

**Memorandum**

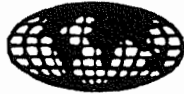
Date October 15, 1990

From

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

Subject GUINEA WORM WRAP-UP #29

To Addressees

**INTERNATIONAL ACTIVITIES**DUPONT, PRECISION FABRICS DONATE NYLON FABRIC FOR FILTERS

In a ceremony at the E.I. DuPont de Nemours & Co. in Wilmington, Delaware on October 11, the Chairman of Dupont, Mr. Edgar S. Woolard, Jr.,



and the Chairman of Precision Fabrics Group, Inc., Mr. Lanty L. Smith, joined former U.S. President Jimmy Carter in announcing the donation of more than 1,400,000 monofilament nylon filters to the Carter Center for use in the Guinea worm eradication campaign in Africa in 1990. The nylon filters were woven by the Precision Fabrics Group (PFG) from thread manufactured by DuPont, which also agreed to ship the cloth filters to Africa. At the ceremony, the Nigerian ambassador to the United States, H.E. Mr. Hamzat Ahmadu, extended greetings from the head of state and minister of health of Nigeria, and thanked the chairmen of Dupont and PFG and President Carter for the donation.

President Carter thanked the heads of DuPont and PFG and the assembled DuPont employees: "This generous gift from Dupont and Precision Fabrics Group will enable some of the world's neediest people to change their own lives. I applaud this new brand of global corporate citizenship." He later toured the PFG plant in Vinton, Virginia where the filter material was actually woven, and thanked the employees. One of the PFG workers told President Carter they were especially careful in weaving these filters because they knew that if they were not careful "a child in Ghana could get Guinea worm."

In a statement at the ceremony, DuPont chairman Woolard said, "We are committed to assisting President Carter in his efforts to rid the world of this painful and often crippling disease. We are glad our contribution will help make that possible." Mr. Smith said he and his company "are honored and excited to participate in this world community project... Our people are proud of the Company's using its know-how to produce these products and participate in the effort to eradicate Guinea worm disease." The first part of this annual shipment had already arrived in Ghana at the time of the official announcement. The chairman of Dupont said his company expects to provide additional annual shipments of filters over the next 5 years.

Countries that have conducted a national search and prepared a national plan of action will be given priority in the allocation of donated filter material in 1990.

GLOBAL CONSULTATION ENDORSES GUINEA WORM ERADICATION

The "New Delhi Statement," issued at the conclusion of the Global Consultation on Water and Sanitation for the 1990s ("Safe Water 2000"), which convened in the Indian capital on September 10-14, highlights the accomplishments and future challenge of the Guinea worm eradication campaign. It states:

"Dramatic reductions in the prevalence of dracunculiasis (Guinea worm) have been attributed to the provision of improved water supplies and hygiene behaviour in endemic areas. The target of total eradication by 1995 should be fully supported, and affected countries should accord it appropriate priority in investment programmes."

The inclusion of this supportive language in the final communique of the meeting, which was attended by over 600 participants from 102 countries, was the result of dedicated efforts by Dr. Robert L. Kaiser of CDC, Mr. Alexander Rotival of UNDP, Dr. Walter Kreisel of WHO, and Dr. Peter Bourne. In seeking to expand provision of water supplies in the 1990s, this conference stressed the philosophy of "some for all rather than more for some."

WORLD SUMMIT FOR CHILDREN INCLUDES GUINEA WORM ERADICATION TARGET

At the end of September, the heads of state or government of 71 nations met under the auspices of the United Nations in a historic "World Summit for Children," organized by UNICEF. Among the 21 goals for the 1990s endorsed by this unprecedented gathering of world leaders is to "eliminate Guinea worm disease." Endemic countries represented at the meeting included Central African Republic, Mali, Nigeria, Senegal, Sudan, and Uganda.



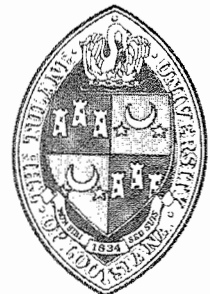
The explicit endorsements of Guinea worm eradication at the World Summit in New York City and the New Delhi Consultation fulfill two of the recommendations of the Third Regional Conference on Dracunculiasis in Africa that met at Yamoussoukro, Cote d'Ivoire in March 1990.

