DEPARTMENT OF HEALTH & HUMAN SERVICES

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

Date: March 20, 2009

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

Subject: GUINEA WORM WRAP-UP #188

To: Addressees

TIME FOR THE "A" TEAMS: ANALYSIS (COMPLETE), ANTICIPATION (FOCUSED), AND ACTION (RAPID) in 2009

As we reminded all concerned in our January issue (*Guinea Worm Wrap-Up #186*), 2009 is the target year that was agreed in 2004 in which we are seeking to stop all transmission of Guinea worm disease (dracunculiasis). In that spirit we offer a critical summary of eradication activities in each of the six remaining endemic countries, based on the reports presented to the annual meeting of program managers of those programs that was held in Bamako, Mali on March 4-6. Guinea Worm Eradication Programs (GWEPs) reduced cases by 62% during 2006-2007 (from 25,217 to 9,585, a difference of 15,632 cases), and by 52% during 2007-2008 (from 9,585 to 4,619, a difference of 4,966 cases). The objective now is to stop transmission from all cases of Guinea worm disease (GWD) in 2009 so that zero cases are reported during 2010. The number of uncontained cases reported by country during 2008 is shown in figure 1. Most programs reviewed their activities in 2008 satisfactorily, but should now focus more on enhancing vigilance and interventions in 2009. **Each of the six national Guinea Worm Eradication Programs needs to analyze its epidemiological data for 2008 and 2009, use the results of that analysis to anticipate where to focus surveillance and preventive measures in 2009, and act rapidly in 2009.**

