



Date: September 26, 2006



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

Subject: GUINEA WORM WRAP-UP #166

To: Addressees

Count Down to Glory

Consecutive months with zero indigenous cases:

Burkina Faso 8

Nigeria 3

Ethiopia 2

Detect every case. Contain each worm. Trace the source of every sporadic case.

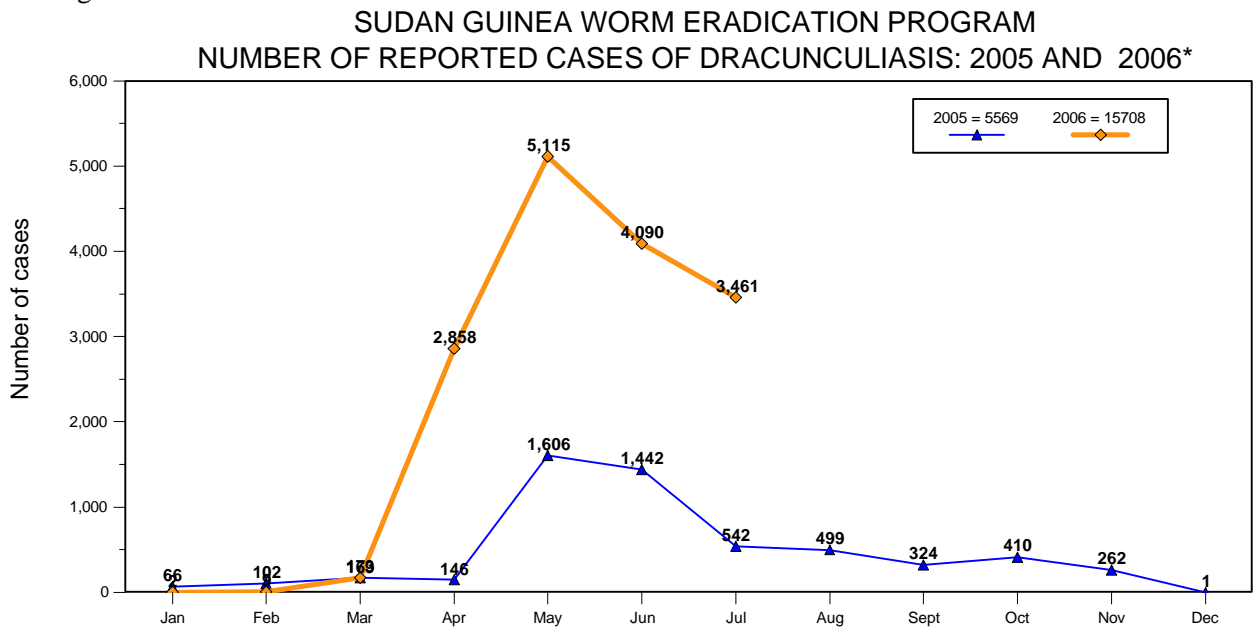
SUDAN: IMPROVED ACCESS IN 2006 YIELDS INCREASED CASES

Sudan continues to report significantly higher numbers of cases of dracunculiasis in 2006 compared to 2005, when uncertainties following the Comprehensive Peace Agreement that was signed in January 2005 to end the long-standing civil war continued to impede access to war-torn areas and reduced reporting even in some accessible areas of south Sudan. As illustrated in Figure 1, Sudan has reported 15,708 cases in 2,415 villages in January-July 2006, which is already nearly triple the 5,569 cases reported by Sudan in all of 2005. All cases are reported from southern Sudan; Sudan's northern states have not reported any indigenous or imported cases so far this year. The cases reported from Sudan comprise 84% of all cases reported globally during the first seven months of 2006. Sudan's peak transmission season is April to October.

Fully 97% of Sudan's cases in 2006 are reported from only 11 counties (Figure 2). However, the current totals are incomplete, since surveillance is still lagging in Kapoeta East and Awerial Counties, for example, and also in Akobo, Nyriol, and Wuror Counties in northern Jonglei State, where a recent assessment confirmed intense indigenous transmission in past months of 2006, but have not yet established structures for routine reporting. The overall reporting rate for endemic villages, which has been improving steadily in southern Sudan so far this year, is now 73%, compared to 42% in 2005. The endemic areas of Kapoeta and Akobo Counties are doubly important, since they border vulnerable areas of Ethiopia, which has reported two imported cases and one indigenous case in January-August (Figure 3, Table 1).

