GUINEAWORM ERADICATION PROGRAMME

XII TASK FORCE MEETING

15th and 16th January 1990
DELHI

REPORT

AND

RECOMMENDATIONS

NATIONAL INSTITUTE OF COMMUNICABLE DISEASES
(Division of Helminthology)
22, SHAM NATH MARG, DELHI-110 054
(Directorate General of Health Services
Ministry of Health, Govt. of India)

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CONTENTS

A. Proceedings of 12th Task Force Meeting on Guineaworm Eradication Programme (GWEP) of India held at National Institute of Communicable Diseases (NICD), Delhi on 15th-16th January, 1990

Besides concurrent and independent evaluation, the GWEP is annually reviewed in depth by a "Task Force Group" under the chairmanship of the Director General of Health Services (DGHS), Govt. of India. The Task Force group on GWEP is constituted by (a) Director and Deputy Director (Helminthology) of NICD, Delhi as convenor & Co-ordinator of meeting (b) Directors of Health Services, State GWEP Officers, Chief Engineers (PHED Rural Water Supply) of guineaworm endemic states and Director/Adviser of National Drinking Water Mission, as members, and (c) invited experts from WHO, UNICEF, SWACH, Central Health Education Bureau and various other organizations.

The 12th Task Force Group on GWEP (Appendix-III) met at National Institute of Communicable Diseases, Delhi, the nodal agency for national GWEP, on 15th and 16th January, 1990. In the inaugural session on 15th January, 1990 morning, while welcoming the chairman, members and invitees, Dr.M.V.V.L.Narasimham, then Director, NICD, Delhi, spelled out the following objectives of this 12th Task Force Meeting on GWEP:-

I. In-depth review of:
   1. Epidemiological situation of Guineaworm disease in the country as on 31st December, 1989/1st January 1990.
   2. The implementation & performance of various operational components of GWEP during 1989.
   3. Achievements of GWEP from 1984 till 1989.

II. Recommendations for an efficient & effective planning, implementation/supervision and evaluation of GWEP to achieve zero guineaworm incidence in the country by 1991, and

III. Prepare the plan of action on GWEP for 1990-91.

In his address, Mr. J. Vasudevan, Joint Secretary to Govt. of India, Union Ministry of Health & Family Welfare, Delhi, lauded the excellent inter-sectoral co-ordination established by NICD between the health & rural water supply engineering departments, and felt that is the key to the success of GWEP. While assuring of the continued resource inputs to GWEP, he requested that guineaworm endemic states should provide due priority to GWEP in terms of sufficient allocation and full utilization of funds under this programme.

Mr. Inamul Haq, Adviser to National Drinking Water Mission emphasized the commitment of Ministry of Agriculture, Govt. of India to provide adequate safe drinking water supplies to every guineaworm affected village, hamlet and habitation, on priority. He informed that even the norms are being relaxed to meet the complete requirement of safe water supplies/sources to guineaworm endemic areas.

Dr. P.Micovic, W.H.O. Co-ordinator and Representative for India expressed his satisfaction over the good management of GWEP in India and thus hoped that this programme will achieve its objective in the stipulated period and could serve as a model for other guineaworm endemic countries. He expressed happiness over the declining guineaworm trend in India by adopting an inter-sectoral approach and actively involving WHO & UNICEF in assisting GWEP. While appreciating the efficient deployment of ten Epidemiological Surveillance Teams under GWEP, by NICD, in endemic states, he felt that these teams will be required to be continued to function even after achieving zero-guineaworm incidence in the country for maintaining active guineaworm surveillance for a defined period.

In his inaugural address, Dr. A.K. Mukherjee, Director General of Health Services and Chairman of Task Force on GWEP had recalled his impressions of attending the inter-national meeting on guineaworm eradication in April, 1989 in Pakistan, wherein India's success in guineaworm eradication was widely acclaimed by other countries. The valuable expertise generated by NICD in this field has been usefully exploited for guineaworm eradication in their countries. He congratulated the Rural Water Supply Enginners for their support to GWEP and mentioned that hand-pumps designed by them are widely appreciated all over the world. While expressing his pleasure & optimism that India would be much ahead of other countries in achieving zero guineaworm incidence by 1991, he, however, coutioned that there are still problem areas like Udaipur, Dungarpur, Jhalawar districts in Rajasthan, Rajgarh district in Madhya Pradesh and in other states where concerted efforts would be required on priority.

The inaugural session of this meeting was concluded with a vote of thanks proposed by Dr. Ashok Kumar, Deputy Director (Helminthology), NICD, Delhi.

Further proceedings of the meeting were held as per the scheduled programme (Appendix-I) in seven sessions during which the Directors of Health Services/GWEP Officers and Chief Engineers (RWS) of all the endemic states presented the detailed guineaworm status reports of their respective states, as per the guidelines (Appendix-II) provided to them. The compiled information on guineaworm situation and GWEP implementation during 1989 as well as future plan of action under GWEP in the country and endemic states is detailed subsequently in this report.

The concluding session of this meeting on 16th January, 1990 evening was chaired by Dr. N.K. Shah, Director Prevention & Disease Control, WHO (SEARO), Delhi. The first part of this session was devoted to "Research needs in GWEP" and the second part discussed the "Recommendations of the 12th Task Force Group on GWEP". The special invitees viz. Prof. I.C. Tiwari, Prof. Nagalotimath and Prof. V.K. Kochar suggested some Operational, clinico-pathological & Behavioural Research needs in GWEP, respectively. They were requested to kindly send write ups on these aspects in order to incorporate the need based research within GWEP. The house resolved that the recommendations of 11th Task Force Group on GWEP, January, 1989 (Appendix-IV) were very exhaustive and still hold good for their continued implementation during 1990-91. However, the additional recommendations of this meeting were recorded.

While concluding, Dr. N.K. Shah hoped that all the guineaworm endemic states would have drawn their plan of action for 1990-91 and would make all sincere efforts to implement them efficiently & effectively to achieve the national objective of zero guineaworm incidence by 1991. He expressed happiness over the performance & achievements of GWEP. Mr. S.M. Kaul proposed vote of thanks.

B. CURRENT GUINEAWORM SITUATION IN INDIA

The current Guineaworm disease situation in the country on the basis of the three active guineaworm case searches during 1989 is summarised in the tables 1(a & b) below.

Table 1a

State-wise Number of GW Affected Districts

total districts in the country : 412

GUINEAWORM ENDEMIC STATES	AFFECTED AS ON 1.1.89	NEW/RE AFFECTED DISTRICTS DURING 1989	DELETED IN 1989	AFFECTED AS ON 1.1.90
Andhra Pradesh	6	Nil	Nil	6
Gujarat	8	1	1	8
Karnataka	7	Nil	Nil	7
Madhya Pradesh	14	2	Nil	16
Maharashtra	13	Nil	3	10
Rajasthan	17	Nil	1	16
TOTAL	65	3	5	63*

* Only 46 districts reported active GW cases during 1989, others were under surveillance.

During 1989, only 5 districts were deleted after 3 years of surveillance during which no guineaworm case was found. These districts include Junagarh in Gujarat; Nasik, Pune and Ahmednagar in Maharashtra; and Bundi in Rajasthan. The state of Tamil Nadu is free from GW disease from 1984-85.

Table 1b

State-wise GW Sisease Situation

total in Country PHCs : 14,609; villages : 557,137; population : 685,185 (1981 Census)

S.No	GUINEAWORM ENDEMIC STATES	AFFECTED AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AFFECTED AS ON 1.1.1990			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Andhra Pradesh	33	241	536363	407	Nil	9	20285	17	7	101	208532	26	150	348125	224
2.	Gujarat	35	81	347468	27	3	3	5852	3	8	32	35235	30	52	319085	6
3.	Karnataka	41	356	690426	1909	Nil	22	34566	129	7	107	156017	34	271	568975	896
4.	Madhya Pradesh	70	867	916251	2565	--- correct information not provided ---							61	825	920589	1408
5.	Maharashtra	113	475	362528	1496	8	40	23708	106	32	226	236147	89	289	152775	475
6.	Rajasthan	83	2258	1864546	5619	4	195	134170	NA	11	444	360845	76	2009	1637871	4872
	TOTAL	375	4278	4717794	12023	15	269	218581	*255	65	910	996776	316	3596	3947420	7881
						-------- excluding Madhya Pradesh ------										

* excluding Madhya Pradesh & Rajasthan, which did not provide information

It may be observed that the number of guineaworm cases have reduced by 34% from 12023 in 1988 to 7881 in 1989, the highest percentage decline being in Gujarat (78%) and Maharashtra (68%).

The State of Rajasthan contributed 62% of total GW cases in India (1989) followed by Madhya Pradesh (18%), Karnataka (11%), Maharashtra (6%), Andhra Pradesh (3%) and Gujarat (0.1%).

The number of affected villages have reduced by 16% from 4278 as on 1.1.1989 to 3596 as on 1.1.1990. Likewise the population at risk reduced from 4.7 million in the beginning of 1989 to 3.9 million in the end of 1989. During 1989, 269 (excluding Madhya Pradesh) villages got newly affected or reinfected from guineaworm disease, of which 195 (55%) were in Rajasthan. On 1.1.1990, Rajasthan accounts for 56% of the guineaworm affected villages in India.

The sex distribution of guineaworm cases showed almost equal distribution of cases amongst males and females, while majority (56%) of GW cases were adult patients.

Drinking Water Supply Situation

Table 2

Drinking Water Supply Situation in GW Affected Areas

S.No	GUINEAWORM ENDEMIC STATES	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Andhra Pradesh	150	1	758	361	35	Nil	1154	229	65	Nil	Nil	294
2.	Gujarat	52	Nil	256	180	23	Nil	459	6	729	3	35	873
3.	Karnataka	183*	Nil	486	442	35	Nil	963	159	5	25	Nil	192
4.	Madhya Pradesh	825	2	4295	6172	64	90	10621	1009	982	216	980	3413
5.	Maharashtra	289	81	555	1274	119	Nil	1948	954	602	Nil	87	1643
6.	Rajasthan	2009	No information	5188	6119	283	Nil	11590	1393	975	Nil	Nil	2368
	TOTAL	3596	84**	11538	14548	559	90	26735	3750	3358	244	1102	8783

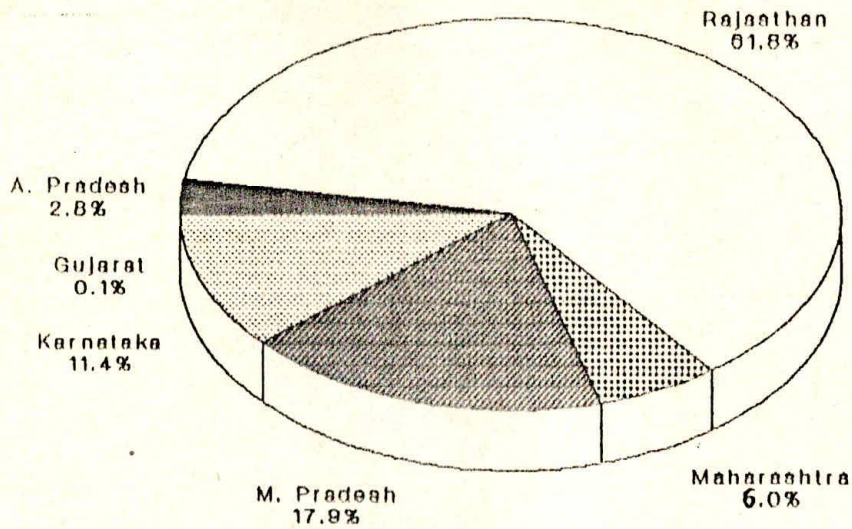
* Relates to only 183 of the total 271 GW affected villages in Karnataka
** Provisional

National on Drinking Water Mission, Ministry of Agriculture, Delhi has assured not only to provide safe drinking water in all those villages which do not have any, but also to provide water sources in every hamlet/habitation of villages affected with Guineaworm disease.

