order of cases in 2002)

COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL		
SUDAN	261 / 1170	122 / 702	271 / 871	256 / 1225	264 / 2284	241 / 2557	297 / 2586	282 / 2384	306 / 1787	574 / 2468	544 / 1695	262 / 570	3680 / 20299	18	
GHANA	485 / 903	769 / 1339	555 / 944	622 / 940	524 / 785	374 / 558	288 / 474	126 / 203	86 / 158	172 / 278	416 / 712	449 / 996	4866 / 8290	59	
NIGERIA	389 / 568	179 / 243	106 / 128	53 / 60	30 / 52	49 / 58	49 / 68	34 / 48	22 / 31	29 / 32	53 / 65	87 / 106	1080 / 1459	74	
TOGO	110 / 149	28 / 44	21 / 29	38 / 44	73 / 87	53 / 72	53 / 63	14 / 22	18 / 27	24 / 29	25 / 35	37 / 68	494 / 669	74	
MALI	3 / 3	4 / 4	5 / 5	2 / 3	3 / 3	8 / 8	42 / 84	92 / 160	122 / 250	106 / 206	41 / 80	16 / 23	444 / 829	54	
BURKINA FASO	6 / 6	1 / 2	0 / 1	3 / 5	14 / 16	27 / 62	24 / 34	12 / 19	12 / 21	11 / 18	4 / 12	5 / 7	119 / 203	59	
NIGER	0 / 0	1 / 1	0 / 0	2 / 2	0 / 0	6 / 6	27 / 37	30 / 47	33 / 71	11 / 73	22 / 38	13 / 18	145 / 293	49	
COTE D'IVOIRE	7 / 21	5 / 8	1 / 2	1 / 4	3 / 4	1 / 1	1 / 1	0 / 0	0 / 0	0 / 0	0 / 0	0 / 1	19 / 42	45	
BENIN	21 / 21	1 / 1	1 / 1	0 / 0	0 / 0	0 / 0	2 / 2	0 / 0	0 / 0	2 / 2	1 / 1	2 / 2	30 / 30	100	
ETHIOPIA	0 / 0	0 / 0	3 / 3	7 / 7	7 / 7	5 / 5	1 / 1	1 / 1	4 / 4	0 / 0	0 / 0	0 / 0	28 / 28	100	
MAURITANIA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	2 / 3	1 / 1	3 / 4	2 / 3	0 / 0	1 / 1	10 / 13	77	
UGANDA	0 / 0	0 / 0	0 / 0	3 / 3	9 / 11	4 / 6	1 / 2	0 / 2	0 / 0	2 / 2	0 / 0	0 / 0	19 / 26	73	
KENYA	1 / 1	1 / 1	1 / 1	1 / 1	4 / 4	1 / 1	2 / 2	2 / 2	1 / 1	1 / 1	1 / 1	1 / 1	0 / 12	0	
TOTAL	1282 / 2842	1110 / 2344	963 / 1984	987 / 2293	927 / 3253	769 / 3335	787 / 3357	592 / 2889	606 / 2354	933 / 3111	1106 / 2639	872 / 1792	10934 / 32193	34	
% CONTAINED	45	47	49	43	28	23	23	20	26	30	42	49	34		

Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

For other imported cases see table of imported cases by month and by country.

Table 2

Number of cases contained and number reported by month during 2004\*

(Countries arranged in descending order of cases in 2003)