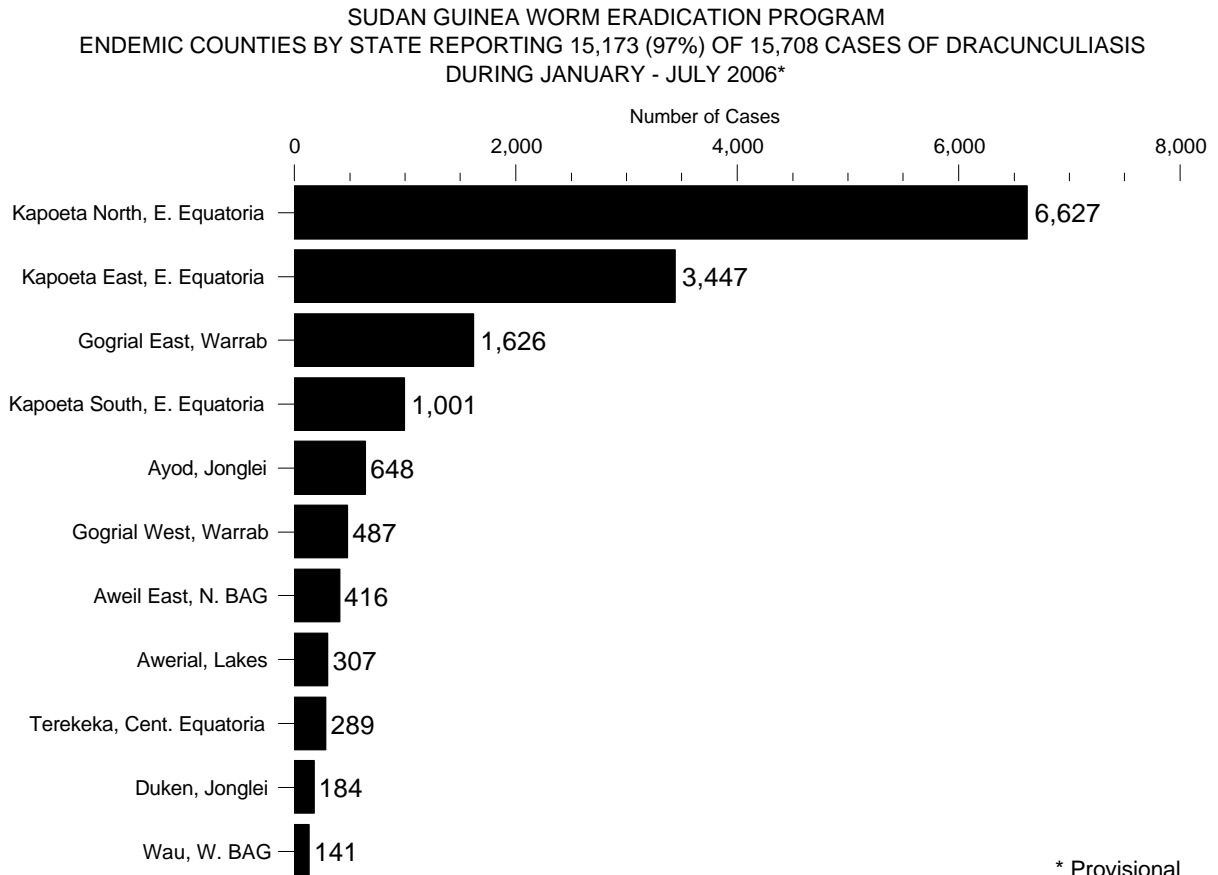
Aggressive interventions, including the case containment strategy, began in parts of the four main focus areas (Figure 3) early in 2006. Overall intervention indicators reported for endemic villages during January-June (latest update available) were 79% coverage with cloth filters, 56% coverage of the target group for pipe filters, 90% health education coverage, 12% coverage with at least one source of safe drinking water, and 12% coverage with ABATE® larvicide. ABATE® usage, especially, has accelerated in 2006 under the new consolidated program led by the coordinator of South Sudan's Guinea Worm Eradication Program Mr. Samuel Makoy, and assisted by Mr. Steven Becknell of The Carter