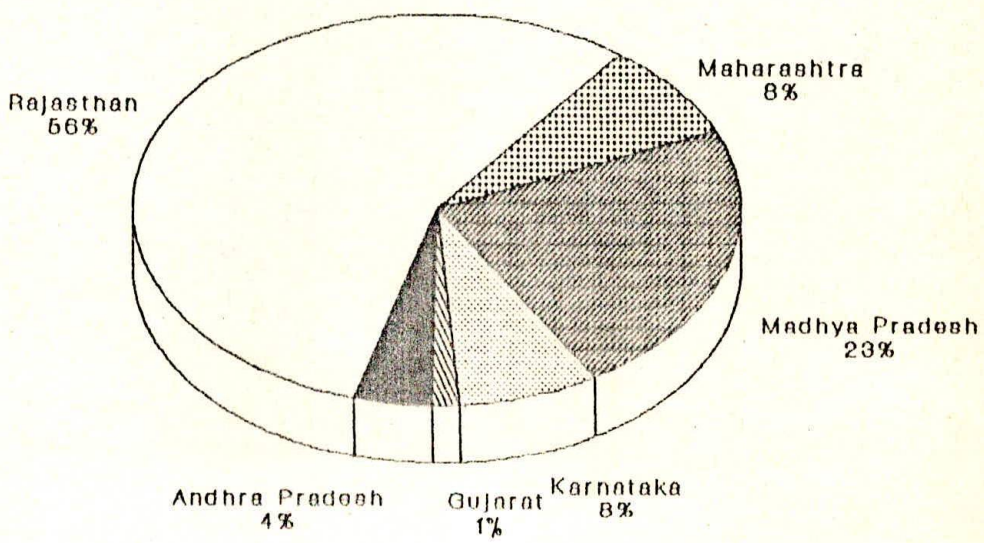
The state-wise information regarding GW situational case management, drinking water position, vector control, health education and trained manpower development under GWEP are summarised, in subsequent text.


GUINEAWORM
ENDEMICITY MAP OF INDIA
AS ON 1.1.90
JAMMU & KASHMIR
HIMACHAL PRADESH
PUNJAB
HARYANA
DELHI
UTTAR PRADESH
RAJASTHAN
SIKKIM
A.P.
ASSAM
NAGALAND
MEGHALAYA
MANIPUR
TRIPURA
MIZORAM
BIHAR
W.BENGAL
ORISSA
MADHYA PRADESH
GUJARAT
Kutch
MAHARASHTRA
ANDHRA PRADESH
GOA
KARNATAKA
TAMIL NADU
KERALA
LAKSHADWEEP ISLANDS
A & N ISLANDS
LEGEND
Districts with GW cases during 1989
Districts with no GW case but under surveillance for three years
Deleted Districts

State-wise Distribution of GW Cases in India during 1989



State-wise Distribution of GW affected Villages in India during 1989



C. STATE-WISE GUINEAWORM SITUATION

ANDHRA PRADESH

GW Situation

The state carried out 3 active guineaworm case search operations, in the months of April, June and December 1989. The GW situation in the State is given in Table 4.

Table - 4

District-wise GW Situation in the State

Total in State : Districts - 23; PHCs - 455; Villages - 27221; Population - 53549673

S.No	NAME OF THE AFFECTED DISTRICTS	AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AS ON 1.1.90			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Ananthpur	5	15	47440	9	Nil	2	2862	2	3	8	21364	2	9	28938	8
2.	Cuddapah	1	1	900	39	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	1	900	18
3.	Kurnool	14	161	359587	172	Nil	7	17432	15	1	72	148753	13	96	228266	190
4.	Mahboobnagar	9	52	78867	175	Nil	Nil	Nil	Nil	3	17	24332	6	35	54535	6
5.	Prakasam	1	1	2151	1	NA	NA	NA	NA	Nil	Nil	Nil	1	2	2351	Nil
6.	West Godavari	3	11	47418	11	Nil	Nil	Nil	Nil	Nil	4	14083	3	7	33335	2
	TOTAL	33	241	536363	407	Nil	9	20285	17	7	101	208532	26	150*	348125	224

* only 36 villages had active cases, others were under surveillance

At the end of the year, the number of GW affected villages have declined by 38% and the number of GW cases by 45%. Though none of the districts qualify for deletion, district Prakasam has only two affected villages while in Cuddapah district only one village is affected. However, the district of Kurnool, deserves close attention as a 10% increase in the number of guineaworm cases is observed , and also of the 9 newly affected villages detected in the State, 7 such villages were detected in this district alone.

Case Management

All the 224 guineaworm cases detected in 1989 were reported to be cured without developing any complications.

Drinking Water Supply

Of the 150 affected villages as on 1.1.1990, one village Pinnapuram in Panyam PHC of District Kurnool is without any safe drinking water source. There are 1154 total safe drinking water sources i.e. 80% of the required number of 1393.

Table - 5

Drinking Water Supply Situation in the State as on 1.1.90

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Anantpur	9	Nil	61	21	6	Nil	88	11	3	Nil	Nil	14
2.	Cuddapah	1	Nil	4	2	Nil	Nil	6	1	Nil	Nil	Nil	1
3.	Kurnool	96	1	386	242	25	Nil	653	170	46	Nil	Nil	216
4.	Mehboobnagar	35	Nil	121	64	1	Nil	186	44	1	Nil	Nil	45
5.	Prakasam	2	Nil	11	10	Nil	Nil	21	3	Nil	Nil	Nil	3
6.	West Godawari	7	Nil	175	22	3	Nil	200	Nil	15	Nil	Nil	15
	TOTAL	150	1	758	361	35	Nil	1154	229	65	Nil	Nil	294

Against a target of 300 unsafe sources for conversion, only 126 (42%) were converted during 1988-89.

Vector Control

Table - 6 Table - 6

Chemical Treatment of Unsafe Drinking Water Sources

S.No	NAME OF THE AFFECTED DISTRICTS	NUMBER OF UNSAFE WATER SOURCES TARGETTED	NUMBER OF UNSAFE WATER SOURCES TREATED WITH TEMEPHOS					AMOUNT OF TEMEPHOS IN LITRES	
			NEVER	1 - 2 TIMES	3 - 4 TIMES	5 - 6 TIMES	7 - 8 TIMES	CONSUMED DURING THE YEAR	BALANCE AT THE END OF THE YEAR
1.	Anantpur	11	Nil	Nil	Nil	Nil	11	55	14
2.	Cuddapah	1	Nil	Nil	Nil	Nil	1	34	11
3.	Kurnool	170	42	8	29	81	10	303	4
4.	Mehboobnagar	44	24	Nil	3	7	10	163	1
5.	Prakasham	3	Nil	Nil	2	1	Nil	7	13
6.	West Godawari	4	Nil	Nil	3	1	Nil	103	Nil
	TOTAL	233*	66	37	40	90	32	665	43

* All were step wells except in district West Godavari where four ponds were treated.

Only 15% unsafe water sources were treated with temephos 7-8 times, while 38% unsafe water sources were treated 5-6 times. The state regretted for the poor performance in temephos application due to shortage of temephos as only 600 litres of temephos was requisited. However, it may be noted that the state

has a balance of 43 litres at the end of the year which could have been reappropriated to Kurnool/Mahboobnagar districts, where the performance was poor.

Health Education

Table 7 Table 7

Health education material distributed and activities conducted in Guineaworm affected districts

S.No.	DISTRICTS	No.of group meeting	No. of film shows	No. of video casettes	No. of film slides shows	No. of recog. cards distri-buted	No. of posters distri-buted	No. of sticker distri-buted	Awareness Camps conducted
1.	Anantpur	52	Nil	1	Nil	50	44	Nil	Nil
2.	Cuddapah	7000	Nil	1	20	100	4000	200	25
3.	Kurnool	8909	36	1	60	300	2000	200	11
4.	Mehboobnagar	480	4	1	50	92	1100	270	12
5.	Prakasham	Nil	Nil	1	Nil	50	100	150	Nil
6.	W. Godawari	300	10	1	14	35	1400	80	30
	TOTAL	16741	50	6	144	627	8644	900	78

A total of 1765 villages were covered by Health Education Activities of which 1539 (87%) were in Mahahboobnagar district alone.

The guineaworm education day was celebrated in only 69 villages - 61 in Mehboobnagar district and 8 in West Godawari district, on 29.4.1989. A community procession was taken out to increase public awareness about the causation and prevention of the disease. Radio talks were also arranged from AIR and spots shown on Doordarshan telecast.

Health Infra-structure & Trained Manpower Development

The State has an officer of the rank of Deputy Director as the State GWEPO, who is assisted by a non medical Technical Officer for the implementation of the GWEP in the State. The Health infrastructure at the PHC level and their training status in the guineaworm eradication programme is given in the table 8 below.

Table 8

Health Manpower and GWEP Training Status of PHC level functionaries

S.No	NAME OF THE AFFECTED DISTRICTS	STAFF SANCTIONED			STAFF IN POSITION			TRAINED TILL PREVIOUS YEAR			TRAINED DURING THE YEAR			STAFF REMAINED UNTRAINED AT THE END OF THE YEAR
		MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	
1.	Ananthpur	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nil	Nil	Nil	NA
2.	Cuddapah	1	3	15	1	3	15	Nil	Nil	Nil	1	3	15	Nil
3.	Kurnool	74	60	230	73	55	211	Nil	Nil	Nil	48	Nil	Nil	25 MOs, 55HAs, 211MPWs
4.	M'boobnagar	6	21	82	5	20	78	Nil	Nil	Nil	3	18	70	2 MOs, 2HAs, 8MPWs
5.	Prakasam	NA	NA	NA	NA	NA	NA	NA	NA	NA	Nil	Nil	Nil	NA
6.	W. Godawari	2	9	25	2	9	25	Nil	Nil	Nil	2	9	25	Nil
	TOTAL	83	93	352	81	87	329	Nil	Nil	Nil	54	30	110	

NA - Information not available/provided

Training of PHC level Medical Officers and health workers in the districts of Ananthpur and Prakasam could not be undertaken as the district health officers of these districts were themselves not trained in the guineaworm eradication programme.

27 MOs, 57 HAs, 219 MPWs need to be trained in 1990 in Kurnool and Mehboobnagar districts, on priority, besides training staff in other districts.

GUJARAT

GW Situation

The state of Gujarat reported that 3 active guineaworm case searches were conducted, however, it was observed during the discussions that the case search operations were not planned in a requisite manner. A detailed house to house guineaworm case search was not undertaken in specific, rather health workers enquired about GW cases during their routine visits to villages for all diseases. Since the state claims to have achieved zero transmission, as all the GW cases detected were imported, the state was requested to conduct well planned and thorough GW active case search operations in the state for close surveillance. The detail of guineaworm situation is presented in the table below:

Table 9

GW Disease Situation in the State

Total in State : Districts - 19; PHCs - 251; Villages - 18275; Population - 33960905

S.No	NAME OF THE AFFECTED DISTRICTS	AFFECTED AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AFFECTED AS ON 1.1.1990			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Sabarkantha	12	47	71809	12	Nil	Nil	Nil	Nil	5	29	27604	7	18	44205	1
2.	Panchmahal	7	10	38966	8	Nil	Nil	Nil	Nil	2	2	3176	5	8	35790	1
3.	Valsad	3	8	25790	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	3	8	25790	Nil
4.	Banaskantha	2	3	68865	3	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2	3	68865	Nil
5.	Kutch	3	3	24706	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	3	3	24706	Nil
6.	Mehsana	4	6	92656	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	4	6	92656	Nil
7.	Kheda	3	3	23840	1	1	1	2619	1	Nil	Nil	Nil	4	4	23840	1
8.	Junagadh	1	1	836	Nil	Nil	Nil	Nil	Nil	1	1	836	Nil	Nil	Nil	Nil
9.	Jamnagar	Nil	Nil	Nil	Nil	2	2	3233	3	Nil	Nil	Nil	2	2	3233	3
	TOTAL	35	81	347468	27	3	3	5852	3	8	32	35235	30	52*	319085	6

* only 5 villages reported active GW cases, others were under surveillance.

The district of Junagarh is deleted from the list of affected districts, being free from guineaworm disease for the last three years.

During 1989, only 6 guineaworm cases have been detected as compared to 27 cases in 1988, all of whom were reported to be imported cases, 5 from Madhya Pradesh and one from Rajasthan. These cases were reported to have been investigated thoroughly.

These six cases were distributed in 5 villages one each in district Sabarkantha, Panchmahal and Kheda and in two newly affected villages of Jamnagar district.

Case Management

All the six guineaworm cases were cured without developing any complications.