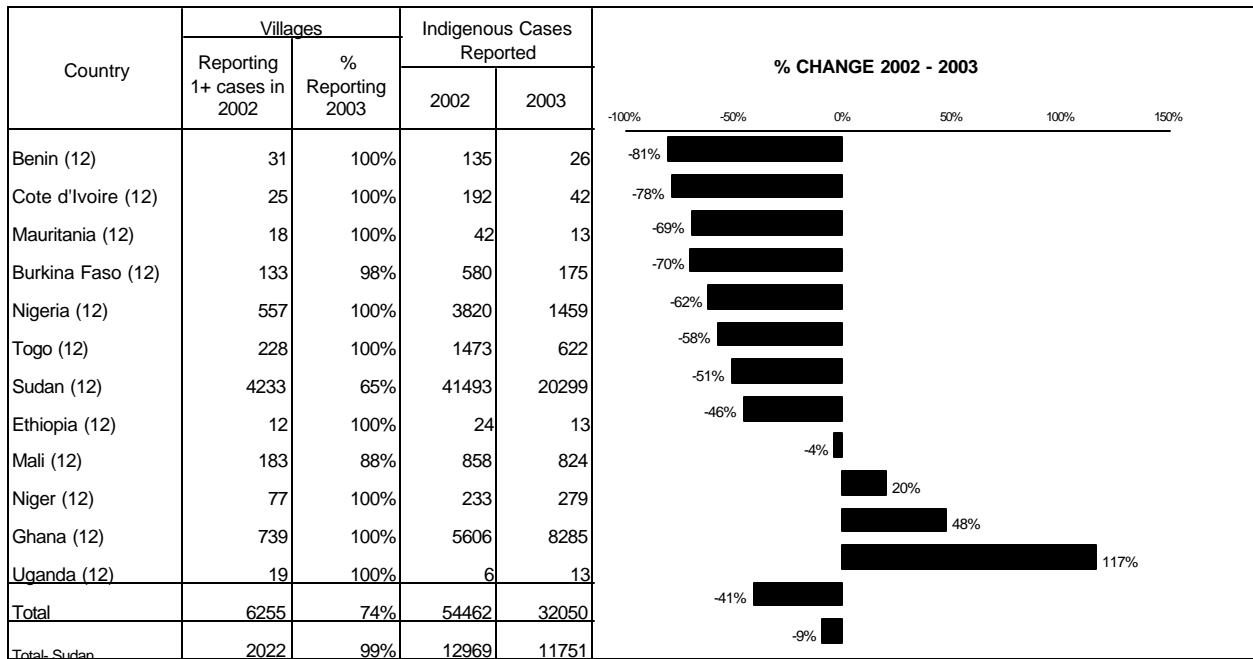
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													CONT.	%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*		
SUDAN	33 / 121	41 / 117	/	/	/	/	/	/	/	/	/	/	74 / 238		
GHANA	480 / 1211	550 / 1130	528 / 976	/	/	/	/	/	/	/	/	/	1558 / 3317	47	
NIGERIA	81 / 101	64 / 73	40 / 48	/	/	/	/	/	/	/	/	/	185 / 222	83	
MALI	1 / 1	0 / 1	0 / 1	/	/	/	/	/	/	/	/	/	1 / 3	33	
TOGO	35 / 46	20 / 29	18 / 46	/	/	/	/	/	/	/	/	/	73 / 121	60	
NIGER	1 / 1	2 / 2	1 / 1	/	/	/	/	/	/	/	/	/	4 / 4	100	
BURKINA FASO	1 / 1	1 / 2	0 / 0	/	/	/	/	/	/	/	/	/	2 / 3	67	
COTE D'IVOIRE	2 / 2	3 / 6	0 / 4	/	/	/	/	/	/	/	/	/	5 / 12	42	
BENIN	0 / 0	2 / 2	1 / 1	/	/	/	/	/	/	/	/	/	3 / 3	100	
ETHIOPIA	0 / 0	1 / 1	0 / 0	/	/	/	/	/	/	/	/	/	1 / 1	100	
UGANDA	0 / 0	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	0 / 0	0	
MAURITANIA	1 / 1	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	1 / 1	100	
TOTAL*	635 / 1485	684 / 1363	588 / 1077	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1907 / 3925	49	
% CONTAINED	43	50	55										49		

\* PROVISIONAL

Shaded cells denote months when zero indigenous cases were reported. Numbers indicate how many imported cases were reported and contained that month.

Figure 4

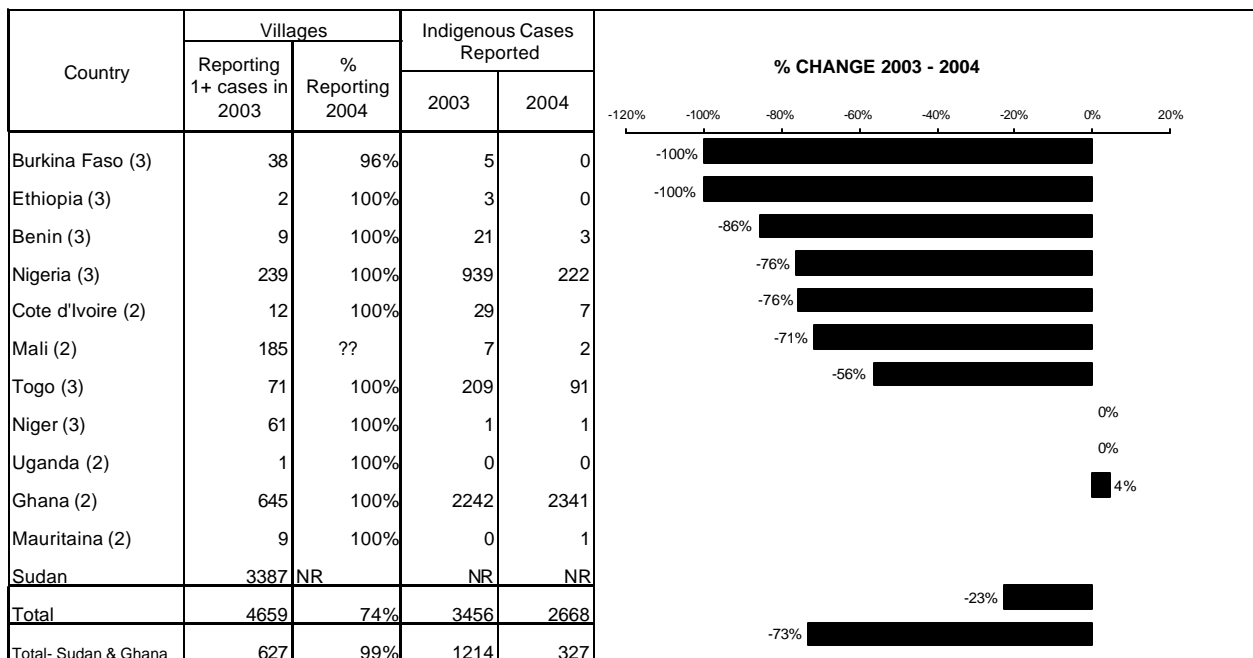
Number of Villages/Localities Reporting Cases of Dracunculiasis in 2002, Percentage of Endemic Villages Reporting in 2003, Number of Indigenous Cases Reported During the Specified Period in 2002 and 2003, and Percent Change in Cases Reported