Figure 1



* Provisional

Figure 2



* Provisional

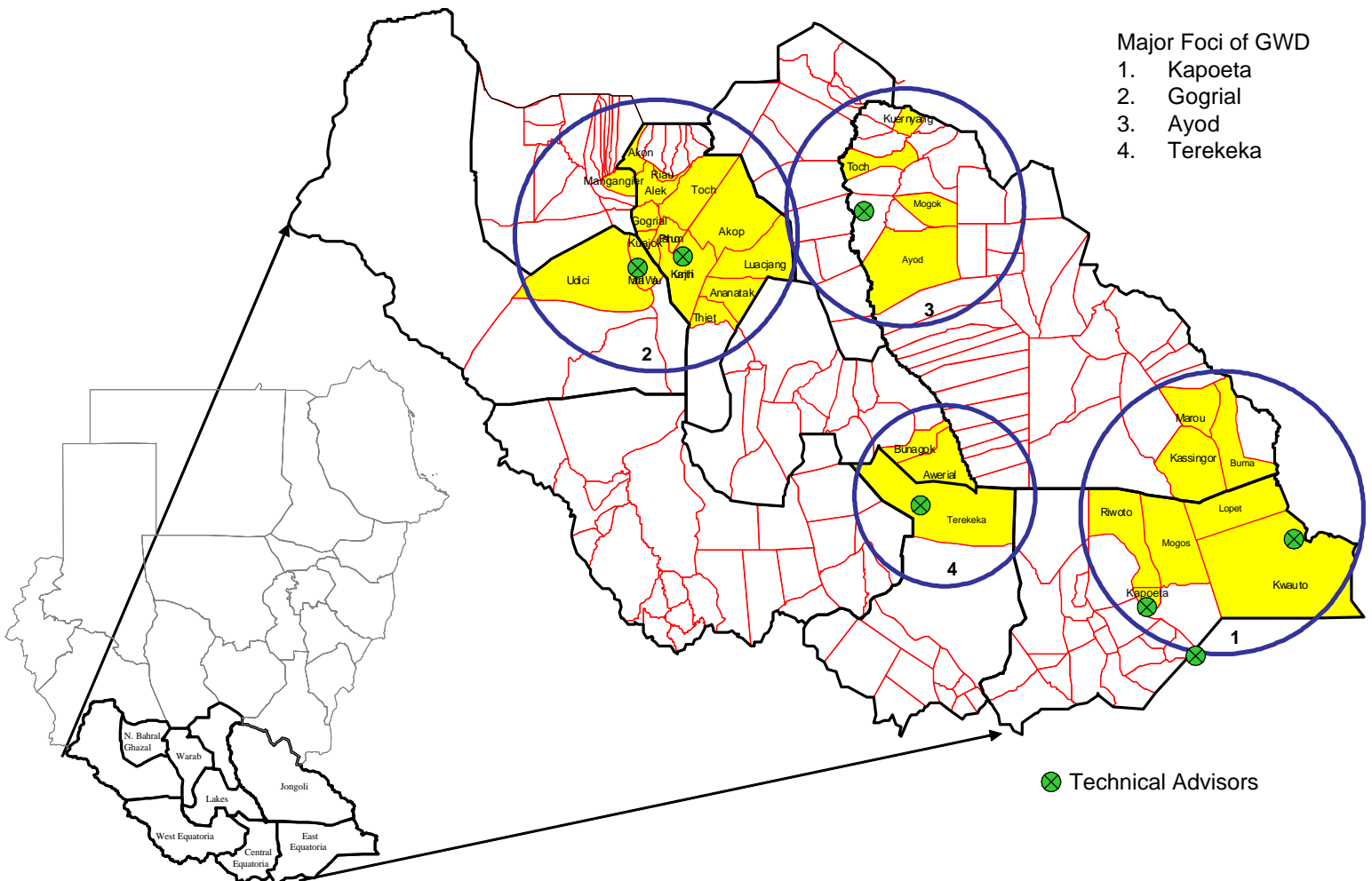
Center. ABATE was used in only 1.6 % (17) endemic villages in 2005, and none in 2004. In July 2006, UNICEF announced the beginning of a borehole drilling campaign by targeting 54 endemic villages in Kapoeta North County, Eastern Equatoria (2 successful wells were drilled during the second week of July), and more recently offered to provide 20 borehole wells in Terekeka County of Central Equatoria State.