PEACE CORPS, TULANE LAUNCH NEW MASTERS PROGRAM



Peace Corps Director Paul Coverdell, and Neal Vanselow, the Chancellor of Tulane University Medical Center, signed an agreement at a ceremony in New Orleans, Louisiana on August 14 to begin collaborative effort to help solve major world health problems such as Guinea worm.

Under the new Masters Internationalist Program, students who have been accepted by both institutions will first spend a year taking master's degree courses on campus at Tulane



University's School of Public Health and Tropical Medicine, then be assigned for two years of volunteer service in Africa with the U.S. Peace Corps. Upon completion of the three years and writing a final paper on their Peace Corps experience, they will receive the masters degree in public health. Participation in the Guinea worm eradication effort in Africa is a specific opportunity of the special program. For more information, contact: Ms. Kristin Nicholson, Project Coordinator, Tulane University School of Public Health and Tropical Medicine, 1430 Tulane Avenue, New Orleans, Louisiana 70112 U.S.A. This program is open only to United States citizens.

WHO COLLABORATING CENTER AT CDC RENEWED, RENAMED

The World Health Organization recently redesignated the WHO Collaborating Center at the Centers for Disease Control in Atlanta, Georgia, U.S.A., for four years. At the same time, the unit, which was first designated the WHO Collaborating Center for Research, Training, and Control of Dracunculiasis in 1984, was renamed the "WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis." The decision to change the name of the Collaborating Center was made following a meeting at WHO headquarters on July 12, 1990 at which it was concluded that "eradication" was the appropriate term for the anti-dracunculiasis campaign, rather than "control" or "elimination."

NATIONAL ACTIVITIES



PAKISTAN: GUINEA WORM ERADICATION NEAR

GLOBAL 2000 At the end of September 1990, which concludes most of the main transmission season for dracunculiasis in Pakistan, a cumulative total of 147 cases had been reported for the entire country, in 54 villages, versus 511 cases in 139 villages at the same time last year. Thus, the decline in cases in Pakistan in 1990 from the total of 534 cases in 1989 will be more than 70%, compared to a decline of 57.6% from 1988 to 1989, and a decline of 53.8% from 1987 to 1988.



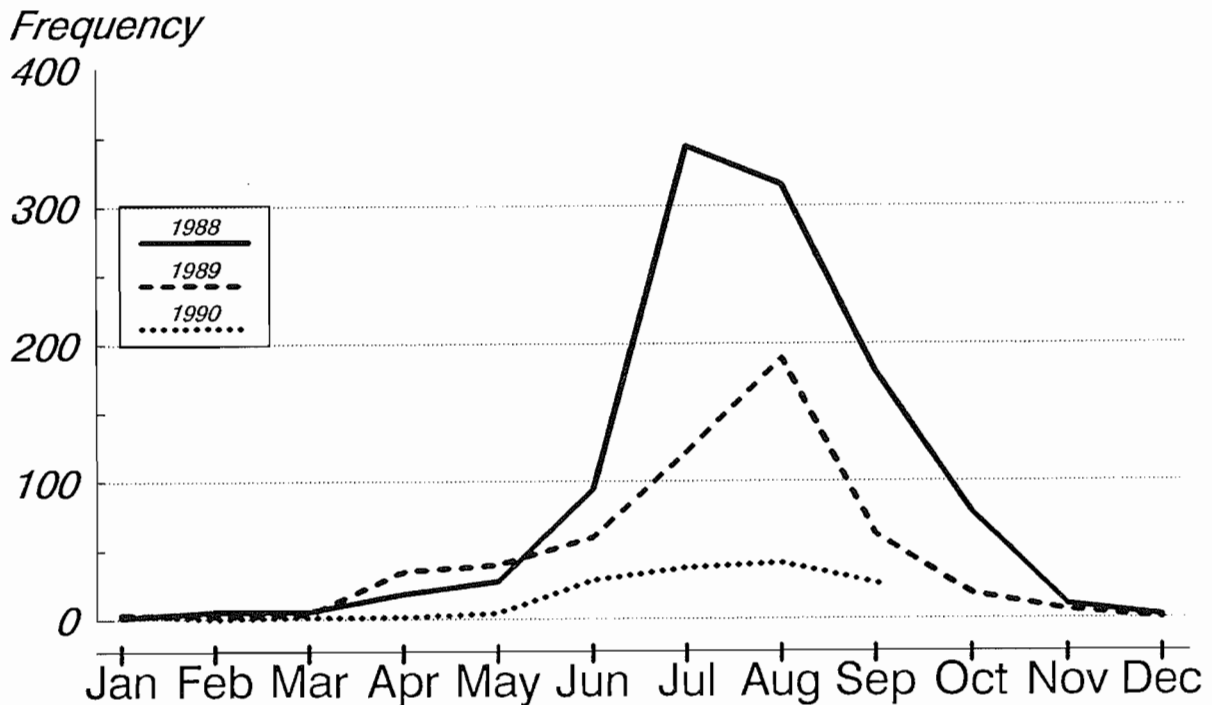
As a result of the new "case containment" strategy introduced early in 1990, it is possible that no more indigenous cases will occur in Pakistan next year, thus meeting the goal established when the program began in 1987: eradication by 1990. This program is conducted by the National Institute of Health of Pakistan, in collaboration with Global 2000, with funding by the Bank of Credit and Commerce International Foundation and technical support by the Centers for Disease Control.