(12) Indicates month for which reports were received, e.g., Jan. - Dec. 2003

Figure 5

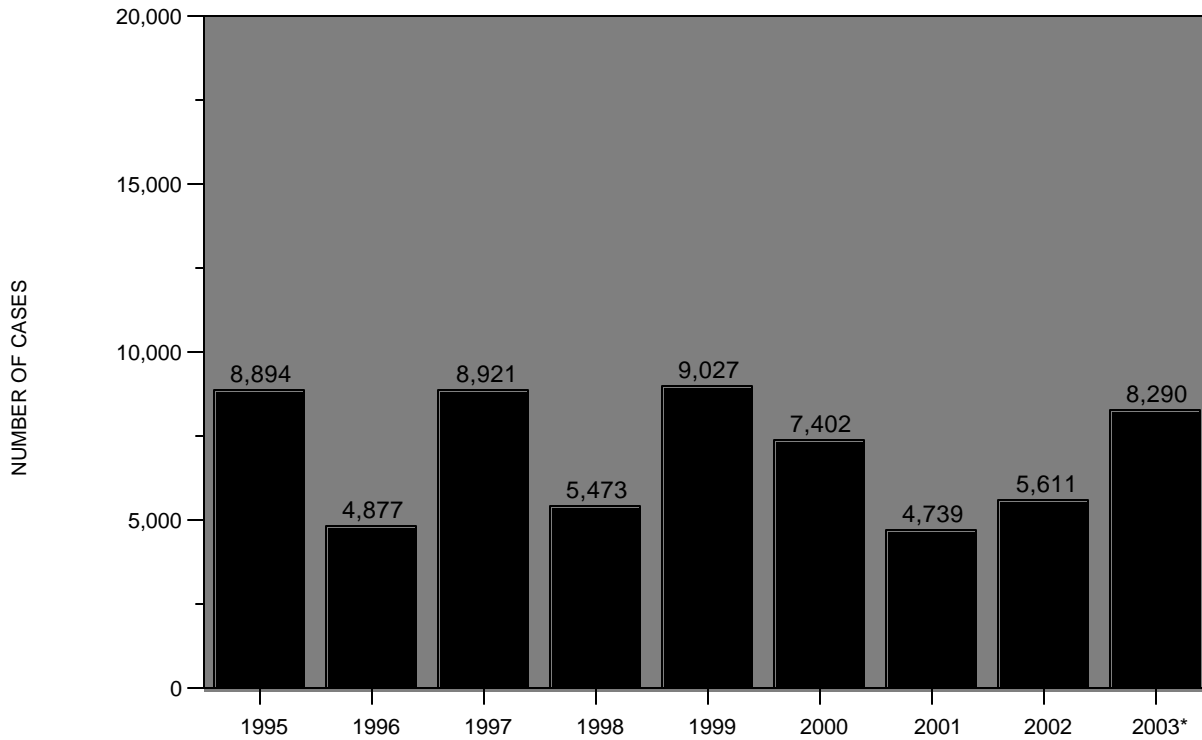
Number of Villages/Localities Reporting Cases of Dracunculiasis in 2003, Percentage of Endemic Villages Reporting in 2004\*, Number of Indigenous Cases Reported During the Specified Period in 2003 and 2004\*, and Percent Change in Cases Reported



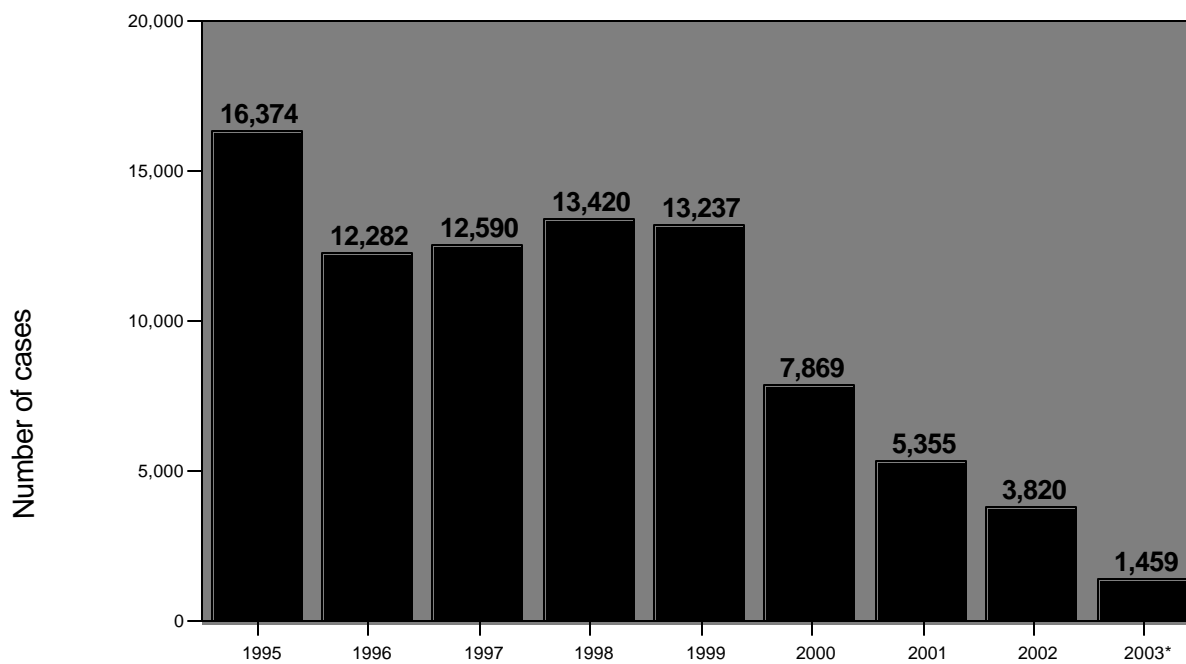
(2) Indicates month for which reports were received, e.g., Jan. - Feb. 2004