As noted in an earlier issue nearly three years ago (*Guinea Worm Wrap-Up #137*), the struggle to eliminate dracunculiasis from southern Sudan is yielding significant other benefits in addition to its primary target. It will help achieve the Millennium Development Goals, and specifically

- Improve agricultural productivity and increase school attendance
- Develop village-based surveillance and hygiene education, including vs. trachoma
- Build capacity by screening and training village-based health workers
- Foster organization and functioning of village-based development committees
- Impart on-the-job managerial, planning, supervisory, and monitoring experience
- Promote extension of clean drinking water sources to some of the most deprived villages
- Provide a tangible, highly visible "Peace Dividend", and
- Eradicate dracunculiasis from the last endemic country.

Figure 3

Sudan Guinea Worm Eradication Program Location of Focus Areas and Technical Advisors



GHANA: STATUS OF ACTION PLAN FOR OCTOBER 2006-APRIL 2007



The regional minister for the Northern Region, Alhaji Iddris Mustafa Ali, presided at the bi-monthly meeting of Ghana's Guinea Worm Eradication Program that was held in Tamale on September 14. This was the first such meeting held after the annual Program Review that met in Atlanta on August 16-17. The regional minister ordered all district chief executives and all district health officers from endemic districts to attend the bi-monthly meeting. Other key participants included the deputy regional minister Mr. Issah Ketekewu, who was Ghana's senior representative to the recent Program Review; Ghana Health Service director-general Prof. A. B. Akosa; UNICEF resident representative Ms. Dorothy Rozga; UNICEF chief advisor on water and sanitation at UNICEF New York, Mr. Oulawafemi Odeiran; Dr. Ernesto Ruiz-Tiben, The Carter Center's technical director for Guinea worm eradication; as well as The Carter Center's outgoing and incoming resident technical advisors, Mr. Philip Downs and Mr. Jim Niquette. Each district chief executive and district health officer briefly described their plans for supporting the eradication campaign. UNICEF will provide Bacitracin antibiotic ointment for care of Guinea worm patients this season. The Carter Center will provide 150,000 additional pipe filters, and assign a technical assistant to Savelugu. The national coordinator Dr. Andrew Seidu Korkor and the senior representatives of UNICEF and The Carter Center also conducted on-site reviews of the impending water supply crises in Tamale and Savelugu.

Intervention indicators reported for 527 endemic villages from January-July are 88% coverage with cloth filters, 62% coverage of the target group for pipe filters, 98% health education coverage, 47% coverage with at least one source of safe drinking water, and 43% coverage with ABATE® larvicide. Trends for cases reported during January 2005 to August 2006 and percentage change by month is shown in figure 5.

The current status of the four milestones for August in the 2006-2007 Action Plan developed during the Program Review in Atlanta is as follows:

1. *Present the communiqué of the Review meeting to the minister of health, the regional minister and other key persons.* DONE. Although the Guinea worm situation was not officially declared a National Emergency, as intended, the director-general of the Ghana Health Service sent a written directive dated 8/23/06 to all regional directors of health, declaring that "all patients with Guinea worm [disease] should be confined in health facilities" to facilitate case containment, and that "The management of all such cases shall be free [of charge]".
2. *Complete the reorganization of the supervisory structure.* ONGOING.
3. *Replace non-performing staff.* INITIATED AND ONGOING. This action is being resisted by some district assemblies and district chief executives.
4. *Raise the case containment rate to 65%.* NOT YET ACHIEVED. The case containment rate during January-August is 63%.