Under the case conatainment strategy, specific goals were set for health workers to detect each new case of Guinea worm as soon as possible, and then to: 1) apply topical antiseptics and occlusive bandages to reduce opportunities for contamination of drinking water sources; 2) instruct the patient about dracunculiasis and why he or she must not enter a drinking water source; 3) reinforce the importance of filtering drinking water to

village members and distribute cloth filters to each household if they did not have them already, with instructions for their proper use; and 4) ensure treatment of local water source(s) with Abate. According to one of the explicit performance standards used to monitor implementation of the new strategy, control measures were begun within 24 hours of emergence of the worm in over 86% of the cases up to the end of August.

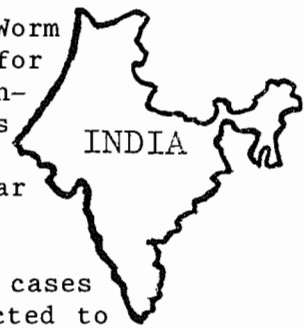
Guinea Worm Eradication Program, Pakistan

Cases by month, 1988 - 1990



INDIA BEGINS MONTHLY SEARCHES

Sometime after March this year, the Indian Guinea Worm Eradication Program began conducting monthly searches for cases in endemic areas. Twice yearly searches were conducted since 1983 until last year, when three searches were conducted. The monthly searches are facilitated by the 10 epidemiologic teams that were deployed a year ago, with support from WHO.



Results now available show a provisional total of 3645 cases of Guinea worm in India so far this year, which is expected to be at least 90% of the final figure for 1990 (7881 cases were reported in 1989). About 2400 of this year's cases are from Rajasthan. India now expects to eradicate Guinea worm by the end of 1991. The eradication effort in parts of Rajasthan are receiving extensive support from UNICEF and the Swedish International Development Agency (SIDA).

CAMEROON: CASES DECLINE

Provisional data from Cameroon show that as of the end of August, approximately 295 cases of Guinea worm were reported for 1990, compared to a total of 871 cases in all of 1989. However, the entire endemic area of Cameroon had not yet been searched in 1990. The main transmission season here is May to September. Of the country's 13 known endemic villages, three villages which had a total of 51 cases among them last year, reported no cases in 1990. Three other villages reported only one case each in 1990. The most highly endemic village in Cameroon, Sanda Wadjiri (population 1156), had 493 cases in 1989, but had not yet been completely surveyed this year. However, two new wells were placed in this village, in addition to treatment of unsafe sources with Abate starting in July, and distribution of 160 cloth filters. Several agencies (e.g., UNICEF, CARE, OCEAC) have agreed to assist Cameroon in applying even more intensive control measures in all remaining endemic villages during the 1991 transmission season (see Guinea Worm Wrap-Up #28). A complete search of all villages in the endemic area will be conducted this month. This year, the program was assisted by a consultant from Tulane University, Dr. George Greer, funded by the Vector Biology and Control Project/USAID. A quantity of Abate was provided by Prof. C. Ripert of the University of Bordeaux.