\* Provisional; NR - No Report Received

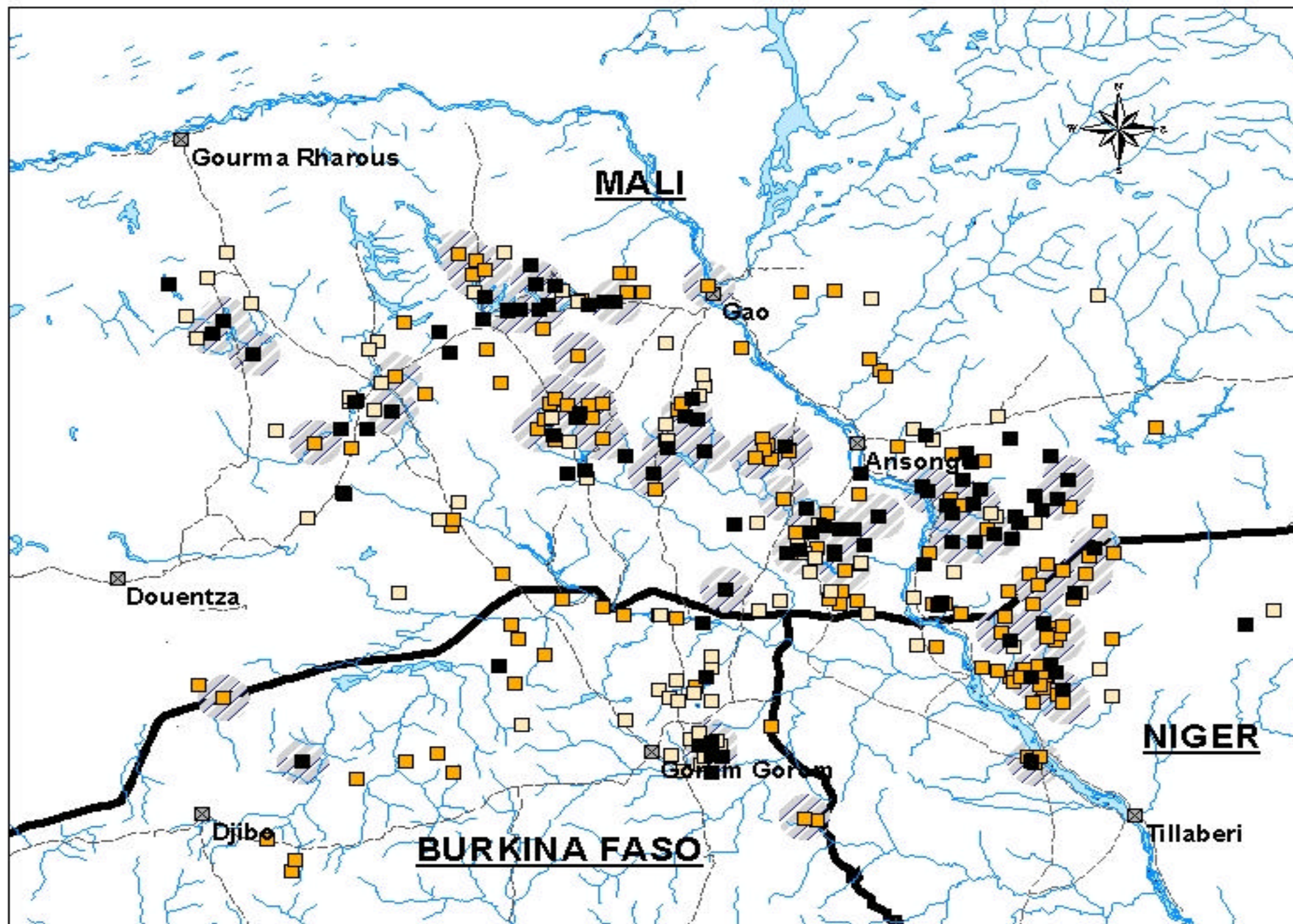
**Ghana Guinea Worm Eradication Program  
Number of Cases of Dracunculiasis Reported: 1995 -2003**



**Nigeria Guinea Worm Eradication Program  
Number of Cases of Dracunculiasis Reported: 1995 -2003**



**Partial distribution of endemic localities in Mali, Burkina Faso, and Niger  
January - December 2003**



**Legend**

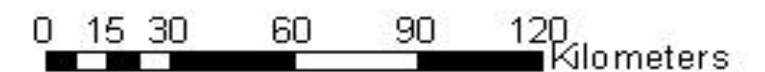
- Group I Villages
- Group II Villages
- Group III Villages
- ⊠ Major Towns
- ▨ Area reporting 5 or more cases<sup>^</sup>