Drinking Water supply

A joint survey was carried out by the Health Directorate and the PHED in January and November/December, 1989 to determine drinking water sources in the guineaworm affected villages. The drinking water situation in the guineaworm affected villages on 1.1.1990 is given in the table below:

Table 10

Drinking Water Supply Situation

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	KACHA WELLS	TANKS	VIRDA	TOTAL
1.	Sabarkantha	18	Nil	131	59	6	Nil	196	5	337	Nil	Nil	442
2.	Panchmahal	8	Nil	82	92	1	Nil	175	1	381	3	9	394
3.	Valsad	8	Nil	14	27	Nil	Nil	41	Nil	Nil	Nil	26	26
4.	Banaskantha	3	Nil	2	2	1	Nil	5	Nil	11	Nil	Nil	11
5.	Kutch	3	Nil	Nil	Nil	3	Nil	3	Nil	Nil	Nil	Nil	Nil
6.	Mehsana	6	Nil	Nil	Nil	6	Nil	6	Nil	Nil	Nil	Nil	Nil
7.	Kheda	4	Nil	Nil	Nil	3	Nil	3	Nil	Nil	Nil	Nil	Nil
8.	Jamnagar	2	Nil	27	Nil	2	Nil	29	Nil	Nil	Nil	Nil	Nil
	TOTAL	52	Nil	256	180	23	Nil	459	6	729	3	35	873

As per the norms of one safe drinking water source per 250 population, 1272 safe drinking water sources are required in the 52 currently guineaworm affected villages. However, only 459 (36%) safe drinking water sources are available including 23 piped water schemes in these villages.

Vector Control

During 1989, around 95% of unsafe water sources in the GW affected villages remained untreated with temephos, and the remaining 42 (5%) unsafe sources received temephos application only 3-4 times, from February to September, 1989. No indent for supply of temephos was made by Gujarat during 1988-1989, to the

Centre. The Temephos was borrowed from the Malaria Eradication Programme. The District wise application of Temephos is shown in table 11.

Table 11

Chemical Treatment of Unsafe Drinking Water Sources

S.No	NAME OF THE AFFECTED DISTRICTS	NUMBER OF UNSAFE WATER SOURCES RECORDED	NUMBER OF UNSAFE WATER SOURCES TREATED WITH TEMEPHOS					AMOUNT OF TEMEPHOS IN LITRES	
			NEVER	1 - 2 TIMES	3 - 4 TIMES	5 - 6 TIMES	7 - 8 TIMES	CONSUMED DURING THE YEAR	BALANCE AT THE END OF THE YEAR
1.	Sabarkantha	442	411	Nil	31	Nil	Nil	35	Nil
2.	Panchmahal	394	--- 394 ---		Nil	Nil	Nil	20	Nil
3.	Valsad	26		26				5	5
4.	Banaskantha	11	Nil	Nil	11	Nil	Nil	4	Nil
		873	--- 831 ---		42	Nil	Nil	64	5

Health Education

Of the two video cassettes received by the state from NICD, one was supplied to Sabarkantha and one retained at headquarters, for health education activities. Three slide sets supplied by the NICD were used by the state for training of various categories of persons in programme implementation. Training of NGO was organised by voluntary organization "Chetna". All primary health centres in the affected districts were targetted for health education during 1989, however details of health education material and activities were not provided.

Health Infrastructure & Trained Manpower Development

The State has appointed a senior officer of the rank of Joint Director of Health Services as the GW Programme Officer. The State has not provided information regarding health infrastructure existing in the state and their training status in GWEP as per the guidelines. However, five district health officers were trained in the guineaworm eradication programme during July and September, 1989 at NICD, Delhi. During a crash training programme organised by the states in September, 1989, only 7 mass media officers and other categories of health functionaries were trained by the state.

KARNATAKA

GW Situation

The district wise GW situation in Karnataka is given in table below.

Table 12

District-wise GW Situation in the State

Total in State : Districts - 19; PHCs - 268; Villages - 270284; Population - 37043451

S.No	NAME OF THE AFFECTED DISTRICTS	AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AS ON 1.1.90			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Belgaum	1	1	526	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	1	526	Nil
2.	Dharwad	4	8	26088	1	Nil	1	234	1	3	4	19739	1	5	6583	1
3.	Bijapur	8	35	104073	511	Nil	2	2405	2	3	8	12320	5	29	94158	205
4.	Gulbarga	17	234	459012	1255	Nil	17	29909	31	Nil	87	120658	17	164	368263	478
5.	Bidar	3	9	9770	23	Nil	Nil	578	3	Nil	Nil	Nil	3	9	10348	3
6.	Raichur	7	67	87337	117	Nil	2	1440	92	1	8	3300	6	61	85477	209
7.	Bellary	1	2	3620	1	Nil	Nil	Nil	Nil	Nil	Nil	Nil	1	2	3260	Nil
	TOTAL	41	356	690426	1909	Nil	22	34566	129	7	107	156017	34	271*	568975	896

* Correct information regarding villages reporting active GW cases was not provided

As compared to 1988, the number of affected villages were reduced by about 53% during 1989. The districts of Belgaum and Bellary did not record any cases while Dharwad and Bidar had only one and three cases, respectively. In Raichur district, the guineaworm cases increased by about 80% in 1989 as compared to 1988. The districts of Gulbarga and Bijapur remained problematic districts of the State, however they showed a decline of GW cases by 60% at the end of 1989. About 77% of the newly affected villages were from Gulbarga district in the state. No explanation for the rise in the number of cases in Raichur district was put forth.

Drinking Water Supply Situation

The drinking water situation in the GW affected villages in the State is given below.

Table 13

Drinking Water Supply Situation as on 1.1.90

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Belgaum		Nil	no information available									
2.	Dharwad	1	Nil	1	1	Nil	Nil	2	1	Nil	Nil	Nil	1
3.	Bijapur	28	Nil	106	84	11	Nil	201	25	2	6	Nil	33
4.	Gulbarga	150	Nil	365	348	23	Nil	736	129	3	19	Nil	151
5.	Bidar	1	Nil	3	1	Nil	Nil	4	2	Nil	Nil	Nil	2
6.	Raichur	3	Nil	11	8	1	Nil	20	2	Nil	Nil	Nil	2
7.	Bellary		Nil	no information available									
	TOTAL	183*	Nil	486	442	35	Nil	963	159	5	25	Nil	192

* Data pertains to only 183 of the 271 GW affected villages as on 1.1.90

The progress in the conversion of step wells is hampered, by their location in private holdings. Only 40 (35%) of the 114 targetted unsafe drinking water sources were converted. The PHED has now issued guidelines for conversion of only those step wells, which are the sources of infection, currently. The Government of Karnataka had already released Rs. 15 lakhs for conversion of 159 step wells into draw wells. The Chief Engineer opined that for open ponds, a design has to be provided to ensure cost effectiveness. The Engineer in Chief(PHED) also assured that his department was aware of the problem of brackishness and was taking steps to tackle it.

Vector Control

The vector control measures (by temephos) were very unsatisfactory during 1989, only five applications with Temephos were made in some of the unsafe water sources in district Gulbarga. In other GW affected districts the unsafe water sources were not treated with temephos.

Health Education

Health Education activities were carried out through distribution of handbills, posters and other mass media available in the district. The details of health education activities carried out in the State are given below.

Table 14

GW Health Education Activities Carried Out

S.No.	DISTRICTS	No.of group meeting	No. of film/ video shows	No. of posters distri-buted	No. of sticker distri-buted	No. of Plastic Cards distr-ibuted	No. of pampha-lets distri-buted	Orienta-tion Camps	Exhibi-tion
1.	Belgaum	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
2.	Dharwad	600	10	95	75	50	1800	25	6
3.	Bijapur	Nil	Nil	100	500	Nil	42500	Nil	Nil
4.	Gulbarga	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
5.	Bidar	15	2	150	Nil	Nil	200	Nil	Nil
6.	Raichur	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
7.	Bellary	102	Nil	300	1000	Nil	5000	Nil	1
	TOTAL	717	12	645	1575	50	49500	25	7

The GW education day was celebrated in 243 villages. However, it was not celebrated in the districts of Gulbarga and Raichur, two of the highly endemic districts.

The health education activity as can be judged from the table is far from satisfactory, specially in the highly endemic and priority districts.

Health Infra-structure & Trained Manpower Development

A Joint Director of Health services has been working as the State GW Eradication Programme Officer and assisted by a Deputy Director and Technical Officer. The Health manpower and training status of PHC level health functionaries in GW affected areas is given below.

Table 15

Health Manpower and GWEP Training Status of PHC level functionaries

S.No	NAME OF THE AFFECTED DISTRICTS	STAFF SANCTIONED			STAFF IN POSITION			TRAINED TILL PREVIOUS YEAR			TRAINED DURING THE YEAR			STAFF REMAINED UNTRAINED AT THE END OF THE YEAR
		MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	
1.	Belgaum	---------- information not available/provided ----------												
2.	Dharwar	17	20	110	17	19	110	17	19	110	Nil	Nil	Nil	Nil
3.	Bijapur	13	10	140	12	9	130	Nil	Nil	Nil	12	9	130	Nil
4.	Gulbarga	---------- information not available/provided ----------												
5.	Bidar	1	2	14	1	2	8	1	2	8	Nil	Nil	Nil	8 MPWs
6.	Raichur	9	6	55	8	5	55	Nil	Nil	Nil	6	5	55	2 MOs & 1 HA
7.	Bellary	2	2	16	2	1	16	Nil	Nil	Nil	Nil	Nil	Nil	2 MOs 1 HA & 16 MPW
	TOTAL	42	40	335	40	36	319	18	21	118	18	14	185	

MADHYA PRADESH

GW Situation

Three active guineaworm case searches were conducted in the State in the months of May, June/July and December 1989. The GW situation at the end of the year is presented below.

Table 16

Current Guineaworm situation in the state

Total in State : Districts - 45; PHCs - 290; Villages - 22418; Population - 52131717

S.No	NAME OF THE AFFECTED DISTRICTS	AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AS ON 1.1.90			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL ATION	CASES
1.	Rajgarh	6	464	504194	1239	Nil	42	19610	110	Nil	87	35047	6	419	488757	530
2.	Dhar	13	84	66824	555	----- information not provided -----							11	182	154062	484
3.	Jhabua	11	198	205694	367	Nil	6	4584		2	76	107535	9	128	129414	66
4.	Ujjain	1	11	5556	126	1	1	215		Nil	5	NA	2	7	5781	115
5.	Dewas	3	9	6362	81	----- information not provided -----							4	15	17568	86
6.	Guna	2	7	10630	37	Nil	20	1145		Nil	9	NA	2	18	11775	54
7.	Barwani	10	35	68546	23	Nil	Nil	Nil		1	23	2575	9	12	65971	2
8.	Shajapur	7	28	22208	114	----- information not provided -----							6	21	28729	66
9.	Sagar	7	4	1678	11	----- information not provided -----1706							4	11	1678	Nil
10.	Sehore	1	3	1239	9	Nil	Nil	Nil		Nil	Nil	Nil	1	3	1890	Nil
11.	Shivpuri	4	12	17386	1	Nil	Nil	Nil		1	8	5518	2	4	10888	Nil
12.	Mandsaur	4	8	704	2	Nil	Nil	Nil		3	7	506	1	1	198	Nil
13.	Khandwa	Nil	Nil	Nil	Nil	1	1	750		Nil	Nil	Nil	1	1	750	2
14.	Vidisha	Nil	Nil	Nil	Nil	1	1	680		Nil	Nil	Nil	1	1	680	3
15.	Damoh	1	3	3707	Nil	Nil	Nil	Nil		Nil	2	2251	1	1	1456	Nil
16.	Panna	1	1	992	Nil	Nil	Nil	Nil		Nil	Nil	Nil	1	1	992	Nil
	TOTAL	70	867	916251	2565	----- information not complete -----							61	825	920589	1408

At the end of 1989, 16 districts of the state continued to be affected with guineaworm problem. The number of affected villages was reduced by about 5% as compared to previous year. However, the decline in the number of guineaworm cases was about 45%. The reduction in cases was remarkable (80%) in Jhabua district. In Ujjain and Dewas districts, the position seems to be almost static. In the district of Guna an increase in GW cases is recorded. In Khandwa district, which had been deleted one imported case was recorded. In Vidisha district, NICD team found three cases referable to the period June-July which were not recorded by the State. Six districts-Sagar, Sehore, Shivpuri, Mandsaur, Damoh and Panna did not report any case during 1989. Overall it appears that, there is considerable scope for improving surveillance in the state.