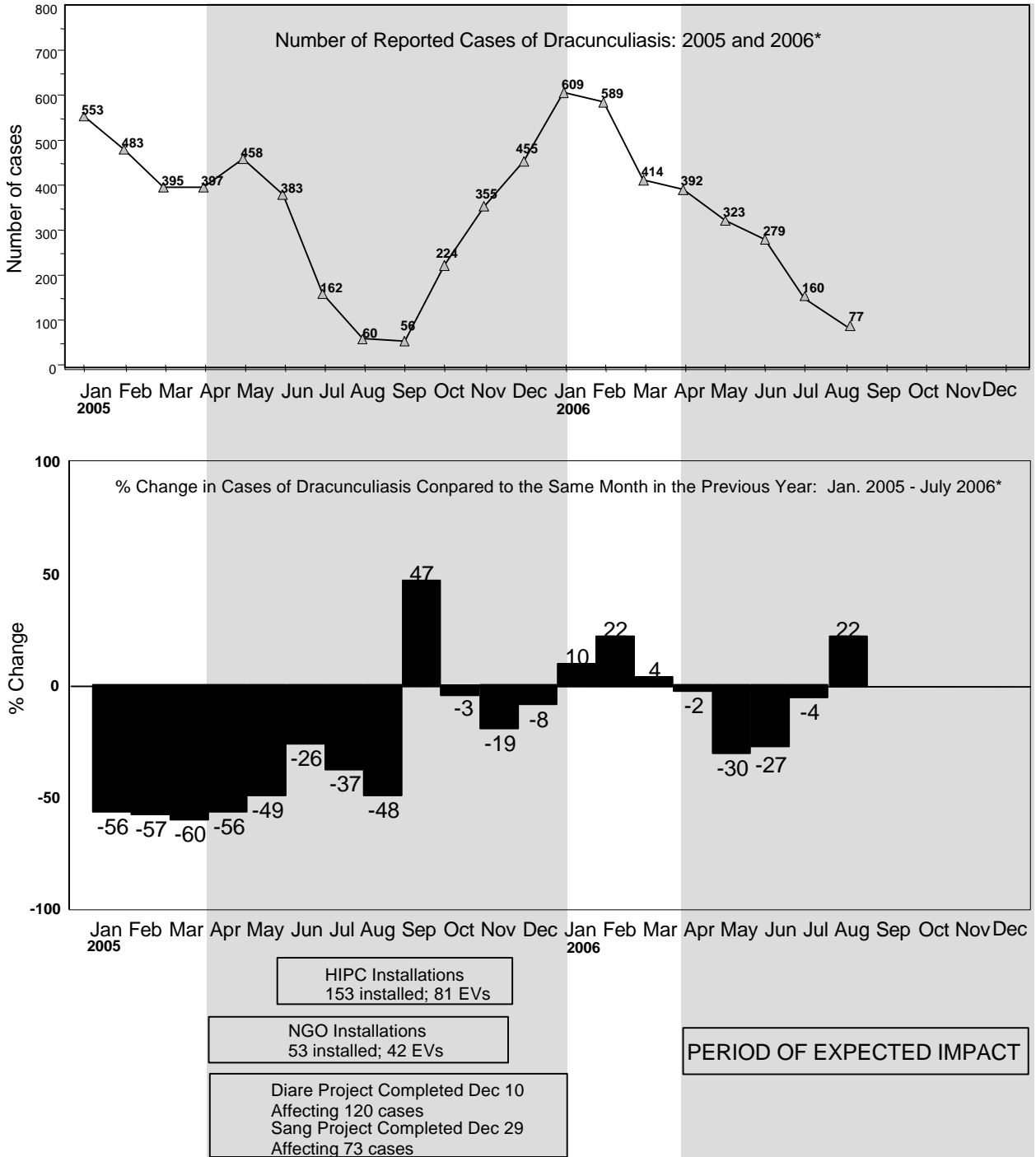
LAMISI MBILLAH, FORMER MISS GHANA, WINS MISS WORLD BEAUTY WITH A PURPOSE AWARD



Miss Ghana 2005, Ms. Lamisi Mbilla, made history in Poland's capital, Warsaw, by becoming the first Ghanaian beauty queen to make it to the finals of the Miss World pageant. Mbilla was "fastracked" to join the final 16 after she won the 'beauty with a purpose' prize for her "sterling work raising awareness and changing attitudes towards the impact of iodine deficiency and Guinea Worm," according to Miss World 2006 organizers. Congratulations Lamisi!

Figure 3

Ghana Guinea Worm Eradication Program Major Water Project Installation Vs Cases Reported & Percent Change January 2005 - August 2006*



* Provisional

Table 1

Number of Cases Contained and Number Reported by Month during 2006*
(Countries arranged in descending order of cases in 2005)