Figure 1

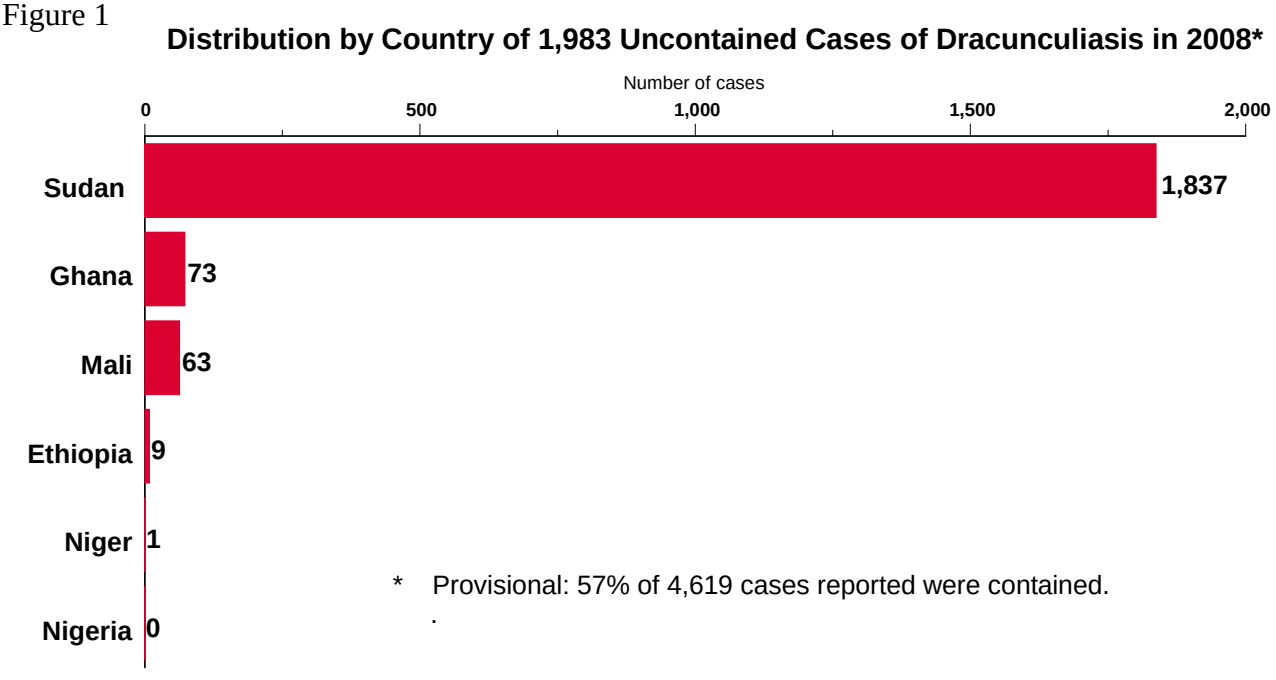


Table 1

Number of Cases Contained and Number Reported by Month during 2008*
(Countries arranged in descending order of cases in 2007)

NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED

%

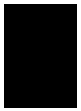


Table 2

Number of Cases Contained and Number Reported by Month during 2009*
(Countries arranged in descending order of cases in 2008)

NUMBER OF CASES CONTAINED / NUMBER OF CASES REPORTED

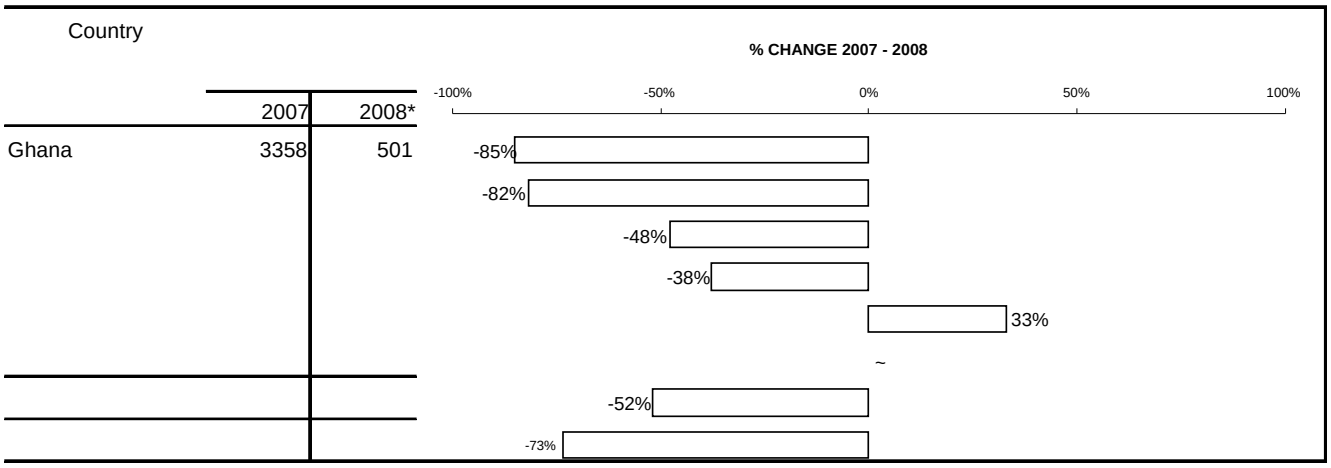
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL*	% CONT.
SUDAN	2 / 11	/	/	/	/	/	/	/	/	/	/	/	2 / 11	18
GHANA	31 / 45	49 / 50	/	/	/	/	/	/	/	/	/	/	80 / 95	84
MALI	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	/	0 / 0	
ETHIOPIA**	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	/	0 / 0	
NIGERIA	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	/	0 / 0	
NIGER	0 / 0	0 / 0	/	/	/	/	/	/	/	/	/	/	0 / 0	
TOTAL*	33 / 56	49 / 50	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	0 / 0	82 / 106	77
% CONTAINED													77	
% CONT. OUTSIDE SUDAN	69	98											84	

* provisional

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

Figure 2

Number of Indigenous Cases Reported During the Specified Period in 2007 and 2008*, and Percent Change in Cases Reported



* Provisional: excludes 4 cases exported from one country to another

Figure 3

Number of Indigenous Cases Reported During the Specified Period in 2008 and 2009*, and Percent Change in Cases Reported

(2) Indicates months for which reports were received, i.e., Jan. - Feb. 2009.