GHANA: REACHING OUT TO AFFECTED VILLAGES

On Monday, September 17, Ghana received the first 15,000 square yards of the monofilament nylon cloth donated by Dupont and Precision Fabrics Group. Even before this very welcome infusion of new resources, the Ghana Guinea Worm Eradication Program had distributed over 60,000 filters (cotton "gray baft") and some 20,000 copies of a Teachers Manual for Guinea worm eradication. The inclusion of a Guinea worm eradication theme in this year's Health Week celebrations in Volta Region stimulated demand for another 2000 filters in that region, which has the second highest number of cases in Ghana. With a target date of end of 1993 for achieving eradication, this program, which is mainly assisted by Global 2000 and the USAID mission, is attempting to provide at least one intervention in as many of the 6500 endemic villages as possible by early next year. All 10 regions now have approved regional plans of action. A total of 35 million cedis (about \$110,000) was allocated to the regions for training and program operations in August. A training session on Guinea worm was held for new Peace Corps Volunteers at Cape Coast, in August.

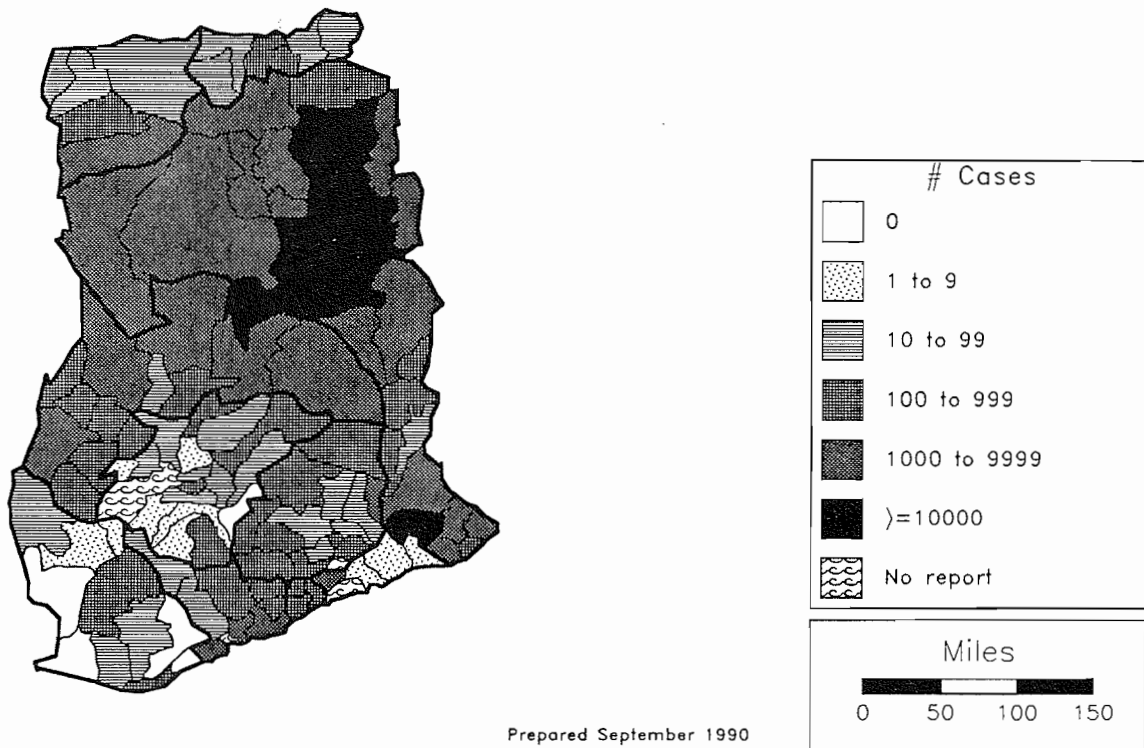
Ghana has also completed a region-by-region inventory of rural water supply projects for use in planning new interventions. In July, the program began to discuss cooperation with a representative of The World Bank/UNDP regional water and sanitation group, on a large rural water supply project now being prepared. The United Nations Development Fund for Women (UNIFEM) is underwriting the major costs of 20 hand-dug wells in endemic villages of the Central Region, in collaboration with the 31st December Women's Movement.