Group I Villages = 1+ cases reported in both 2002 and 2003

Group II Villages = 1+ cases reported in 2002, but no cases in 2003

Group III Villages = No cases reported in 2002, but 1+ cases reported in 2003

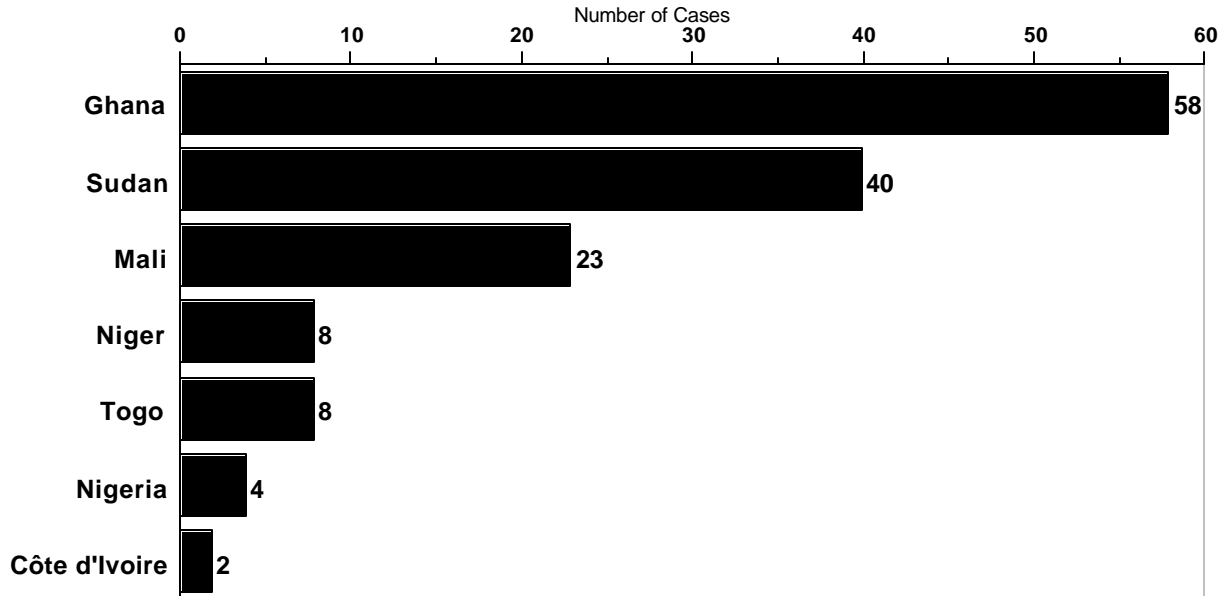
**Area of enlargement**



\* partial distribution of endemic villages based on available coordinates  
<sup>^</sup> 5 or more cases within a 10 km radius of village



**Figure 6**  
**Distribution by Country of Origin of 143 Cases of Dracunculiasis Exported to Other Countries During 2003**

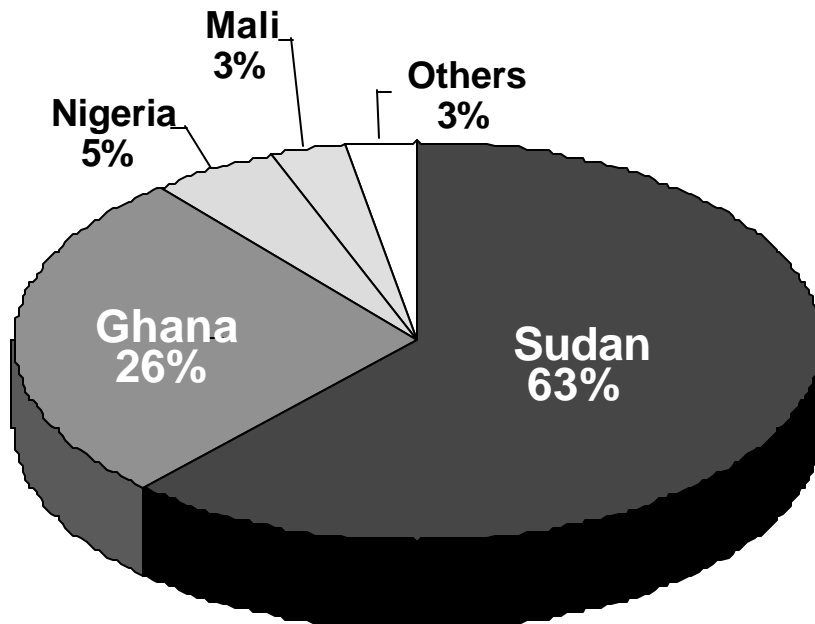


**JIMMY AND ROSALYNN CARTER AWARD TO DR. NABIL AZIZ OF SUDAN**

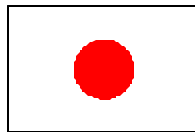
The National Program Coordinator of Sudan’s Guinea Worm Eradication Program, Dr. Nabil Aziz Mikhail, was presented with the 2004 Jimmy and Rosalynn Carter Award for Guinea Worm Eradication during the Ninth Meeting of National Program Coordinators of Dracunculiasis Eradication Programs in Bamako, Mali on March 30. Dr. Nabil was cited for his “exemplary leadership in the struggle to eradicate dracunculiasis in Sudan over the past decade”. He was saluted with two standing ovations by his colleagues and peers when he was presented with the award by Dr. Donald Hopkins on behalf of The Carter Center. CONGRATULATIONS DR. NABIL!!!!