Drinking Water Supply Situation

Table 17

Drinking water supply situation in the Guineaworm affected districts of the state

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Rajgarh	419	Nil	849	848	6	Nil	1703	387	3	2	Nil	392
2.	Shajapur	21	Nil	1797	3774	37	Nil	5608	585	18	16	Nil	619
3.	Jhabua	128	Nil	980	790	3	Nil	1773	3	754	93	925	1775
4.	Barwani	12	Nil	11	2	Nil	Nil	13	NA	NA	NA	NA	7
5.	Dhar	182	Nil	493	386	3	87	969	20	204	105	53	382
6.	Dewas	15	Nil	68	42	Nil	3	113	4	Nil	Nil	2	6
7.	Ujjain	7	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	7
8.	Guna	18	Nil	NA	NA	NA	NA	NA	NA	NA	NA	NA	93
9.	Shivpuri	4	Nil	25	81	3	Nil	109	NA	NA	NA	NA	104
10.	Sehore	3	Nil	8	Nil	Nil	Nil	8	7	Nil	Nil	Nil	7
11.	Sagar	11	Nil	29	7	Nil	Nil	36	Nil	Nil	Nil	Nil	Nil
12.	Damoh	1	Nil	7	2	Nil	Nil	9	1	Nil	Nil	Nil	1
13.	Panna	1	Nil	NA	NA	NA	NA	NA	NA	NA	NA	NA	22
14.	Khandwa	1	Nil	28	240	12	Nil	280	2	3	Nil	Nil	5
15.	Vidisha	1	Nil	NA	NA	NA	NA	NA	NA	NA	NA	NA	1
16.	Mandsaur	1	Nil	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	TOTAL	825	2*	4295	6172	64	90	10621	1009	982	216	980	3421

* Provisional NA - information not available

Only two villages still remain without the provision of any safe water supply as per informations given by the programme officer. The Chief Engineer informed that in 16 guineaworm endemic districts, though only 555 additional hand pumps were required to be installed as per norms but PHED actually installed 2746 hand pumps. Of the total step wells targetted for conversion, 472 remained unconverted into safe draw wells.

Vector Control

The State regretted regarding the poor performance in Temephos application in the State and promised better performance in 1990. The performance regarding Temephos application and consumption of Temephos is given below.

Table 18

Identification of unsafe water sources and

Application of temephos

S.No	NAME OF THE AFFECTED DISTRICTS	NUMBER OF UNSAFE WATER SOURCES RECORDED	NUMBER OF UNSAFE WATER SOURCES TREATED WITH TEMEPHOS					AMOUNT OF TEMEPHOS IN LITRES	
			NEVER	1 - 2 TIMES	3 - 4 TIMES	5 - 6 TIMES	7 - 8 TIMES	CONSUMED DURING THE YEAR	BALANCE AT THE END OF THE YEAR
1.	Rajgarh	392	120	118	86	46	22	133	40
2.	Shajapur	619	499	118	2	Nil	Nil	60	Nil
3.	Jhabua	1775	1274	Nil	17	106	378	218	20
4.	Barwani	7	Nil	Nil	Nil	7	Nil	3	2
5.	Dhar	382	252	6	Nil	67	57	120	30
6.	Dewas	6	Nil	Nil	Nil	6	Nil	17	19
7.	Ujjain	7	Nil	Nil	4	1	2	40	20
8.	Guna	93	Nil	21	27	34	11	22	38
9.	Shivpuri	104	Nil	Nil	73	31	Nil	37	13
10.	Sehore	7	Nil	Nil	Nil	7	Nil	40	20
11.	Sagar	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
12.	Damoh	1	Nil	Nil	1	Nil	Nil	1	2
13.	Panna	22	Nil	22	Nil	Nil	Nil	2	8
14.	Khandwa	5	Nil	Nil	5	Nil	Nil	5	15
15.	Vidisha	1	1	Nil	Nil	Nil	Nil	Nil	Nil
16	Mandsaur	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	TOTAL	3421	2146	285	215	305	470	698	227

Of the 3421 unsafe water sources recorded for chemical treatment during 1989, a majority (63%) did not receive any Temephos application, others (14%) were treated inadequately and only 23% were treated 5-8 times.

Health Education

Health education activities have been taken up on a large scale in the districts of Rajgarh, Shajapur, Jhabua and Dhar only. They are proposed to be intensified during 1990. UNICEF is also assisting the activities and have committed an assistance of Rs. 12 lakhs for health education. The district-wise information on health education activities in the State are shown in table 19.

Table 19

Health education material distributed and activities conducted in Guineaworm affected districts

S.No.	DISTRICTS	No.of group meeting	No. of film shows	No. of video casette slide show	No. of Hand bills	No. of kala pathak drama prog.	No. of slogans	No. of posters	No. of sticker	No. of tin-plats	No. of pamphlets distribution	No. of OTC officials and non-officials	Health Exhibition
1.	Rajgarh	1300	Nil	Nil	800	Nil	32000	Nil	800	Nil	2000	Nil	Nil
2.	Shajapur	18	Nil	18	Nil	6	60000	50	Nil	300	7000	150	101
3.	Jhabua	19	5	31	Nil	37	3247	7096	Nil	110	7590	Nil	Nil
4.	Barwani	190	Nil	Nil	6000	Nil	385	150	6000	36	Nil	Nil	Nil
5.	Dhar	12	8	358	Nil	10	6000	8000	Nil	150	8000	10	Nil
6.	Dewas	-	-	Nil	Nil	Nil	Nil	440	Nil	Nil	Nil	Nil	Nil
7.	Ujjain	Yes	Yes	Yes	Nil	Nil	Nil	Nil	Nil	100	5000	Nil	Nil
8.	Guna	Nil	Nil	Nil	Nil	Nil	Nil	3000	Nil	10	4000	Nil	Nil
9.	Shivpuri	Nil	Nil	3000	Nil	Nil	1300	3000	Nil	28	3000	12	9
10.	Sikar	998	Nil	4	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
11.	Sagar	12	Nil	2	Nil	Nil	45	Nil	Nil	105	Nil	12	Nil
12.	Damoh	32	3	3	Nil	Nil	38	36	Nil	Nil	Nil	2	Nil
13.	Panna	432	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	22	Nil
14.	Khandwa	Nil	Nil	Nil	Nil	Nil	405	10000	Nil	260	510	Nil	Nil
15.	Vidisha	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
16.	Mandsaur	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	TOTAL	2093	16	3416	6800	53	105120	31772	6800	4071	37100	183	110

Health Infrastructure & Trained Manpower Development

Table 20

Health Manpower situation and training status with respect to GWEP

S.No	NAME OF THE AFFECTED DISTRICTS	STAFF SANCTIONED			STAFF IN POSITION			TRAINED TILL PREVIOUS YEAR			TRAINED DURING THE YEAR			STAFF REMAINED UNTRAINED AT THE END OF THE YEAR
		MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	
1.	Rajgarh	12	36	210	12	36	210	12	36	210	Nil	Nil	Nil	8 MOs
2.	Shajapur	29	52	282	25	42	262	Nil	Nil	Nil	21	42	262	4 MOs
3.	Jhabua	46	83	272	37	52	217	Nil	Nil	12	30	49	191	7 MOs, 3 HAs & 26 MPWs
4.	Barwani	56	49	213	41	45	188	35	38	172	41	45	168	22 MPWs
5.	Dhar	50	92	278	40	61	235	Nil	Nil	19	27	50	272	13 MOs & 11 HAs
6.	Dewas	13	32	126	14	26	112	Nil	Nil	Nil	7	26	112	7 MOs
7.	Ujjain	NA	NA	NA	3	1	43	Nil	Nil	Nil	3	1	43	
8.	Guna	8	12	108	5	9	98	2	9	76	4	9	22	1 MO
9.	Shivpuri	16	35	126	15	36	114	Nil	Nil	Nil	14	30	114	1 MO & 6 HAs
10.	Sehore	36	38	240	36	38	240	Nil	Nil	Nil	36	38	240	
11.	Sagar	8	26	100	14	26	92	Nil	Nil	Nil	4	26	92	10 MOs
12.	Damoh	4	11	50	3	11	50	Nil	Nil	Nil	Nil	10	36	3 MOs, 1 HA & 14 MPWs
14.	Khandwa	2	2	19	2	2	19	Nil	Nil	Nil	2	2	19	
	TOTAL	380	468	2023	247	385	1879	49	83	489	189	328	1571	

Note: Information for Panna, Vidisha and Mandsaur districts not provided

The Chief Medical and Health Officers of Ujjain, Shajapur, Guna and Dhar have already been trained in GWEP in August and September. A two days Orientation Training Programme for mass media officers of the affected districts was carried out in September at Shajapur. According to the Programme Officer, 247 Medical Officers 385 Health Assistants and 1879 MPWs have already been trained in the various components of the guineaworm eradication.

NOTE : The situation presented for the year 1989 shows that Madhya Pradesh needs to immediately prioritise and intensify GWEP implementation, its supervision, record & reporting system and concurrent monitoring/evaluation inorder to improve GW situation in the state.

MAHARASHTRA

GW Situation

The State of Maharashtra is conducting monthly GW searches in the GW affected districts, and have put in considerable efforts to control/eradicate GW disease from the State.

Table 21

District-wise GW Situation in the State

Total in State : Districts - 29; PHCs - 477; Villages - 39354; Population - 62784171

S.No	NAME OF THE AFFECTED DISTRICTS	AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AS ON 1.1.90			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Thane	26	141	90689	581	3	17	9462	47	Nil	62	39300	29	96	63925	220
2.	Raigad	31	188	76229	621	1	17	4598	53	Nil	78	389990	32	127	42035	187*
3.	Ratnagiri	14	55	13008	151	1	1	310	1	9	25	5353	6	31	7965	18
4.	Pune	1	1	75	1	Nil	Nil	Nil	Nil	1	1	75	Nil	Nil	Nil	Nil
5.	Ahmednagar	1	1	2914	Nil	Nil	Nil	Nil	Nil	1	1	2914	Nil	Nil	Nil	Nil
6.	Satara	5	6	64570	3	Nil	Nil	Nil	Nil	3	3	60409	2	3	4253	Nil
7.	Nanded	10	36	30362	48	1	2	6443	2	5	25	19380	6	13	16753	39
8.	Beed	7	11	15449	8	Nil	Nil	Nil	Nil	4	8	9914	3	3	5535	Nil
9.	Parbhani	8	22	33516	28	Nil	Nil	Nil	Nil	5	15	28034	3	7	5482	2
10.	Osmanabad	5	5	27429	8	1	1	902	1	4	4	25286	2	2	3045	1
11.	Chandrapur	1	2	684	Nil	1	1	750	1	Nil	1	253	2	2	1175	1
12.	Latur	4	7	7603	47	Nil	1	1243	1	Nil	3	6239	4	5	2607	2
13.	Nasik	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
	TOTAL	113	475	362528	1496	8	40	23708	106	32	226	236147	89	289@	152775	475

@ No. of villages reporting active GW cases during 1989 were 103.
* Of the 187 GW cases detected in Raigad, six cases were traced to be originally resident of an urban slum in Aurangabad district. There have been no GW cases in Aurangabad, and since no unsafe drinking water source is existing in the particular slum, these cases have been recorded in Raigad district, where the patients stay a major part of the year for employment reasons.In Sangli and Jalana districts, which had been deleted after a 3 years of surveillance, 2 imported cases in one village of Sangli and 3 imported cases in another village of Jalana were detected which have been included in the total cases.

At the end of 1989, there has been a 69% reduction in GW cases and 38% reduction in the number of affected villages. About 90% of the GW disease problem is confined to the three coastal districts ie. Thane, Raigad and Ratnagiri.

Drinking Water Supply Situation

Out of 318 step wells which were targetted for conversion during 1989, a total of 155 were converted. There were 75 villages without single source till 1988. However, six more such villages were identified in 1989 making a total of 81. Out of these 81 villages 14 villages have got the sanction for safe water supply under the Regional Schemes. In six villages, the work is under progress. 163 step wells conversion is targetted for the year 1990-91. Most of the guineaworm affected villages have less than 900 population. Number of such hamlets are inaccessible and situated far away from the main village. There is need to relax the existing norm of safe sources/population and capita expenditure norm. The drinking water supply situation as on 1.1.90 is presented below.