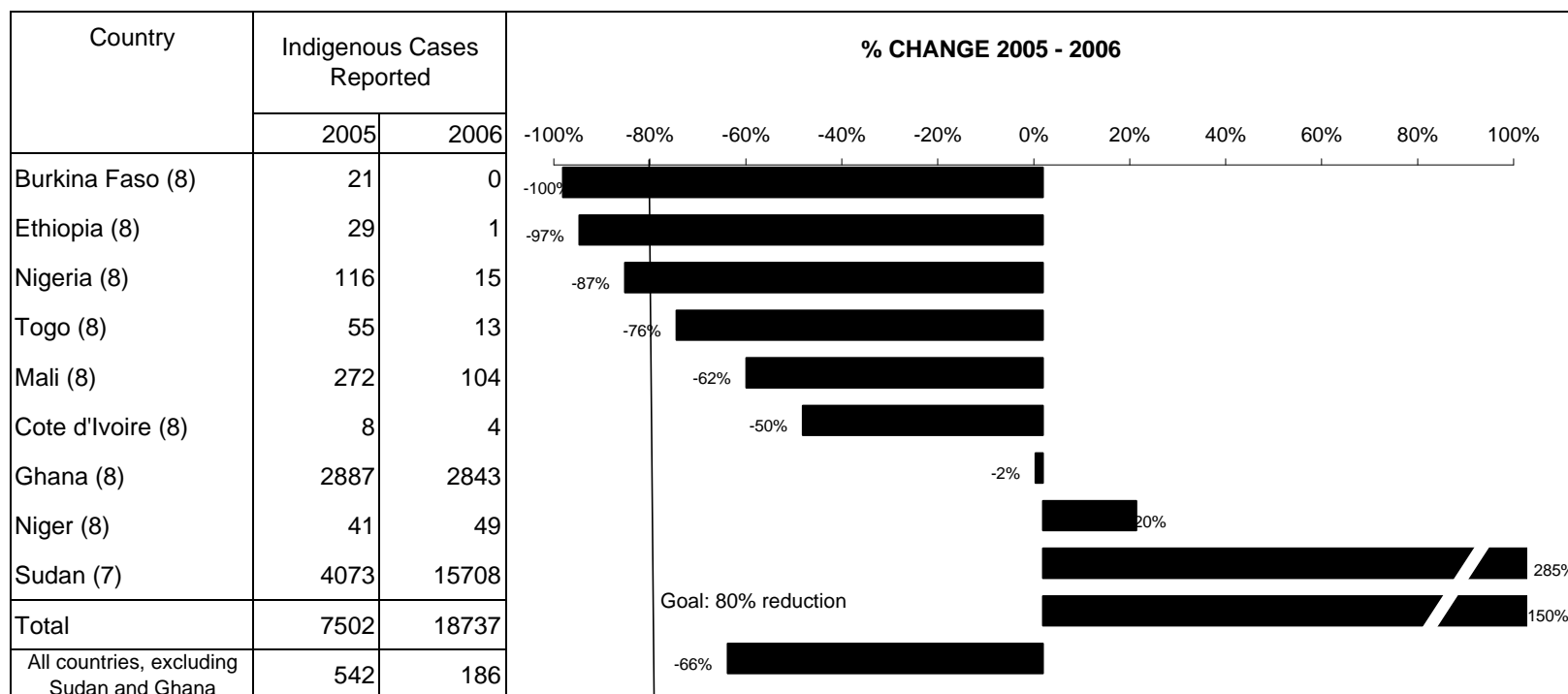
COUNTRIES REPORTING CASES	NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED													%
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	
SUDAN	0 1 2	0 / 9	48 / 173	198 / 2858	2736 / 5115	2479 / 4090	2384 / 3461	/	/	/	/	/	7845 / 15708	50
GHANA	396 / 609	376 / 589	266 / 414	237 / 392	209 / 323	177 / 279	90 / 160	39 / 77	/	/	/	/	1790 / 2843	63
MALI	3 / 3	1 / 1	0 / 0	1 / 1	3 / 3	14 / 14	11 / 14	66 / 72	/	/	/	/	99 / 108	92
NIGER	2 / 2	0 / 0	0 / 0	1 / 2	6 / 6	7 / 7	11 / 12	17 / 21	/	/	/	/	44 / 50	88
NIGERIA	0 / 0	10 / 14	0 / 0	0 / 0	0 / 1	0 / 0	0 / 0	0 / 0	/	/	/	/	10 / 15	67
TOGO	1 / 1	2 / 3	0 / 0	0 / 1	1 / 1	2 / 2	0 / 0	5 / 5	/	/	/	/	11 / 13	85
BURKINA FASO	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 1	/	/	/	/	1 / 2	0
COTE D'IVOIRE	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	2 / 2	2 / 2	0 / 0	/	/	/	/	4 / 4	100
ETHIOPIA	1 / 1	0 / 0	0 / 0	0 / 0	1 / 1	1 / 1	0 / 0	0 / 0	/	/	/	/	3 / 3	100
UGANDA	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	1 / 1	0 / 0	/	/	/	/	1 / 1	
TOTAL*	403 / 618	389 / 616	314 / 587	437 / 3254	2956 / 5450	2682 / 4395	2500 / 3651	127 / 176	0 / 0	0 / 0	0 / 0	0 / 0	9808 / 18747	52
% CONTAINED	65	63	53	13	54	61	68	72					52	
% CONT. OUTSIDE SUDAN	65	64	64	60	66	67	61	72					65	