A map depicting the number of Guinea worm disease cases enumerated by district during the 1989 national search is shown on the next page. A system

of monthly surveillance reports is being instituted in the known endemic villages, from which a national count of 1990 cases will be obtained in December.

GHANA

NUMBER OF CASES OF GUINEA WORM DISEASE BY DISTRICT, 1989



NIGERIA: INTERVENTIONS INCREASING

As Nigeria prepares to visit all 6000+ known endemic villages at the end of 1990, the Federal Ministry of Health has asked that Primary Health Care teams accompany the Guinea worm enumerators, in order to provide immediate treatment for patients suffering from the disease. The program's goal is to provide health education about Guinea worm to every known endemic village this year. Meanwhile, each state has or is selecting two Local Government Areas where cloth filters will be distributed to endemic villages. Nigeria will receive its first shipment of donated monofilament filter material before the end of this year. The Health Education subcommittee of the National Task Force is considering which health education materials to recommend for use in the country.



The government's Directorate of Food, Roads, and Rural Infrastructure (DFRRI) is expected to complete provision of borehole wells to most or all of the 47 endemic villages identified in Gongola State by the end of 1990. UNICEF/Nigeria will extend its rural water supply assistance to Ondo, Oyo, Kaduna, and Bauchi States in 1991-1995. UNICEF will phase out its current rural water supply efforts in Anambra, Imo, and Kwara, but follow up with a special emphasis on Guinea worm eradication in those states during the same five-year period. Earlier this year, the Japanese International Cooperation Agency (JICA) announced a grant of \$8 million for a rural water supply project aimed at Guinea worm endemic villages in Niger State. More recently, the European Economic Community (EEC) and the Canadian University Services Organization (CUSO) have agreed to help fund rural water supply projects for some endemic villages in Kwara and Ondo States, respectively.

On September 4, Dr. Donald Hopkins, Global 2000 Senior Consultant, discussed Guinea worm eradication in an hour-long interactive video program as a part of the United States Information Services (USIS) WORLDNET Dialogue program. The audience for the video dialogue, broadcasted from USIS studios in Washington, included health specialists, journalists, and program personnel in Lagos, Ibadan, and Kaduna. In July, Dr. Hopkins and Dr. Adetokunbo Lucas of the Carnegie Corporation of New York participated in a similar USIS dialogue on Guinea worm eradication with health workers and journalists in Accra, Ghana.

MEETINGS

ROUNDTABLE AT ICOPA VII

Under the co-chairmanship of Dr. Philippe Ranque of WHO and Dr. Donald Hopkins of Global 2000, a lively roundtable discussion on Guinea worm and the eradication campaign was held during the VIIth meeting of the International Congress of Parasitology in Paris on August 23. Other members of the scientific panel were Drs. J.P. Chippaux of OCEAC, Prof. O.O. Kale of the University of Ibadan, and Dr. H. Spencer of the Centers for Disease Control. Other participants included Dr. Andrew Davis, Herbert Gilles, and Ralph Muller of Britain, Drs. Eka Braide and Lola Sadiq of Nigeria, and Dr. Gholan Sahba of Iran.

SYMPOSIUM SCHEDULED FOR AMERICAN TROPICAL MEDICINE MEETING

A symposium on Guinea worm eradication is scheduled to be held from 9:30 a.m. to noon on November 7, at the annual meeting of the American Society of Tropical Medicine and Hygiene in New Orleans, Louisiana. The symposium will include presentations on eradication programs in Ghana, India, Mali (Peace Corps), Nigeria, and Pakistan. Support for this symposium is provided by Global 2000, Vector Biology and Control/AID, CDC, UNICEF, and Peace Corps. The XIVth Interagency Guinea Worm Coordinating Meeting will be held later the same day in New Orleans.