Months since last indigenous case of dracunculiasis:
Ethiopia: 4 months, **Niger:** 4 months, **Nigeria:** 3 months, **Mali:** 2 months

NIGERIA

Nigeria reported 38 cases during 2008, all reportedly contained (Table 1), from 5 villages in 4 Local Government Areas, although all of the cases are believed to have originated in one village: Ezza Nkwubor. The Nigerian Guinea Worm Eradication Program (NIGEP) has reported zero cases in Jan-Feb 2009, vs. 36 cases in Jan-Feb 2008 (Figure 2). Fourteen months have now elapsed since the last two uncontained cases of GWD were recorded in December 2007 (Figure 3). Since May 2006, NIGEP has disseminated information via local FM and short wave national radio, posters, handouts, and person to person (mostly GWEP staff) about rewards for reporting of suspect cases that meet the definition of a case of GWD. NIGEP has also utilized national and local days for immunizations and Worm Weeks as opportunities to ask about cases of GWD. Moreover, NIGEP monitors the status of GWD monthly in 707 formerly endemic and high risk villages in 88 Local Government Areas in 17 states. During 2009 the monthly reporting rate in these 707 villages was 75%. The Nigerian program also investigated 526 rumors in 2008, versus 170 in 2007 and 176 in 2006 (Figure 4). The South-East Zone of the program, home of Ezza Nkwubor and other villages reporting cases in 2008, investigated 236 (45%) of the 526 rumors of cases of GWD. The proportion of 526 alleged cases

Figure 4

Nigerian Guinea Worm Eradication Program

Cumulative Frequency of Rumors of Cases of Guinea Worm Disease Investigated during 2006, 2007, and 2008**