* 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 Indigenous Cases Reported During the Specified Period in 2005 and 2006*, and Percent Change in Cases Reported



Overall % change outside of Sudan = -11%

(7) Indicates months for which reports were received, i.e., Jan. -July 2006

* Provisional

NIGER: ALL CASES IN TILLABERI REGION, NO OTHER PROGRESS SO FAR

Niger has reported 50 cases of dracunculiasis in January-August 2006, all of which occurred in Tillaberi Region. Within Tillaberi Region, 44 (88%) cases were reported from Tillaberi District, while 3 of the 6 cases outside of Tillaberi District were imported: one each from Mali, Tera District, and Kollo District. Eighty-eight percent (88%) of the 50 cases reported so far this year were reportedly contained. As Niger enters its peak transmission season (August-November), it has reported 20% more indigenous cases this year than during the same period of 2005 (49 vs. 41). Niger has made little progress over the past four years (2002-2005), reporting 248, 293, 240, and 183 cases, respectively.

One possible explanation for Niger's lack of progress is suggested in Table 2. Nearly half (48%) of all cases detected during January-July 2006 were reported from localities where all cases were reportedly contained in 2005. Some of these apparent failures may have occurred because of migrants moving into a locality, but others may have occurred because one or more known cases were not truly contained, or because not all cases that occurred in the locality were detected in 2005.

Table 2

District	Zone	Locality	Cases 2005	2005 Not Contained	Cases 2006
Kollo	Kollo	Kaba	0	0	3
Tera	Dargol	Bandio	0	0	1
Tillaberi	Ayorou I	Tinizagaz (Mali)	0	0	5
Tillaberi	Ayorou I	Tinimouzou	0	0	1
Tillaberi	Tillaberi	Toubawat	0	0	5
Tillaberi	Tera	Tinfat	0	0	2
Tillaberi	Famale	Bellaye	0	0	2
Tillaberi	Famale	Bibiyargou	0	0	1
Tillaberi	Famale	Innamares	1	0	1
Tillaberi	Famale	Tounkous	1	0	1
Tillaberi	Ayorou I	Timana	2	0	9
Tillaberi	Sarakoira	Loumban	2	0	6
Tillaberi	Ayorou I	Tegazaratene	2	0	3
Tillaberi	Sarakoira	Sarlis	2	0	1
Tera	Dargol	Tchiringui	3	0	1
Tillaberi	Famale	N'bossey	4	0	1
Tera	Dargol	Zano	17	0	1
Tera	Tillaberi	Tillaberi	1	1	1
Tillaberi	Sarakoira	Intakaret	3	1	5
Total Cases			38	2	50

2005 Locality Type	Cases 2006	%
Cases from localities where cases were not contained in 2005	6	12.0%
Cases from localities where cases were 100% contained in 2005	24	48.0%
Cases from "new" localities (0 cases in 2005)	20	40.0%
Total Cases	50	100%

District	Zones	Locality	Cases 2005	2005 Not Contained	Cases 2006	Zone Total Cases 2006	%
Tillaberi	Ayorou I	Tegazaratene	2	0	3	12	50.0%
		Timana	2	0	9		
	Famale	Innamares	1	0	1	3	12.5%
		Tounkous	1	0	1		
		N'bossey	4	0	1		
Sarakoira	Loumban	2	0	6	7	29.2%	
	Sarlis	2	0	1			
Tera	Dargol	Tchiringui	3	0	1	2	8.3%
		Zano	17	0	1		

IN BRIEF



Uganda. On September 20th, the Ministry of Health appointed seven members of the National Certification Committee on Guinea Worm Disease Eradication in Uganda.



Togo. The Government of Togo has appointed a new Minister of Public Health. The minister is Mr. Charles Kondi Agba who replaces Madame Suzanne Aho. The new minister previously served as minister of public health immediately before Madame Aho. With only 13 cases reported through August, Togo is in a tight race with Nigeria (15 cases) to see which country will report the fewest number of cases this year, and which will be the first to stop transmission of dracunculiasis.