WHO ANNOUNCES MEETING OF NATIONAL PROGRAM COORDINATORS



In a notice to WHO Country Representatives in September, the Regional Office for Africa of the World Health Organization (WHO/AFRO) has proposed that national coordinators of the Guinea worm eradication efforts in 19 African countries meet in Brazzaville, Congo, on 18-22 March 1991. This meeting at the African Regional Office of WHO is in response to the recommendation for such a meeting that was made at the Third African Regional Conference on Dracunculiasis in Yamoussoukro, Cote d'Ivoire in March 1990. The main purposes of the proposed meeting will be to assess the current status of eradication programs, exchange information, and discuss successful health education efforts for Guinea worm eradication. Each participating national program coordinator will be expected to prepare in advance a written status report of their country's eradication program, including the national search.

NINE-POINT ACTION PLAN FOR 1991

In order to eradicate dracunculiasis by the end of 1995, the following actions are needed in 1991:

1. The Forty-fourth World Health Assembly should adopt a resolution that endorses unequivocally the goal of eradicating dracunculiasis by 1995. This would be in keeping with the resolution of the African Regional Committee's resolution adopted at Brazzaville in September 1988 (AFR/RC38/R13). The new resolution should also authorize WHO to begin the process of certifying elimination of the disease from formerly endemic countries.
2. Those endemic countries that have not yet done so need to complete nationwide searches to determine the full extent of Guinea worm, and develop national plans of action as fast as possible. UNICEF's assistance will be needed in funding and conducting these national searches, as well as its support for some interventions in follow up to these national searches.
3. WHO should begin immediately the process of certification of elimination of dracunculiasis from certain formerly endemic countries, based on principles described in the Provisional Document that resulted from the informal consultation held on this subject at WHO headquarters in Geneva in February 1990.
4. Endemic countries need to extend appropriate health education, cloth filters, treatment of cases, and in certain circumstances treatment of local drinking water sources with temephos (Abate), to all the known endemic villages, as quickly as possible.
5. Endemic countries need to establish policies giving appropriate priority for provision of safe sources of drinking water to villages where dracunculiasis is endemic. The documented presence of dracunculiasis may be used to help solicit addi-

tional external assistance for the rural water supply sector, if necessary.

6. National Guinea worm eradication programs need to establish an intersectoral steering committee, a national task force, or some similar mechanism to help disseminate information and coordinate relevant actions of all agencies and institutions involved in the eradication effort.
7. Appropriate bilateral, multilateral, and non-governmental international assistance agencies need to quickly help bring the resources of the rural water supply sector to bear effectively on the problem of dracunculiasis in endemic countries.
8. International agencies, including WHO, need to help mobilize the remaining resources needed for this program, such that availability of appropriate resources is not a constraint for populations that are working to rid themselves of this infection.
9. Appropriate operational research should be supported to facilitate this eradication effort.

Reported Cases of Dracunculiasis, By Year, 1985 - 1990

Country	1985	1986	1987	1988	1989	1990*
Benin	...	...	400	33962	7172	...
Burkina Faso	458	2558	1957	1266	5122	...
Cameroon	168	86	...	752+	871+	295+
Central African Republic	31	-	1322	...	...	...
Chad	9	314	...	...	...	...
Cote d'Ivoire	1889	1177	1272	1370	1555	...
Ethiopia	1467	3385	2302	751	...	...
Gambia	-	-	-	...	...	...
Ghana	4501	4717	18398	71767	179556+	3613+
Guinea	-	-	-	...	1	...
India	30950 +	23070 +	17031 +	12023 +	7881 +	3645 +
Kenya	...	...	...	...	5+	...
Mali	4072	5640	435	564	1111	...
Mauritania	1291	...	227	608	447	...
Niger	1373	...	699	...	288	...
Nigeria	5234	2821	216484	653492 +	640008 +	...
Pakistan	...	...	2400	1110 +	534 +	147 +
Senegal	62	128	132	138	...	...
Sudan	...	822	399	542	...	...
Togo	1456	1325	...	178	2749	...
Uganda	4070	...	...	1960	1309	...