Table 22

Drinking Water Supply Situation

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED VILLAGES	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Thane	96	NA	213	462	27	Nil	702	36	490	Nil	9	535
2.	Raigad	127	NA	123	507	28	Nil	658	754	26	Nil	61	841
3.	Ratnagiri	81	NA	10	78	10	Nil	98	57	65	Nil	9	131
4.	Satara	3	NA	Nil	5	4	Nil	9	4	2	Nil	Nil	6
5.	Nanded	13	NA	59	85	22	Nil	166	49	8	Nil	3	60
6.	Beed	3	NA	13	26	8	Nil	47	9	2	Nil	Nil	11
7.	Parbhani	7	NA	81	70	7	Nil	158	44	1	Nil	1	46
8.	Osmanabad	2	NA	40	24	6	Nil	70	1	6	Nil	4	11
9.	Chandrapur	2	NA	3	4	Nil	Nil	7	Nil	Nil	Nil	Nil	Nil
10.	Latur	5	NA	12	11	6	Nil	29	Nil	1	Nil	Nil	1
	TOTAL	289	81 *	555	1274	119	Nil	1948	954	602	Nil	87	1643

* the district wise breakup of the 81 villages was not available (NA)

Vector Control

The application of Temephos in the State has been quite satisfactory. Out of 2927 unsafe drinking water sources in the affected villages, only 90 (3%) could not be treated with Temeph, while 1806 (62%) were treated more than 7 times.

Table 23

Chemical Treatment of Unsafe Drinking water Sources

S.No	NAME OF THE AFFECTED	NUMBER OF UNSAFE WATER SOURCES	NUMBER OF UNSAFE WATER SOURCES TREATED WITH TEMEPHOS					AMOUNT OF TEMEPHOS IN LITRES	
								CONSUMED	BALANCE
	DISTRICTS	TARGETTED*	NEVER	1 - 2 TIMES	3 - 4 TIMES	5 - 6 TIMES	>7 TIMES	DURING THE YEAR	AT THE END OF THE YEAR
1.	Thane	902	Nil	177	74	43	608	615	33
2.	Raigad	1677	89	143	347	210	888	949	71
3.	Ratnagiri	186	1	2	5	11	167	110	Nil
4.	Pune	3	Nil	Nil	Nil	Nil	3	5	Nil
5.	Ahmednagar	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
6.	Satara	11	Nil	NIL	Nil	Nil	11	29	10
7.	Nanded	56	Nil	NIL	Nil	8	48	84	6
8.	Beed	12	Nil	NIL	Nil	Nil	12	12	3
9.	Parbhani	63	Nil	NIL	7	4	52	130	31
10.	Osmanabad	8	Nil	NIL	Nil	Nil	8	41	8
11.	Chandrapur	1	Nil	NIL	Nil	Nil	1	1	7
12.	Latur	8	NIl	NIL	Nil	Nil	8	33	13
	TOTAL	2927	90	322	433	276	1806	2009	182

* this includes unsafe water sources and draw wells

Health Education

Table 24

Health Education Activites in the State

S.No.	DISTRICTS	No.of group meeting	No. of film shows	No. of video casette slide show	No. of Radio prog.	No. of kala pathak drama prog.	No. of slogans painted	No. of posters distri-buted	No. of sticker distri-buted	No. of tin-plats	No. of pampha-lets distri-bution	No. of OTC offi-cials and non-offi-cials trnd	Health Exhibi-tion
1.	Thane	2347	44	22	3	9	4473	1759	1684	365	2118	46	53
2.	Raigad	4059	89	Nil	Nil	20	15504	2680	1138	54	5680	2	Nil
3.	Ratnagiri	2370	29	4	1	Nil	2746	932	1069	93	2447	12	10
4.	Pune	13	Nil	Nil	1	Nil	703	50	Nil	Nil	500	Nil	Nil
5.	Ahmadnagar	7	2	Nil	Nil	Nil	49	Nil	Nil	Nil	2112	Nil	Nil
6.	Nasik	84	Nil	Nil	Nil	Nil	311	132	Nil	Nil	205	Nil	Nil
7.	Satara	78	Nil	Nil	Nil	Nil	246	143	123	11	139	6	30
8.	Nanded	1257	2	Nil	Nil	Nil	1377	425	356	20	2144	2	Nil
9.	Beed	410	Nil	Nil	Nil	Nil	256	102	Nil	Nil	295	Nil	Nil
10.	Parbhani	290	9	Nil	Nil	Nil	1011	282	388	87	990	Nil	6
11.	Osmanabad	569	8	Nil	Nil	Nil	431	Nil	Nil	Nil	8793	Nil	Nil
12.	Chandrapur	432	605	10	Nil	Nil	115	2142	Nil	Nil	Nil	Nil	5
13.	Latur	40	Nil	5	Nil	Nil	292	58	39	3	Nil	8	Nil
14.	Aurangabad	10	Nil	Nil	Nil	Nil	22	15	20	Nil	20	Nil	Nil
15.	Sangli	71	6	4	Nil	3	666	1021	28	Nil	810	1	39
16.	Jalna	22	2	Nil	Nil	Nil	65	95	Nil	Nil	1000	1	Nil
	TOTAL	12967	796	45	5	32	23711	9842	4845	633	27153	78	143

Most of the affected population was found to be tribal, illiterate and residing in the remote villages/hamlets. More stress was given on regular visit of health worker and medical officers and also involvement of non-officials like Sarpanch etc. 74 orientation training programmes for Sarpanch, Gramsevak etc. were organised in endemic stste of the state. Guineaworm education day was celeberated in 257 guineaworm affected villages.

2500 sieves (cloth) were prepared and distributed to the families of endemic villages for filtering the water before use.

Health Infrastructure & Trained Manpower Development

The State has Joint Director of Health Services as the State GW Programme Officer and a Assistant Director of Health Services as the Technical Officer for the implementation of GWEP. Training programmes were organised for medical officers, para medical workers, district mass media officers and regional health officers, during 1989.

Table 25

Health Manpower and GWEP Training Status of PHC level functionaries

S.No	NAME OF THE AFFECTED DISTRICTS	STAFF SANCTIONED			STAFF IN POSITION			TRAINED TILL END OF 1989			STAFF REMAINING UNTRAINED		
		MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs	MOs	HAs	MPWs
1.	Thane	52	117	348	43	104	300	41	104	299	2	Nil	1
2.	Raigad	53	127	390	42	91	361	42	89	352	Nil	2	9
3.	Ratnagiri	30	50	142	18	38	137	15	35	135	3	3	2
4.	Ahmednagar	2	4	11	1	4	10	1	4	9	Nil	Nil	1
5.	Satara	10	9	9	10	9	9	10	9	9	Nil	Nil	Nil
6.	Nanded	24	51	148	23	46	140	23	46	140	Nil	Nil	Nil
7.	Beed	81	146	499	57	141	499	56	130	438	1	9	61
8.	Parbhani	14	32	102	14	28	96	12	28	96	2	Nil	Nil
9.	Osmanabad	11	24	82	9	20	63	9	20	63	Nil	Nil	Nil
10.	Latur	10	19	52	10	19	52	10	19	52	Nil	Nil	Nil
	TOTAL	287	280	1783	227	500	1667	219	484	1593	8	14	74

Information for district Chandrapur not available

Supervision, Monitoring & Evaluation

District level officers visit quarterly the affected areas, PHC Medical Officer monthly, Health assistant fortnightly and MPWs visit weekly. During search period villages are distributed among state level officers. In the coastal district,

a separate team of health supervisors numbering 6-8 with independent vehicle is in operation to visit GW affected villages. As per the recommendations of the 11th Task Force Meeting all the supervisory activities are undertaken.

RAJASTHAN

GW Situation

Table 26

GW Disease Situation in the State

Total in State : Districts - 27; PHCs - 236; Villages - 33305; Population - 34261862

S.No	NAME OF THE AFFECTED DISTRICTS	AS ON 1.1.1989				NEWLY AFFECTED IN 1989				DELETED IN 1989			AS ON 1.1.90			
		PHCs	VILL-AGES	POPULA-TION	CASES	PHCs	VILL-AGES	POPUL-ATION	CASES	PHCs	VILL-AGES	POPUL-ATION	PHCs	VILL-AGES	POPUL-ATION	CASES
1.	Banswara	8	283	174187	178	Nil	19	3847		Nil	76	37024	8	226	141010	139
2.	Barmer	8	151	273329	735	Nil	1	6184		Nil	24	32644	8	128	246869	159
3.	Bikaner	1	5	12996	17	Nil	1	1462		Nil	Nil	Nil	1	6	14458	49
4.	Bundi	2	3	3342	2	Nil	Nil	Nil		2	3	3342	Nil	Nil	Nil	Nil
5.	Chittorgarh	3	37	21649	31	1	1	1535		1	6	2137	3	32	21047	8
6.	Dungarpur	5	502	293773	723	Nil	Nil	Nil		Nil	69	43358	5	433	250415	582
7.	Jaisalmer	3	25	32928	25	Nil	4	2329		Nil	8	9069	3	21	26188	11
8.	Jalore	4	6	10667	1	1	2	2024		Nil	Nil	Nil	5	8	12691	4
9.	Jhalawar	6	323	141816	546	Nil	90	50555		Nil	82	62796	6	331	129575	1494
10.	Jodhpur	8	83	193195	206	Nil	4	2688		Nil	22	35128	8	65	160755	175
11.	Kota	9	33	27638	55	Nil	1	1781		4	15	13317	5	19	16102	2
12.	Nagaur	7	55	105912	226	Nil	10	20024		Nil	9	12857	7	56	113079	401
13.	Pali	2	7	1422	Nil	1	1	3764		2	7	1422	1	1	3764	1
14.	S. Madhopur	1	2	1433	23	Ni1	Nil	Nil		Nil	1	1194	1	1	239	Nil
15.	Sirohi	1	1	12625	1	1	5	11715		Nil	Nil	Nil	2	6	24340	14
16.	Tonk	2	3	921	3	Nil	Nil	Nil		1	2	715	1	1	206	Nil
17.	Udaipur	13	739	556713	2847	Nil	56	26262		1	120	105847	12	675	477133	1833
	TOTAL	83	2258	1864546	5619	4	195	134170	NA	11	444	360845	76	2009*	1637871	4872

* Information regarding no. of villages with active GW cases during 1989 not provided

As in the other affected states of the country, Rajasthan also recorded a decline in the number of GW cases. However, the rate of decline in the number of affected villages or cases was not as pronounced as in other States. During 1989, Rajasthan contributed 62% of the total guineaworm cases recorded in the country. There was an almost 3 times increase in the number of guineaworm cases in Jhalawar from 546 cases in 1988 to 1494 cases in 1989, in Nagaur there was a two-fold increase from 226 cases in 1988 to 401 cases in 1989 and in Bikaner from 17 cases to 49 cases. In Jhalawar, 90 newly affected villages had been detected in 1989 accounting for about 50% of all the newly affected villages in the State. Guineaworm situation in Banswara, and Jodhpur districts has more or less been static. District Bundi was deleted from the list of GW affected districts after being under surveillance for 3 consequtive years.

81 newly and 22 reinfected villages were reported in 1989 of which 38 villages are from district Jhalawar and 41 from Udaipur. The highest number of GW affected villages - 675 are located in Udaipur district which contributed 1833 cases. No case was detected from districts of Sawai Madhopur, Sirohi and Tonk during 1989.

Drinking Water Supply Situation

During 1989 the drinking water supply situation in the State is presented below.