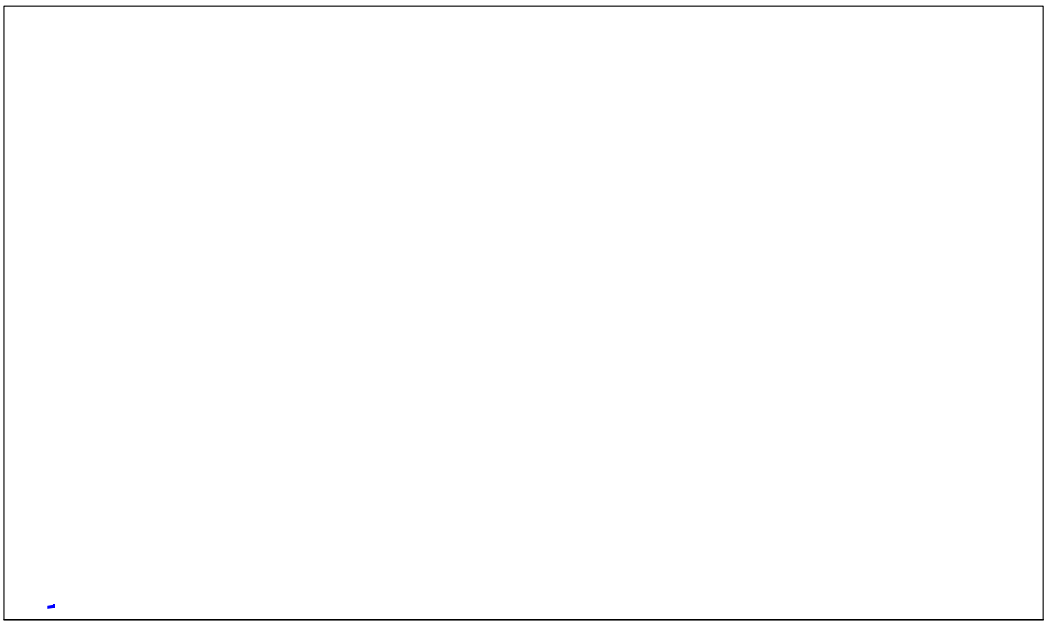


Figure 5

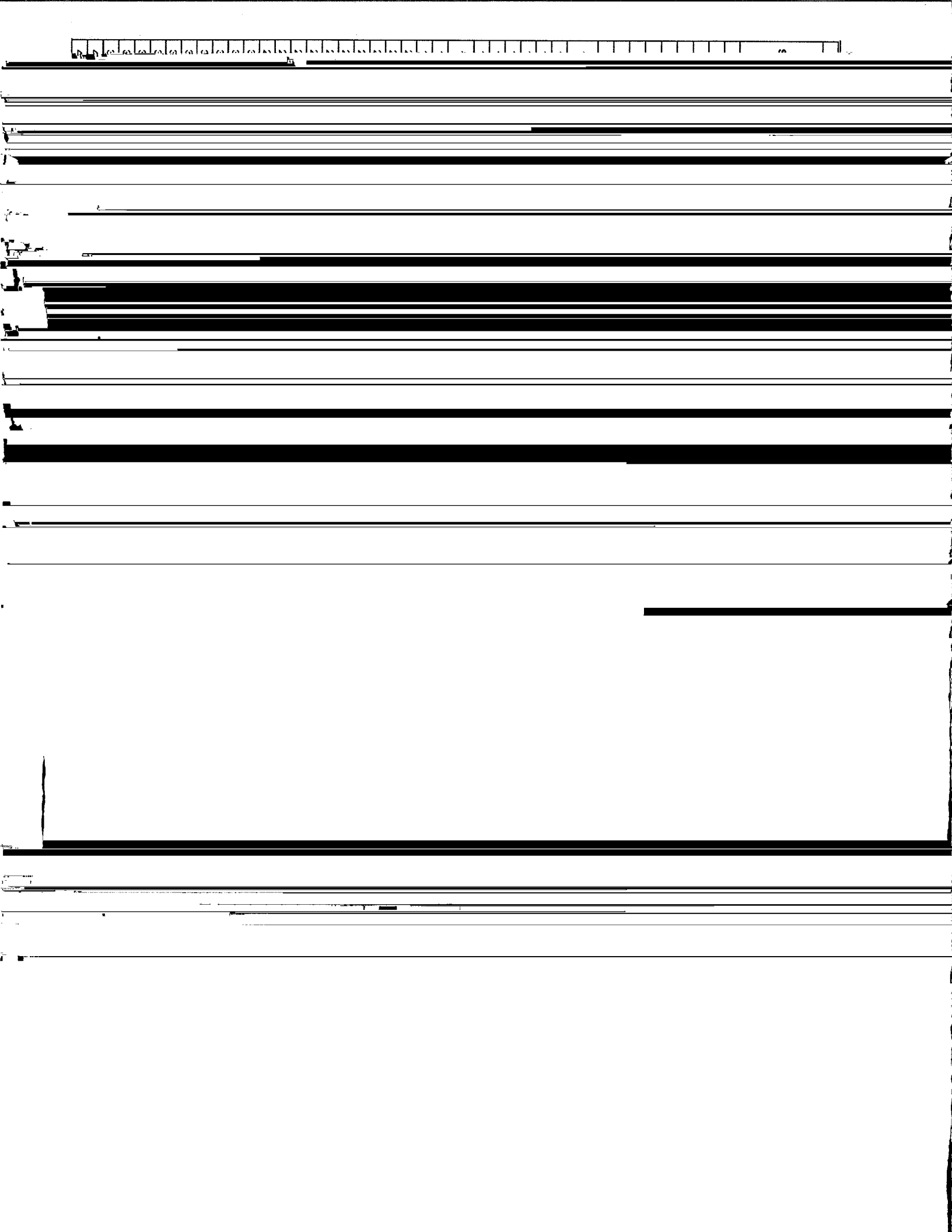


Table 4

Nigeria Guinea Worm Eradication Program
Frequency and Percent of Outcome Conditions Resulting from Investigations of 526 Alleged Cases of Guinea Worm Disease in 2008