Figure 7

**Distribution of 31,193 Cases of Dracunculiasis Reported During 2003**



## FUNDING



JAPAN

The Government of Japan, through its Grassroots Grants Assistance Program, in March awarded another \$80,000 to The Carter Center to help support the provision of filter material for Sudan's Guinea Worm Eradication Program. As reported in the previous issue, Japan has now contributed more than \$1 million to The Carter Center through the grassroots grants mechanism. This is the fifth such grant provided to The Carter Center office in Khartoum by the Embassy of Japan for Sudan's GWEP, following previous grants totaling over \$475,000 in 1999, 2001, 2002, and 2003.

## SPECIAL SESSION ON SURVEILLANCE: 9TH MEETING OF NATIONAL COORDINATORS OF GUINEA WORM ERADICATION PROGRAMS, MARCH 29—APRIL 1, 2004, BAMAKO MALI

**Topic I. Surveillance in formerly endemic areas.** Since 1986 the international Dracunculiasis Eradication Program (DEP) has reduced the annual incidence of the disease from an estimated 3.5 million cases, to 32,152 cases detected during 2003, a reduction of 99%.

The number of endemic villages has been reduced by 80%, from 23,735 endemic villages in 1991 to 4,660 in 2003. In Africa, there are now an estimated 18,500 villages where transmission of dracunculiasis no longer occurs. Surveillance for cases of dracunculiasis in these disease-free areas (at-risk villages) is weak or non-existent, and makes the Guinea Worm Eradication Programs (GWEPs) vulnerable to annual unexpected outbreaks of the disease.

Although in theory, all of the currently endemic countries have national integrated disease surveillance response systems (IDSRs) in place, and dracunculiasis is slated for eradication, routine reporting of alleged cases of dracunculiasis through the IDSR system to the national GWEP seldom occurs in any of the 12 endemic countries. There is consensus about the need for more robust and consistent surveillance systems in areas now free of the disease, particularly in villages that have been freed of transmission of dracunculiasis during the last three years, i.e., during 2001-2003. Establishing adequate surveillance capacity in formerly endemic areas is necessary for three reasons.

1. It is a requirement of the International Commission for Certification of Dracunculiasis Eradication (ICCDE) for all currently endemic countries;
2. GWEPs are expected to document all surveillance activities and to describe these in the country report required by the ICCDE; and
3. GWEPs need to become immediately aware of the occurrence of sporadic cases (indigenous or imported) in formerly endemic areas in order to prevent or contain disease outbreaks.

Two possible approaches seem pertinent. Firstly, seek and provide funding to directly support GWEPs so these can develop, implement, and sustain capacity for surveillance of cases of dracunculiasis in formerly endemic villages, i.e., those where transmission of the disease was stopped during the last three years, and also provide some support to the national IDSR system to implement routine mandatory reporting of cases of dracunculiasis from areas at lesser risk of reintroduction of the disease. Secondly, seek and provide funding to the existing national IDSRs to include routine mandatory reporting of cases of dracunculiasis nation-wide (except from currently endemic areas where the GWEP would provide for active village-based surveillance of and reporting of cases monthly).

Discussants suggested the greatest need was for Ghana, Nigeria, Mali, Togo, and Burkina Faso to prepare a listing of the villages where transmission of the disease was stopped since 2000 by state and district. Other countries need to do the same. The intended use of these listings is to know the magnitude of the number of villages and districts where surveillance needs to be implemented and sustained, and to prepare a plan of action and budget for surveillance in these districts. The plan of action should include: number of villages, districts and states; costs (how funded?); logistics; proposed reporting system, i.e., through existing IDSR, GWEP?; minimum reporting frequency (immediately if an alleged case of GWD, monthly if zero cases; by whom and to whom [identify efficient channels of communications between the IDSR and the GWEP]).

Discussants also suggested the GWEPs use information from redundant surveillance systems, such as rumors about cases (national rumor registry for alleged cases of GWD), participation in national surveys (e.g., national

immunization days to search for cases of GWD), reports about cases of GWD from school children attending the school system, or from other workers such as community-based drug distributors, and from cash reward systems for reporting of cases of GWD.

1. Include reporting of cases of GWD in the country's IDSR system. Currently, IDSRs are facility (health post) based, but need to be expanded to villages, at least in the most highly at-risk group of formerly endemic villages.
2. How to evaluate?
  - Number of alleged cases of GWD in rumor register
  - Information from reward system for reporting of dracunculiasis cases
  - Number of dracunculiasis outbreaks detected
  - Timeliness of detection of outbreaks.

## **Topic II. Improving Surveillance for cases of dracunculiasis in nomadic areas in Mali (Gao, Ansongo, and Gourma Rharous Cercles) Niger (Tillaberi and Tera Districts), and Burkina Faso (Gorom-Gorom, and Djibo Districts).**

WHO and Carter Center staff described efforts to assist Mali, Niger, and Burkina Faso to define the location (latitude and longitude) of nomadic camps, determine the seasonal flow of movements by nomadic populations, determine the location of nomadic camps, of sources of drinking water, of fonio fields, and of seasonal and perennial streams and impoundments. Coordinates were obtained from 927 villages visited in the above-mentioned endemic districts in the three countries, and data on all above parameters collected. A total of 254 localities (including 30 new ones) were determined to have endemic GWD.