Table 27

Drinking Water Supply situation

S.No	NAME OF THE AFFECTED DISTRICTS	NO.OF AFFECTED PHCs	NO.OF VILLAGES WITHOUT A SINGLE SAFE SOURCE	SAFE DRINKING WATER SOURCES					UNSAFE DRINKING WATER SOURCES				
				HAND PUMPS	DRAW WELLS	PIPED WATER	OTHER	TOTAL	STEP WELLS	PONDS	TANKS	OTHERS	TOTAL
1.	Banswara	226		1145	1243	16	Nil	2404	220	1	Nil	Nil	221
2.	Barmer	128		30	451	118	Nil	599	199	291	Nil	Nil	490
3.	Bikaner	6		Nil	6	6	Nil	12	Nil	13	Nil	Nil	13
4.	Bundi	Nil	No	8	10	Nil	Nil	18	3	1	Nil	Nil	4
5.	Chittorgarh	32		49	56	Nil	Nil	105	21	2	Nil	Nil	23
6.	Dungarpur	433	Information	2851	2248	34	Nil	5133	316	64	Nil	Nil	380
7.	Jaiselmer	21		2	Nil	21	Nil	23	3	28	Nil	Nil	31
8.	Jalore	8	available	22	5	5	Nil	32	Nil	9	Nil	Nil	9
9.	Jhalawar	331		631	786	34	Nil	1451	560	38	Nil	Nil	598
10.	Jodhpur	65		174	242	Nil	Nil	416	22	397	Nil	Nil	419
11.	Kota	19		177	123	3	Nil	303	25	Nil	Nil	Nil	25
12.	Nagaur	56		19	97	43	Nil	159	Nil	123	Nil	Nil	123
13.	Pali	1		5	10	3	Nil	18	1	3	Nil	Nil	4
14.	S. Madhopur	1		9	7	Nil	Nil	16	1	Nil	Nil	Nil	1
15.	Sirohi	6		20	8	Nil	Nil	28	Nil	Nil	Nil	Nil	Nil
16.	Tonk	1		7	6	Nil	Nil	13	Nil	Nil	Nil	Nil	Nil
17.	Udaipur	675		39	821	Nil	Nil	860	22	5	Nil	Nil	27
	TOTAL	2009	NA	5188	6119	283	Nil	11590	1393	975	Nil	Nil	2368

A project of Rs. 2034.54 lakhs was presented by PHED, Rajasthan under Water Mission for 1989 for provision of safe drinking water supply to guineaworm affected villages of 14 districts. The Govt. of India has sanctioned Rs. 491.519 lakhs for the project. It is understood as per the report of the Chief Engineer, Rajasthan that 40% of the hand pumps installed in the state were out of order at any one point of time. It was the experience of the PHED that the hand pump mistry scheme had been a failure in the state and the department was now proposing to undertake the hand pump maintenance directly. In the desert

of Rajasthan including Nagaur district, brackishness was
problem which forced people to seek
consumption of drinking

e data regarding Temephos
NICD. However, the round

Water Sources

							SOURCES HOS TH ID	FIFTH ROUND	AMOUNT OF TEMEPHOS IN LITRES CONSUMED DURING THE YEA	BALANCE AT THE END OF THE YEAR
							1	59	40	Nil
							1	87	55	15
							9	14	33	2
							11	8	19	Nil
							il	10	Nil	Nil
							74	270	113	Nil
							13	19	35	Nil
							Nil	16	10	Nil
							521	753	180	86
							4	212	55	34
							25	25	68	7
							Nil	Nil	Nil	Nil
							Nil	4	10	10
							1	Nil	6	Nil
							Nil	Nil	Nil	Nil
							Nil	Nil	1	9
17.	Udaipur						643	1220	121	9
	TOTAL	4531	1315	646	1456	1328	1457	2697	746	172

Of the 4531 unsafe water sources targetted for Temephos treatment, not more than 1328 (30%) received 5 applications. 746 litres of temephos was consumed for the treatment of unsafe water sources.

Health Education

The state did not provide detail information regarding health education material and activities in the various GW affected districts. However a mention was made that a variety of health education material viz.-Hoarding boards, tinplates,cinema

slides, video cassettes, wooden boards, rexine posters, recognition cards, flip book, PVC hangers, stickers, folders and posters were produced for GWEP and sent to endemic districts for display. A proposal of Rs. 45 lakhs for the intensification of Health Education has been sent to Govt.of India, under Technology Mission.

GW education day was reported to be celebrated in all the GW affected villages of the State.

Trained Manpower Development

Detail district-wise information was not presented/provided. However, during November, a crash training Programme was organised by the Director of Health Services in all the affected districts of the state to train M.Os and PMAs in the guineawotm eradication strategy.

NOTE : The situation presented for the year 1989 shows that Rajasthan state needs to immediately prioritise and intensify GWEP implementation, its supervision, record & reporting system and concurrent monitoring/evaluation inorder to improve GW situation in the state.

SWACH (Udaipur)

The SWACH representatives outlined the strategy adopted by the SWACH for guineaworm control. They felt that there was need for accuracy and validation of search report and the problem was of the much higher magnitude in Barmer than was reported by the Health Directorates. However, SWACH did not present the report as per the desired guidelines.

TAMIL NADU

GW Situation

Tamil Nadu state is free from guineaworm disease since 1984. Regular guineaworm search operations are being conducted twice a year to prevent imported cases establishing new foci in the state. During 1989, the searches were conducted in 30 districts covering all the 51800 villages.

Drinking Water Supply

Substantial inputs have been made to improve the drinking water supply and to maintain the guineaworm free status in the state. An expenditure of Rs. 61.256 lakhs has been made.

Vector Control

Temephos application is done in the unsafe water sources of the villages where imported cases are detected.

Health Education

The state has printed tin plates requesting the people to report if there is any case of guineaworm to the nearest Primary Health Centre. 3000 tin plates have been supplied to the endemic villages.

D. MAJOR ACTIONS TAKEN DURING 1989 TO IMPROVE EFFICIENCY AND EFFECTIVENESS OF GWEP.

1. The financial allocation under GWEP for the year 1989-90 was raised to Rs.70 lakhs as against Rs.45 lakhs allocated for 1988-89 and state governments especially Rajasthan, were requested to make full utilization of funds.

2. In order to detect all guineaworm cases early and improve the surveillance, a third " Active GW case search operation" was introduced and carried out by guineaworm endemic states w.e.f. April, 1989. The quality of the guineaworm case search operations was concurrently monitored through concurrent sample checks by different levels of supervisors. GW case management and their education were improved.

3. Vector (Chemical) Control measures under GWEP were strengthened. States were advised to treat the identified unsafe drinking water sources with temephos, 8 times i.e. monthly from Feb.-June and once in two months thereafter; as against only four temephos applications uptill 1988. This proved very beneficial.

4. Fine nylon mesh as well as cloth strainers were distributed to house-holds in some guineaworm affected districts, to filter drinking water at the time of collection/storage. This received good response from community, and the evaluative observations encourage to take large scale action in this direction during 1990-91.

5. Besides improving & intensifying guineaworm health education activities, in order to create mass awareness and seek their involvement in GWEP, the "Guineaworm Education Day" was celeberated at different levels in the country, simultaneously by all endemic states during last week of April, w.e.f. 1989, as per guidelines sent to them by NICD. This will be a regular feature, now.

6. Efforts were made to improve the existing inter sectoral co-ordination between state PHED (RWS) and Health functionaries especially at district/PHC levels, for adequate provision and maintenance of safe drinking water supplies to guineaworm affected areas. This will further strengthen in terms of their regular quarterly meetings to review the situation and draw out plan of action in this important matter.

7. During the year 1989, high priority was accorded by NICD to develop Trained Manpower under GWEP. "Teaching Modules on GWEP" were designed by NICD for different levels of health functionaries viz. District level health officers Incharge GWEP, District Mass-Media/Health Education Officers, Medical Officer and Para Medical staff of PHC, and Public Health Engineers involved in Rural Water Supply. These modules incorporated special emphasis on "Management aspects of GWEP" and mentioned appropriate Teaching/Learning and course evaluation methods to assist the state health functionaries for trained manpower development in their states. Three Orientation Teaching Programmes were organised at NICD, wherein 45 district level health officers involved in GWEP and 14 PHED (RWS) engineers from guineaworm endemic states were thorougly trained.

With technical assistance of NICD, all the states, except Rajasthan, organised Orientation Teaching Programme of District Mass-Media/Health Education Officers of their guineaworm endemic districts for their active involvement in guineaworm health education programme.

Most of guineaworm affected districts in endemic states, organised Crash Orientation Teaching Programmes on GWEP for Medical Officers and Para-medical staff of their respective PHCs. These programmes will continue during 1990-91 for continued education/teaching of health functionaries, to make GWEP function effectively.

8. 'Set of 25 Teaching Slides' on various aspects of GW disease and its eradication, along with detailed commentary, was prepared. All the States DHS/GWEP Officers and GW endemic districts were provided these teaching slide sets to assist them to effectively conduct the orientation teaching programmes on GWEP for different levels/categories of health functionaries.

9. Considering the advancements, the Operational Manual on GWEP (1985) was revised during 1989. This revised 4th (1989) edition of the manual, besides providing detailed information on guineaworm disease and all the operational components of the programme, contains an improvised "Information System under GWEP" for uniform data collection/recording, its compilation, analysis and timely flow to programme managers at different levels for planning and concurrent monitoring/evaluation of the programme. This modified information system should come into effect from 1990.

10. In order to assist the central & state health administrators at various level, to concurrently evaluate the efficiency of GWEP implementation (operational evaluation) and its impact/effect (epidemiological evaluation), various proformae were designed and were utilized during 4th Independent Evaluation of GWEP in May 1989. The report of 4th Independent Evaluation contains the observation, recommendations and these proformae in details. The mid year review of the programme was held during August, 1989. The 4th internal evaluation of GWEP during December 1989 concentrated to evaluate the programme in those districts which were reported to be free from disease for last 2-3 year or were deleted or were not affected any time. The observations made it clear that a constant surveillance for guineaworm disease and health education in such districts are very essential. The temephos applications operation in the states was monitored by NICD during March, September & October 1989. The programme was reviewed by Ministry of Health & Family Welfare and Director General of Health Services, during the year. The observations & recommendations of various evaluations were forwarded well in time to the states for their follow up and corrective measures.

11. Ten Epidemiological Surveillance Teams were deployed during 1989 in the following States and Districts, to closely monitor the GW situation and GWEP implementation in highly endemic/problematic areas with help of well designed information system:-

State	Team no. & District HQ	Districts Covered
Andhra Pradesh	1.- Kurnool	Kurnool & Mehboobnagar
Karnataka	2.- Bijapur	Bijapur & Raichur
	3.- Gulbarga	Gulbarga & Bidar
Madhya Pradesh	4.- Indore	Dhar & Jhabua
	5.- Shajahpur	Shajapur & Rajgarh
Maharashtra	6.- Raigad	Raigad & Ratnagiri
	7.- Thane	Thane & Nanded
Rajasthan	8.- Barmer	Barmer & Jaisalmer
	9.- Jhalawar	Jhalawar & Kota
	10.- NICD, Delhi	

.pm 10

These teams in the first phase (December '89 to February '90) are conducting situational analysis with regard to GW situation, programme implementation, system of programme

supervision/monitoring by health infrastructure and to identify training and other resource needs to make GWEP more effective in 18 highly affected districts responsible for approximately two thirds of the guineaworm problem in the country.

E. RECOMMENDATIONS OF 12th TASK FORCE MEETING

The house resolved that the recommendations of 11th Task Force Meeting, January 1989 (Appendix IV) are exhaustive and should continue to be implemented during 1990-91 also. However, the additional recommendations as emerged during this meeting are mentioned here.

I. Improved Infrastructure for GWEP

1. Considering the national objective of achieving zero guineaworm incidence in country by 1991, it was resolved that all guineaworm endemic states should accord top priority for efficient planning, implementation, supervision and monitoring/evaluation of programme by all levels of health functionaries. The state level GWEP Officer should be relieved of extra duties to enable him to concentrate on GWEP.

(Action State DHS)

2. Efforts should be made to identify and involve the local voluntary/non-governmental organizations in GWEP implementation.

(Action State DHS/PHED)

II. GW case finding & management

3. Besides conducting well planned & supervised three active GW case search operations during April, June, December every year; the surveillance should be strengthened to detect guineaworm cases during inter-search period and efficient system of cross-notification of imported cases should be followed for necessary timely measures to interupt the transmission. The GW cases detected during inter-search period should be recorded & reported for that year.

(Action - State DHS)

4. Active GW surveillance should not only be confined to know guineaworm endemic Districts/PHC/Villages, but the non-endemic areas in guineaworm endemic states should also be covered under guineaworm case search operations.

(Action: State DHS)

5. The quality of GW case management, especially regular bandaging of their guineaworm blister/ulcer, must be improved to the level of patient's satisfaction.

(Action: State DHS)

III. Health Education & Community Involvement

6. There is an urgent need to actually intensify the guineaworm health education activities by GW endemic states in the community on a war-footing level, using the most effective methods of communication as suitable to local needs.

(Action: State DHS,CHEB)

IV. Vector Control

7. In addition to well planned & efficient temephos treatment of unsafe drinking water sources; the house-holds in guineaworm endemic villages should be equipped with properly designed fine nylon mesh/double cloth strainers for filtering the drinking water at the time of its collection / storage/drinking.