Ethiopia. The Ethiopian Dracunculiasis Eradication Program has reported only one indigenous case so far in 2006. However insecurity reportedly worsened in Gambella Region in August. Formerly endemic South Omo Zone suffered significant flooding in the same month.

A WHO INTERNATIONAL CERTIFICATION TEAM (ICT) EVALUATES PRE-CERTIFICATION ACTIVITIES IN CAMEROON.

A World Health Organization International Certification Team (ICT) visited Cameroon during September 1-28. The ICT was led by Dr. Alhouseini Maiga, WHO-AFRO. Members of the ICT lead teams, which included national and district level members, traveled to specific selected areas, visiting many formerly endemic villages to assess the sensitivity of surveillance for detecting cases of Guinea worm disease and the effectiveness of the program in investigating rumors of alleged cases of the disease. The ICT is to report the outcomes of the assessment and its recommendations about Cameroon to the International Commission for the Certification of Dracunculiasis Eradication (ICCDR). The ICCDR will next meet in Geneva during March 2007.

WHO ASSESSES GUINEA WORM SURVEILLANCE ACTIVITIES IN NORTHERN AND SOUTHERN SUDAN

Dr Ahmed Tayeh, WHO Geneva, and Dr Sam Bugri, WHO Temporary Adviser, visited northern and southern Sudan Guinea Worm Eradication Programs during September 8-28 to review surveillance activities. Dr Tayeh and Dr Nabil Aziz, the National Coordinator, visited White Nile and Blue Nile States to review pre-certification activities in the northern states of Sudan. Dr Bugri visited Juba to assist in strengthening surveillance activities in guinea-worm free areas in the southern states.

Although the northern states that were endemic (North Darfur, South Darfur, North Kordofan, South Kordofan, Blue Nile, White Nile, Sinner and Gadaref States) have interrupted disease transmission, these continue at risk of re-introduction of the disease because of movement of population, mainly seasonal workers and herdsman, from endemic areas in southern states. Thus, recommendations were suggested to maintain guinea-worm surveillance in formerly endemic and at risk areas including conducting refresher training, holding review meetings, carrying out rumours investigation and registration and publicity of informing on cases or rumours.

At the end of the visit, WHO staff headed by Dr Mohamed Abdur Rab, WHO Representative in Khartoum paid a courtesy call on the Federal Minister of Health of Sudan, Dr Tabita Shokai. The Federal Minister of Health reiterated her commitment to accelerate activities to free the country from the disease.

TRANSITIONS

We are delighted to welcome Dr. Mohamed Abdur Rab back to the Guinea Worm Wars! Dr. Rab, who was recently appointed WHO's Representative to Sudan, was formerly national program coordinator of Pakistan's Guinea Worm Eradication Program. His experience in Pakistan's achievement and certification of eradication will be helpful. Welcome Dr. Rab!

THREE CIRCLES OF CONTAINMENT

Containment of transmission **in the individual**: isolate patients in case containment houses or similar primary health care facilities; monitor case containment rates.

Containment of transmission **in the household**: provide cloth filters and teach villagers how to use them; monitor proportion of endemic villages with such filters in all households.

Containment of transmission **in the community**: provide timely, effective, complete treatments of water sources with ABATE® Larvicide, educate villagers to prevent GW patients from contaminating drinking water, help provide safe sources of drinking water; monitor all three of these.

When implemented well, in combination with active surveillance, any one of these three barriers to transmission of dracunculiasis would completely halt further spread of the disease in an endemic area. The fact that transmission continues, or even increases, despite the claimed deployment of all of these in many areas, is a measure of how imperfectly programs have applied the three barriers to transmission.

DEFINITION OF CASE CONTAINMENT

A case of Guinea worm disease is contained if all of the following conditions are met:

1. The patient is detected before or within 24 hours of worm emergence; **and**
2. The patient has not entered any water source since the worm emerged; **and**
3. The village volunteer has properly managed the case, by cleaning and bandaging until the worm is fully removed, and by giving health education to discourage the patient from contaminating any water source (if two or more emerging worms are present, the case is not contained until the last worm is pulled out); **and**
4. The containment process, including verification that it is a case of Guinea worm disease, is validated by a supervisor within 7 days of the emergence of the worm.

*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 the 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>.



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