From passive reporting and/or area-limited searches unless otherwise indicated.

+ National survey.

... No data available.

- Zero cases reported.

*Provisional



RECENT PUBLICATIONS

Brandt FH, Eberhard ML, 1990. Distribution, behavior, and course of patency of Dracunculus insignis in experimentally infected ferrets. J Parasitol, 76(4):515-518.

Brandt FH, Eberhard ML, 1990. Dracunculus insignis in ferrets: comparison of inoculation routes. J Parasitol, 76(1):93-95.

Brieger WR, Ramakrishna J, Adeniyi JD, Sridhar MKC, 1990. Monitoring use of monofilament filters for Guinea worm control in a rural Nigerian community. Int'l Q Community Hlth Educ, 11:5-18.

Imtiaz R, Hopkins DR, Ruiz-Tiben E, 1990. Permanent disability from dracunculiasis (letter). Lancet, 2:630.

Ricucci AM, 1990. Una malattia del sottosviluppo. Il Mondodomani, May:34-36.

Sharma SK, Sehgal S, Rahman SJ, Kumar A, Wanare NS, Belambe AR, 1989. Involvement of Mesocyclops leukarti (claus) in the transmission of guinea-worm infection in Thane Dist. Maharashtra. J Commun Dis, 21:365-367.

Steering Committee for Cooperative Action, 1990. Report on IDWSSD impact on dracunculiasis, 16 pp.

[This document was prepared on behalf of the Steering Committee for Cooperative Action for the International Drinking Water Supply and Sanitation Decade by Donald R. Hopkins of the Carter Center. A summary of this paper will be incorporated into the Decade Assessment Report to the U.N. General Assembly in November 1990. Copies of the document are available from the CWS Unit, World Health Organization, 1211 Geneva 27, Switzerland.]

Tamakloe E, 1990. Guinea-Worm eradication programme: A subregion on the warpath. Mediconsult West Africa, June:8-13.

Vergheze T, 1990. Guinea worm - the fiery serpent. World Health, September-October:20-22.

WHO, 1990. Dracunculiasis: Third Regional Conference on Dracunculiasis in Africa. Wkly Epidemiol Rec, 65:245-247.

WHO, 1990. Dracunculiasis - Ghana. Wkly Epidemiol Rec, 65:267-269.

WHO, 1990. Dracunculiasis - Pakistan. Wkly Epidemiol Rec, 65:307-309.



WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis, Centers for Disease Control, Atlanta, GA

CURRENT STATUS OF ACTIVE SEARCHES (September 30, 1990)

- Benin Started. 7172 cases found in Zou Province; search now underway in 3 southern provinces, to be completed by end of 1990.
- Burkina Faso UNICEF approved \$96,000 funding. Search scheduled to begin in October.
- Cameroon 1989 SEARCH COMPLETED. 1990 active surveillance underway.
- C.A.R. Search scheduled for October 1990.
- Chad In June 1990, UNICEF consultant assisted the Ministry of Health with preparation of a plan for a national search.
- Cote d'Ivoire UNICEF-funded search in rural health sector of Bondoukou completed in February. Search of other rural health sectors currently underway.
- Ethiopia UNICEF has approved \$52,000 for search.
- Ghana 1989 NATIONAL SEARCH COMPLETED. 1990 assessment due in December.
- India 1990 SEARCHES COMPLETED.
- Kenya Follow up to questionnaire survey being organized.
- Mali Plan for national search developed in July. Search is scheduled to be conducted this fall. UNICEF funding pending.
- Mauritania 1990 search scheduled in target districts, with UNICEF assistance this Fall.
- Niger Proposal for funding of national search prepared. Needs to be submitted to UNICEF.
- Nigeria 1989 NATIONAL SEARCH COMPLETED. 1990 search late this year.
- Pakistan 1990 ASSESSMENT COMPLETED. Village-based active surveillance and containment of cases underway.
- Senegal A consultation is planned during 1990 to develop a plan for the assessment of dracunculiasis.
- Sudan The government is committed to conduct a search. Global 2000 and UNICEF will assist with consultation.
- Togo Search scheduled for late this year.
- Uganda Awaiting Global 2000 consultant this year.