(Action: State DHS, PHED & NICD)

V. Provision & Maintenance of safe drinking water

8. In order to achieve the zero guineaworm incidence in the country by 1991, it is necessary that all the affected villages/hamlets are provided with safe drinking water supply. Keeping this into view, all the guineaworm affected state Directorates of Health Services should prepare the list of guineaworm affected (1989) villages / hamlets/habitations i)which do not have even single safe drinking water source and ii) those which require additional water source to meet the community need. Such a list should be prepared by middle of February 1990 and be sent to the Chief Engineers, Public Health Engineering Departments (RWS) of their respective states for providing the safe drinking water sources in these villages / hamlets / habitations.

(Action: State DHS, PHED)

9. It was decided during the meeting that the National Drinking Water Mission (NDWM) will issue suitable directives to

the Chief Engineers, PHED (RWS) of all the guineaworm endemic states to provide safe drinking water sources in each guineaworm affected villages, hamlet and habitation irrespective of the population and that the safe drinking water sources will be properly maintained to yield continuous water supply to the community so that the community only uses safe drinking water sources and does not go back to unsafe water sources in absence of continuous safe water supply to them.

(Action: NDWM, Delhi)

VI. Trained Manpower Development

10. In addition to continued Crash Orientation Teaching Programmes for mass-media/health education officials, Medical Officers and para-medical staff of PHCs in endemic states, as per teaching modules designed by NICD; the stress is laid to organize one day Orientation Teaching Programme on GWEP for district/PHC level PHED (RWS) engineers by District Health Authorities in order to orient them & seek their active involvement/co-ordination to provide and maintain safe drinking water supplies in guineaworm endemic areas, on priority. The modules for such a teaching programme will be designed and sent by NICD.

(Action: State DHS, PHED & NICD)

VI. Information System under GWEP

11. Considering the utmost necessity of having an efficient & uniform information system under GWEP, the proformae have been designed for (i) relevant data collection , (ii) data compilation & analysis and (iii) timely flow (report) of the data to concerned authorities for necessary action at various levels. These proformae are appended in the revised 4th edition (1989) of "Operational Manual on GWEP". All the guineaworm endemic states should use these proformae, for uniformity, with effect from 1990.

(Action: State DHS & PHED)

12. Sincere efforts must be made by various supervisory level officials to validate the GW data collected & compiled by peripheral workers to make the data reliable for planning & evaluation of programme.

(Action: State DHS & PHED)

VII. Supervision, monitoring and evaluation of GWEP

13. In order to assist the different levels of health managers to concurrently monitor and evaluate GWEP, proformae have been designed and pretested. These proformae are annexed in the report of the 4th Independent Evaluation of GWEP, 1989, and should be utilised for the purpose to improve the efficiency and effectiveness of GWEP.

(Action: State DHS & PHED)

14. A small working group of experts should decide on the strategy to be adopted under GWEP in those districts/state(s) which are nearing zero guineaworm incidence during 1990.

(Action: NICD & State DHS)

F. EPDEMIOLOGICAL ACHIEVEMENTS OF GWEP

Since the inception of the GWEP in 1983-84, the guineaworm situation has considerably decreased. A comparison regarding the GW status as in 1984 and 1989 is presented in the tables below.

Table 29

GUINEAWORM ENDEMICITY IN INDIA

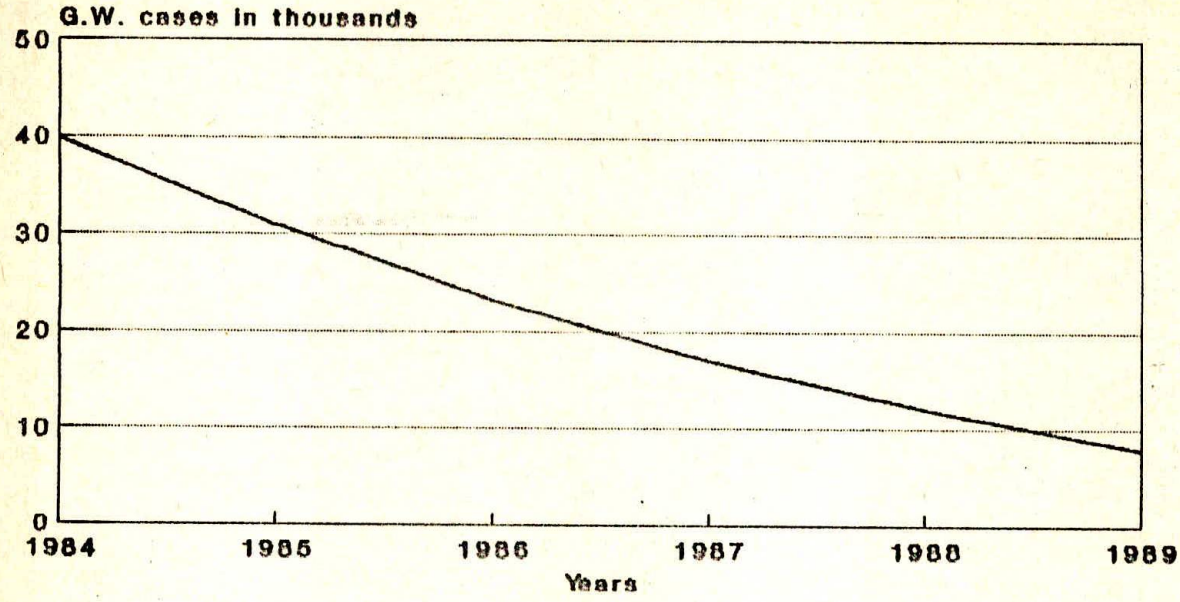
S.No	NAME OF THE AFFECTED STATE	AFFECTED AS IN 1984					AFFECTED AS IN 1989				
		DISTRICS	PHCs	VILLAGES	POPULATION	CASES	DISTRICS	PHCs	VILLAGES	POPULATION	CASES
1.	Andhra Pradesh	6	54	1160	1566218	4461	6	26	150	348094	224
2.	Gujarat	13	56	444	1058012	426	8	30	52	319085	6
3.	Karnataka	8	73	991	1666123	5239	7	34	271	568975	896
4.	Madhya Pradesh	21	131	3647	2723934	11341	16	61	825	920589	1408
5.	Maharashtra	15	99	1213	1058452	3115	10	89	289	152775	475
6.	Rajasthan	23	146	5376	4849340	15210	16	76	2009	1637871	4872
7.	Tamil Nadu	3	5	9	10048	Nil	Deleted since 1984-85				
	TOTAL	89	564	12840	12932127	39792	63	316	3596	3947420	7881

Table 30

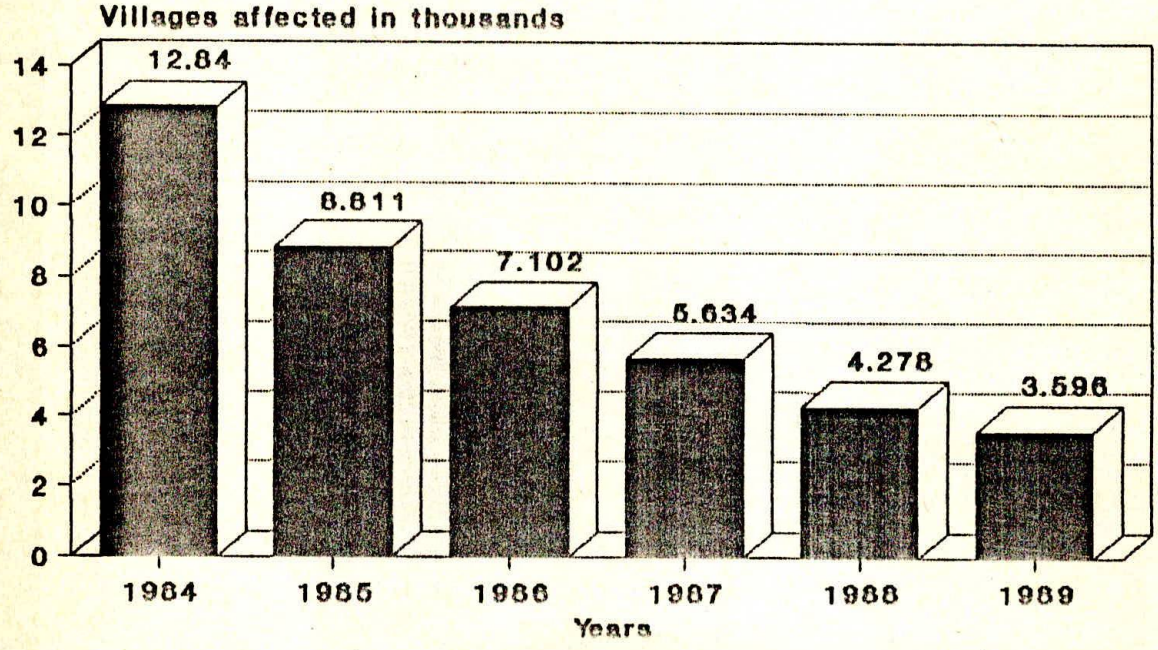
GUINEAWORM AFFECTED VILLAGES/HAMLETS AND CASES FROM 1984 TO 1989

S.No.	GW ENDEMIC STATE	AFFECTED VILLAGES/HAMLETS						NUMBER OF GW CASES					
		1984	1985	1986	1987	1988	1989	1984	1985	1986	1987	1988	1989
1.	Andhra Pradesh	1160	741	599	414	241	150	4461	2389	1772	1122	407	224
2.	Gujarat	444	204	140	130	81	52	426	322	181	164	27	6
3.	Karnataka	991	715	662	398	356	271	5239	4035	2754	2405	1909	896
4.	Madhya Pradesh	3647	2855	1575	1170	867	825	11341	8349	4217	3285	2565	1408
5.	Maharashtra	1213	902	853	767	475	289	3115	4211	3646	2159	1496	475
6.	Rajasthan	5376	3394	3276	2755	2258	2009	15210	11644	10500	7896	5619	4872
	TOTAL	12840	8811	7102	5634	4278	3596	39792	30950	23070	17031	12023	7881

Guineaworm Endemicity in India
Guineaworm Cases (1984-89)



Guineaworm Endemicity in India
Villages/Hamlets Affected (1984-1989)



G. GWEP - SCHEDULE OF VARIOUS ACTIVITIES DURING 1990

S. No.	Activities	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1.	12th Task Force Meeting				↓		↓						↓
2.	Active Guineaworm Case Search Operation												
3.	Guineaworm Case Management	Continuous Activity during the year											
4.	Temephos Treatment of unsafe water source												
5.	Provision & Maintenance of safe water supply	Continuous Activity through-out the year											
6.	Guineaworm Health Education	Continuous Activity during the Year, intensified during Feb to June											
7.	Guineaworm Education Day												
8.	Orientation Crash Teaching Programme for :												
a.	Dist. Health/Med. officers at NICD Delhi												
b.	M.O./Para-Medicals by State in Districts												
c.	PHED (RWS) Engineers by State in Districts												
d.	Dist. Mass Media & H.E. officers by State in Districts												
9.	PHED (RWS) Engr & Health officers meeting*												
10.	Evaluation by NICD												
a.	Fifth Independent Evaluation												
b.	Mid Year Review **												
c.	Temephos Monitoring												
d.	Fifth Internal Evaluation												

Note : * Inter-sectoral co-ordination meeting between Health and PHED(RWS) engineers at state/district/PHC levels to review drinking water situation, additional water need, target achievements during quarter as wll as plan of action for next quarter.

** Mid year review meeting of all GW endemic state programme officers.

Appendix I

12th Task Force Meeting on Guineaworm Eradication Programme, 15th-16th January, 1990, NICD, Delhi.

P R O G R A M M E

15.1.1990 (Monday) 0930-1030hrs REGISTRATION

INAUGURAL SESSION

1030-1130 HRS

1030-1040 hrs.	Welcome address	Dr.M.V.V.L.Narasimham, Director, NICD, Delhi
1040-1050 hrs.	Address	Mr.J.Vasudevan, Joint Secretary to GOI, Ministry of Health & FW
1050-1100 hrs.	Address	Mr.Inamul Haq, Adviser, National Drinking Water Mission
1100-1110 hrs.	Address	Dr.P.Micovic, WHO Representative to India
1110-1120 hrs.	Inaugural address	Dr.A.K.Mukherjee, Director General of Health Services,Delhi
1120-1125 hrs.	Vote of Thanks	Dr. Ashok Kumar, Dy.Director,NICD,Delhi
1125-1200 hrs.	TEA	

15.1.190 (Monday) **TASK FORCE MEETING**

State-wise Review of guineaworm situation, GWEP - implementation, target achievements during 1989 and future plan of action for 1990-91.