A series of maps (based on data collected by all three countries) was presented. These maps identify localities that reported cases of GWD in 2002 and/or 2003. The localities shown on the maps represent 240 (72%) of the localities reporting cases in 2002 and/or 2003. The maps highlighted areas, with red arrows and circles, with clustering of localities reporting 5+ cases in 2003. Clusters are associated with significant seasonal bodies of water and well-traveled roads, and are the places where transmission of GWD occurred in 2002 and in 2003. These clusters need to be urgently targeted for intensified active surveillance and interventions during 2004. During 2004 the GWEPs need to re-assess the zonal structures in place during 2003 so there is tight correspondence of program supervisors and of interventions against transmission of GWD, with these clusters.

## **Topic III. Follow-up on the recommendation made to partner organizations during the meeting in Kampala in 2003 to review the international definitions for cases, villages, and program indicators.**

National Coordinators from Ghana, Burkina Faso, and Uganda met with members of the Interagency Coordination Group, and WHO/Geneva staff in Geneva during May 2003 to review and revise these definitions. The revisions were published in the WHO Weekly Epidemiological Report, No. 37, September 2003.

### General conclusions from the special surveillance session

All GWEPs need to adhere to the revised definitions for cases, villages and program indicators in the above mentioned document, and should teach staff at all levels about these definitions. Conclusions were:

- No automatic implementation of interventions in villages reporting only cases imported from elsewhere. Thorough investigation of the status of transmission in such villages is required, including the probable origin of all imported cases.
- The value of detecting cases of GWD within the first 24 hours after worm emergence is critical to the GWEP. That value decreases exponentially with time, e.g., after 48, 72, or 96 hours have elapsed.
- All GWEPs should identify and list all villages reporting zero cases during 2001-2003 that were previously endemic, by state and district, and should develop a comprehensive action plan that ensures continued surveillance in these areas so that unexpected outbreaks of the disease can be prevented.
- The appropriate case notification forms, and case investigation forms, should be used by all GWEPs to cross-notify other countries/areas about imported cases or about the investigation of cases.

- All national coordinators are to liaise with their ministries of health to urge that the reporting of cases of dracunculiasis be included in the national IDSR system.
- All endemic countries are encouraged to engage and utilize now, idle village-based health workers trained by the GWEP, in other health programs.

## **NINTH MEETING OF NATIONAL COORDINATORS OF GUINEA WORM ERADICATION PROGRAMS**

### GENERAL RECOMMENDATIONS

1. The level of implementation of the recommendations and of the expected results from this meeting should be evaluated country by country, during next meeting.
2. All national coordinators should ensure a broad dissemination of the revised definitions of cases, villages, and program indicators, including the investigation of imported cases and notification forms, and ensure their effective use at all levels of the program.
3. Countries should identify all previously endemic villages by state and district from 2001- 2003 and develop a comprehensive action plan and budget. This is intended to ensure continued support for surveillance in Guinea worm-free areas.
4. Each GWEP should encourage the Minister of Health to investigate the opportunity to obtain funds for their program from the HIPC (Highly Indebted Poor Countries) Fund.
5. Each GWEP should urge their Ministry of Health to include reporting of cases of dracunculiasis in the National Integrated Disease Surveillance Response System.
6. Each GWEP national coordinator should brief their minister of health on the status of their program, including the key constraint(s) to completing eradication.
7. Partners and endemic countries should maintain a strong coalition and have the same commitment with regards to the program up to the certification of Guinea worm disease.
8. National GWEPs should refine the broad objective “Detect 100% of cases of GWD” as follows: “Conduct daily endemic village or locality-based searches for cases of GWD to detect all cases within 24 hours of emergence of the Guinea worm”. Determining the proportion of cases detected within 24 hours of worm emergence, and reporting on it monthly can measure this objective.
9. WHO country officers should train all program managers along with their data managers on the Health Mapper application.
10. WHO should update Health Mapper database and geographical indicators in order to allow entering the imported cases by village separately from the indigenous cases in order to visualize differently the villages reporting ONLY imported cases, which cannot be considered endemic due to the absence of local transmission.

### **SPECIFIC RECOMMENDATIONS**

11. Burkina Faso, Mali and Niger programs should continue epidemiological surveillance in localities where transmission has been recently interrupted and in at-risk localities.

**TOGO**

12. The national and regional GWE staff should ensure, by their monthly field visits, the effective implementation of interventions.
13. The GWEP should intensify its cross-border activities with Ghana.

#### **CÔTE D'IVOIRE**

14. The GWEP should conduct active case searches in areas controlled by « Les forces nouvelles ».
15. The GWEP should participate in cross-border meetings between Burkina Faso, Cote d'Ivoire and Ghana.

#### **CENTRAL AFRICAN REPUBLIC**

16. The ministry of health should create a multidisciplinary pre-certification committee that would include health, water, other sectors and the partners.