Condition	Frequency	%
Boil / ulcer / sore	156	30%
Rheumatism / arthritis	84	16%
Localized swelling	57	11%
Scar or wound	44	8%
False Allegation of GWD	29	6%
Varicose vein	28	5%
Skin Rash	26	5%
Lymphodema	15	3%
Onchocerciasis nodule	13	2%
Pain	11	2%
Itching	9	2%
Calcification	9	2%
Myasis	11	2%
History of GWD	3	1%
Other	31	6%
TOTAL	526	100%

were imported, and realize how much needs to be done to correct the deficiencies. We are also aware that during a number of years preceding the claimed interruption of transmission there were many periods of severe insecurity in Gambella Region because of conflict between the Agnuak people and "Ethiopian Highlanders" over land use, all of which interfered with program operations. Analysis of the line-listing of cases in 2008 shows that detection of several of the 9 uncontained cases in 3 villages of Gambella Region was badly delayed, leaving Ethiopia in danger of onward transmission, starting in March 2009. Awukoy village (39 cases overall) had 7 uncontained cases, on March 16 (4 days delay before detected), March 16 (31 days delay), March 21 (4 days), March 31 (15 days), April 3 (18 days), April 18 (2 days) and June 20 (15 days); Wankak village had 1 uncontained case on August 16, 2 days delay; and Tharpam village had 1 uncontained case (imported from Sudan) on August 30, 6 days delay. Knowing now that it did have uncontained cases on its territory in 2008, and knowing when and where those cases occurred, the challenge for the EDEP is to prove that it can detect, contain and explain whatever cases occur in Gambella or elsewhere in Ethiopia during 2009. Having had the benefit of last year's wake up call, Ethiopia can rise to that challenge. Its actions in 2009 will determine whether it does so, and whether 2008's embarrassment becomes a worse tragedy in 2009. The world is watching! The EDEP reported that it investigated "all" rumors in 2008, but presented no details, it offers a reward of 100 birr (~US$10) for reporting of a case in villages under

compared to 180 villages reporting indigenous cases in 2007. Household filter coverage improved from 70% to 75% of endemic villages with cloth filters in all households between 2007 and 2008, while coverage with pipe filters improved from 30% to 74% in the same period. As of March 11th, 117 cases had been reported so far in 2009, compared to 201 cases in January-March 2008. Of the 45 cases reported in January 35 were contained, 5 were not contained (3 of these were not detected within 24 hours), and 5 are still pending. Of the 50 cases reported during February, 30 are contained, 19 are pending containment, and 1 was uncontained. So far, 74 of the cases reported in 2009, were detected in Fulfulso Junction of Central Gonja District in Northern Region, and another 20 cases were exported from Fulfulso to other locations in the Northern (19) and Brong Ahafo (1) Regions. Transmission appears to have been blocked by case,4-,.9

MEETINGS:

WHO has announced workshops to strengthen capacity of national Guinea Worm Eradication Programs in surveillance and data management. A workshop for French-speaking countries will be held in Ouagadougou, Burkina Faso during April 7-9 and one for English-speaking countries will be held in Addis Ababa, Ethiopia during April 22-23, 2009.

RECENT PUBLICATIONS

World Health Organization, 2009. Dracunculiasis: gearing up for eradication. Action Against Worms. Issue 13 (February).

Rinaldi, A., 2009. Free, at last! The progress of new disease eradication campaigns for Guinea worm disease and polio, and the promise of tackling other diseases. EMBO Reports 10 (3): 15-21

"Ah! The fierce urgency of stopping transmission of Guinea worm disease in 2009!"

- An old Guinea worm warrior

Figure 6

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, NCZVED, 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