#### **GHANA**

17. The government of Ghana should seek funding from the HIPC initiative for Guinea Worm Eradication Program activities in addition to provision of water in endemic areas.
18. The Ministry of Local Government and Regional Ministers should ensure full commitment of all District Chief Executives (particularly for the endemic areas) to the eradication of Guinea worm disease from their districts.
19. The MOH Ghana Health Service should ensure full integration of GW surveillance into the integrated disease surveillance and response program. Regional and district health managers should be held accountable for the eradication of Guinea worm disease in their areas.

#### **NIGERIA**

20. The Federal Ministry of Health should provide support for strengthening human and material resources at the NIGEP central level for adequate monitoring and supervision of endemic and non-endemic villages in the country.
21. The Federal Ministry of health should advocate for provision of safe water sources not only to currently endemic localities but also to formerly endemic villages.

#### **MAURITANIA**

22. The GWEP should implement a specific surveillance system for each of the 9 endemic villages.
23. Develop archives system at different levels: village, moughataa, wilaya, and national.

#### **ETHIOPIA**

24. The EDEP should strengthen cross border collaboration with counterparts in Sudan, particularly with Operation Lifeline Sudan/ Southern Sector.
25. Supervision should be strengthened at all levels.
26. Non-functional water schemes should be rehabilitated and new ones should be constructed in endemic and high-risk villages

**SUDAN GUINEA WORM ERADICATION PROGRAM GENERAL OBJECTIVES FOR CALENDAR YEAR 2004**  
**Government of Sudan and OLS/South Sudan**

1. Cases will be contained, according to the international definition for case containment as confirmed by full-time active surveillance utilizing in-place village resources, at the following levels:  
GOS - contain 80% of all reported cases (53% in 2003).  
OLS - contain 20% of all reported cases (1% in 2003).
2. Attain 100% coverage of household filters in all endemic villages (51% for GOS, 67% for OLS in 2003).
3. Conduct house-to-house training in the use and care of household filters in 90% of GOS-served endemic villages (0% in 2003).
4. Conduct bi-weekly supervision of village volunteers in GOS-served areas of the five most endemic states (0% in 2003).
5. Provide pipe filters, and education on their use and care:  
GOS - 500,000 herders and farmers in the five most endemic states (39% in 2003).  
OLS - 100,000 military forces and 200,000 herders.
6. Monitor monthly the functioning of all existing hand pumps in endemic villages of GOS-served areas (0% in 2003).
7. Advocate for the provision of new and rehabilitated handpumps.  
GOS - 150 new and 1,000 rehabilitated in the five most endemic states (35% and 60% respectively in 2003).  
OLS – 772 new, 500 rehabilitated in focus areas of return.
8. Conduct monthly spot checks for copepods in Abate-treated ponds in 20 endemic villages in GOS-served areas of three endemic states.
9. Conduct a KAP study of local Nuer populations in the GOS-served areas of the Upper Nile zone.
10. Conduct Guinea worm days in five of the most endemic villages of the GOS-served areas. (60% in 2003).
11. Conduct a National Guinea Worm Day led by President Bashir, Dr. Garang and President Carter within 3 months of the signing of the peace agreement between the Government of Sudan and the SPLM (new objective).
12. Ensure the broadcast, twice weekly, of radio messages in local languages in the five most endemic states (40% in 2003).
13. Conduct health education sessions for 350,000 internally displaced persons in targeted displacement camps of the GOS-served areas (100% in 2003).
14. Expand surveillance into 2,000 new villages in OLS-served areas.

**MALI'S GUINEA WORM ERADICATION PROGRAM MEASURABLE OBJECTIVES 2004**

1. Detect 100% of all Guinea worm cases in Mali within a 24 hrs period in villages reporting 5 or more cases.
2. Contain 90% of all Guinea Worm Disease in Mali [now 54%].
3. Conduct 3 supervisory visits per month in endemic villages during the transmission season.
4. Reach 100% supervisory coverage of all endemic villages by village volunteers, zonal coordinators, and Medecin Point Focal.
5. Ensure 100% household filter coverage in all endemic localities before peak transmission season [now

- 100%]  
Distribute 104,000 filters (all types) to all endemic villages.
6. Apply ABATE larvicide on a timely basis to 50% of endemic localities [now 22%]  
When applicable, treat water sources in the 20 most endemic villages.
  7. Provide rewards to all cases that are correctly contained within 24hrs [now 9%].
  8. Increase number of endemic localities with at least one safe water source [now 11%]  
Construct 20 new wells in the 20 most endemic villages.
  9. Increase the number of female Village Volunteers trained [now ???].
  10. Recruit and train additional Village Volunteers to ensure at least two per endemic locality [now??].
  11. Recruit and train 450 AVG, 35 ASZ, 50 ICPM/TS/TDC/ 10 Medecins.
  12. Conduct two Guinea Worm Weeks (April and May) in the 10 most endemic localities in each Circle (G. Rharous, Gao, Ansongo, Bourem) [now May 2003].
  13. Cross-notify 100% of imported cases of GWD upon receiving information at the district and national level [now 100%].
  14. Broadcast health education messages by radio 4x/month during peak transmission season [now not regular].
  15. Conduct health education sessions in local markets 4x/month from April to December [now not regular].
  16. Open a Case Containment Center in Gossi, G. Rharous [now 0] Organize 3  
awareness campaigns to promote the center before June.

*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 Dr. James H. Maguire, 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: 770-488-7761. The GW Wrap-Up web location is <http://www.cdc.gov/ncidod/dpd/parasites/guineaworm/default.htm>.*




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