SESSION - I

Chairperson - Dr. M.I.D. Sharma
Rapporteur - Mr. V.K. Raina

1200-1300 hrs.	Status report of Andhra Pradesh	Dr.P.Venkata Reddy
1300-1400 hrs.	LUNCH	

SESSION - II

Chairperson - Dr. E.S. Rahavendra
Rapporteur - Dr. R.L. Ichhpujani

1400-1445 hrs. Status report of Gujarat — Dr. T.D. Gandhi

1445-1530 hrs. Status Report of Karnataka — Dr. G. Viswanath

1530-1545 hrs. TEA

SESSION - III

Chairperson - Dr. (Mrs.)M.R.Chandrakapure
Rapporteur - Dr. Gautam Biswas

1545-1645 hrs. Status Report of Madhya Pradesh — Dr. V.B. Saxena

1645-1715 hrs. Status Report of Tamil Nadu — Dr. E.S. Rahavendra

16.1.1990 (Tuesday)

SESSION - IV

Chairperson - Dr.(Mrs.) Saraljit Sehgal
Rapporteur - Mr. G.C. Joshi

1000-1100 hrs. Status Report of Rajasthan — Dr. M.M. Gogna

1100-1145 hrs. Status Report of SWACH Udaipur — Mr. Mukesh Sharma

1145-1200 hrs. TEA

SESSION - V

Chairperson - Dr. V.B. Saxena
Rapporteur - Dr. R.L. Ichhpujani

1200-1300 hrs. Status Report of Maharashtra — Dr.M.R. Chandrakapure

1300-1400 hrs. LUNCH

SESSION - VI

Chairperson - Mr. Inamul Haq
Co-Chairperson- Dr. Mahendra Dutta
Rapporteur - Dr. V.K. Saxena

1400-1530 hrs.	Status report on situation, target achievements and future plan of action for provision and maintenance of safe drinking water, including conversion of unsafe water sources in guineaworm endemic states.	PHED(RWS) Engineers Mr.C.N.Suresh of Andhra Pradesh, Dr.N.S.Dave of Gujarat, Mr.Gulam Ahmed of Karnataka, Mr.M.S.Bedi of Madhya Pradesh, Mr.P.N.Gholap of Maharashtra, Mr.B.K.Surana of Rajasthan
1530-1545 hrs.	TEA	

SESSION - VII

Chairperson - Dr. N.K. Shah
Co-chairperson- Dr. M.V.V.L.Narasimham
Rapporteur - Mr. S.M.Kaul

1545-1630 hrs.	Research needs in GWEP	Prof. I.C. Tiwari Prof. S.J. Nagalotimath Prof. V.K. Kochar
1630-1700 hrs.	Recommendations	
1700 hrs.	CONCLUSION	

Appendix II

Guidelines to State Health Directorates of Presentation of GWEP Status Report (1989)

This meeting aims to undertake a comprehensive review on the GW situation, implementation of GWEP during 1989, as well as to decide the further course of action towards achieving the goal of Guineaworm Eradication by 1991. You are therefore requested to come prepared with your presentation highlighting the following facts about guineaworm situation & GWEP implementation in your state during 1989:

1. The complete Village/PHC/District wise Epidemiological situation of guineaworm disease indicating sex & age distribution of cases, as on 31st December, 1989; basing on the active guineaworm case searches undertaken during 1989 and details on the NEW detected guineaworm foci (villages) in each PHC and districts.

2. The number of guineaworm cases under management, cured and/or developed complications etc. and your suggestions to improve guineaworm case management under GWEP.

3. Identification of unsafe drinking water sources in endemic areas which required temephos treatment, the details of temephos applications to such water sources, and the statement on the amount of temephos received as well as consumed, as per the recommendations of 11th Task Force on GWEP (January, 1989).

4. The situation & target achievements on provision & maintenance of safe drinking water supply and conversion of unsafe water sources into safe ones, in the guineaworm affected villages/PHCs/Districts. The targets for next year in this direction may please be specified.

5. The details on health education activities undertaken including Guineaworm Education Day Celebration & awareness camps in the villages and the resource inputs for health education along with the evaluation their impact on community. A set of guineaworm health education material prepared by your state may please be brought along with you for display during the meeting for benefit of other states.

6. The district wise information on health infrastructure sanctioned, in position and trained in GWEP during 1989 as well as plan of action for trained man power development under GWEP in the state for next year.

7. The system of supervision, monitoring & evaluation of GWEP in the state and various administrative, technical, operational and social problems/constraints experienced while implementation of GWEP along with their proposed solutions.

8. Action taken on the recommendations of 11th Task Force meeting on GWEP held at NICD, Delhi, January, 1989.

9. The proposed calender of specific activities and targets to be achieved under GWEP and manpower requirements for implementing the GWEP during 1990-91.

Appendix III

LIST OF PARTICIPANTS

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26 Dr.S.J.Nagalotimath
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27 Dr.V.K.Kochar
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40 Dr.Jim Sherry
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UNICEF, New York

IX. NATIONAL INSTITUTE OF COMMUNICABLE DISEASES, DELHI-110 054

41 Dr.M.V.V.L.Narasimham
Director.

42 Dr.Ashok Kumar
Dy.Director (Helminthology).

43 Dr.Saraljit Sehgal
Director (Microbiology).

44 Dr.K.K.Datta
Dy.Director (Epidemiology).

45 Dr.Gyan Prakash
Co-ordinator, GWEST.

46 Mr.S.M.Kaul
Assistant Director.

47 Dr.Balram Mohanty
Senior Medical Officer.

48 Dr.Gautam Biswas
Senior Medical Officer.

49 Mr.V.K.Raina
Dy.Asstt.Director.

50 Mr.G.C.Joshi
Entomologist,GWEST.

51 Dr.R.L.Ichhpujani
Asstt. Director.

52 Dr.S.K.Sharma
Assistant Director.

53 Dr.V.K.Saxena
Dy.Asstt.Director.

X. INVITEES WHO COULD NOT ATTEND

54 Dir.Gen.Armed Forces
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55 Mr.M.S.Dayal,
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57 Mr.G.Ghosh,
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58 Dr.S.C.Saha
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59 Mr.M.M.Datta,
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60 Dr.R.S.Sharma,
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NICD, Delhi.

Appendix IV

RECOMMENDATIONS OF THE 11th TASK FORCE GROUP ON GWEP (January 1989)

I. Improved infrastructure for GWEP

1. For an effective implementation and evaluation of GWEP, each endemic state should have one full time GWEP Officer of the rank of Joint/Deputy Director of Health Services assisted by Stenographer, Statistical Assistant, non-medical supervisor, driver and a vehicle. Likewise each of the 15 problem districts in states of Rajasthan (Udaipur, Jhalawar, Barmer, Nagaur), Maharashtra (Raigad, Thane & Ratnagiri), Karnataka (Gulbarga, Bijapur), Andhra Pradesh (Kurnool and Mahboobnagar) and Madhya Pradesh (Rajgarh, Dhar and Jhabua) should also have a full time team of District Health Officer, health supervisor, driver & vehicle for GWEP. The Central Government should study the financial feasibility for the implementation of this additional personnel inputs into the GWEP on a priority basis.

(Action NICD, State DHS)

2. Deployment of Epidemiological Surveillance teams in the affected states should be expedited.

(Action NICD)

3. State should make efforts for involving the community health guides and opinion-leaders in implementation of GWEP viz. early detection of guineaworm case and their management, temephos treatment of water sources, maintenance of water supplies and health education.

(Action DHS & PHED)

II. Guineaworm case finding & management

4. For efficient GW case finding & their timely management, instead of existing two active search operations during May and December, it is recommended that GW endemic states should organize at least three active case search operations during the months of April, June/July and November with effect from 1989.

(Action State DHS)

5. Though active guineaworm case search operations are well planned, their implementations need to be concurrently evaluated for its efficiency. For this purpose, a sample of 25%, 10% & 1% of villages as searched by respective MPWs should be randomly & concurrently cross-checked by para medical supervisors, Medical Officer of PHC and District

Health Officer, respectively for coverage and quality of search in terms of guineaworm case detected as well as missed by workers. A report to this effect should be included in search reports submitted by PHC/District.

(Action State DHS)

6. In absence of effective chemotherapy for guineaworm, it is important that the guineaworm blisters/ulcers of patients should be constantly covered until healing. For this purpose besides educating, patients should be assisted by providing a package of 12 gauze bandages to each needy patient for self ulcer dressing and this should be regularly monitored.

(Action State DHS)

III. Health Education and Community Involvement

7. State should prepare a "Target Oriented Plan of Action" for implementation & evaluation of guineaworm Health Education Programmes to be undertaken by them at state, district, PHC and village levels during 1989 and 1990. School health education should be given due priority. A quarterly report on performance of guineaworm health education programmes organised should be submitted by DHO to State DHS and NICD.

(Action State DHS)

8. The Guineaworm Education Day (GED) should be celebrated during the last week of April every year from 1989 onwards by all endemic states. This is important to create a mass awareness and seek community involvement in guineaworm eradication campaign. All the endemic states should draw out a plan of action for celebrating GED in April at village, PHC, District and State levels, and the implementation report to this effect should be sent to NICD.

(Action State DHS)

9. Some guineaworm affected states have evolved useful health education package(s). NICD along with C.H.E.B. should compile a digest on such health education packages and circulate the same to all guineaworm affected states for improving their health education programmes as per their local needs.

(Action NICD, CHEB and State DHS)

10. State Health Directorates and PHED should approach the Station Director(s) of Doordarshan & All India Radio in their respective states for including guineaworm health education programmes on TV and Radio at periodical interval, free of cost. The assistance of Ministry of Information & Broadcasting may also be sought in this matter.

(Action State DHS & PHED)

11. NICD, Delhi has prepared guineaworm health education rubber stamps/seals for use on postal envelops & letters. Similar stamps/seals should also be prepared for routine use by states.

(Action State DHS & PHED)

12. In order to effectively conduct Guineaworm Health Education Programmes in the schools and community, (a) the affected PHCs should be equipped with a set of slides on guineaworm disease & its eradication, and (b) each affected district should be provided with one set of colour TV, VCR and portable generator. The operational & financial feasibility for these inputs should be worked out by Govt. of India.

(Action NICD, National Mission on Drinking Water, State DHS & PHED)

13. The 16 mm film on guineaworm as shot in West Africa should be provided to each affected district for community health education and training purposes.

(Action NICD)

14. Wherever possible the State Governments will arrange to secure assistance of an animator preferably a female from voluntary organization working in the neighbourhood who should co-ordinate health education activities in a group of villages. The State Government will furnish to the Government of India the lists of such voluntary organizations whose services can be utilised and will bear the estimated cost likely to be incurred on this activity.

(Action DHS)

IV. Vector Control

15. NICD should continue to function as a nodal agency for the procurement of temephos, its quality control and supply to the guineaworm endemic states/districts. However, to ensure timely receipt of temephos, the guineaworm endemic states should plan out well in advance, the quantity of insecticide required in respect of various districts. The final demand may be submitted to NICD by 15th March, 1989 to ensure its timely supply during 1989-90.

(Action DHS)

16. Proper records should be maintained at State, District and PHC level specifying the date and quantity of temephos received, consumed during the month and balance in hand at the end of every month. This information should be sent to NICD for monitoring the temephos consumption & further supply.

(Action DHS)

17. The present practice of supplying temephos in 5 litre containers should be discontinued. In view of the requirement of very small quantity of insecticide at a given point of time, it would be more convenient if temephos is made available preferably in 1.0 litre packs to the state GWEP Officers.

(Action NICD)

18. The detailed advance planning for temephos application of unsafe drinking water sources in villages during active transmission season at monthly intervals (February to June) and once in two months during post-monsoon season should be made for every affected PHC. The plan of action should be sent to the State Health Directorates and NICD.

The worker should be equipped with the necessary tools to measure the water quantity in well for chemical treatment. The temephos application of unsafe water sources should be recorded/stenciled at the site of the unsafe water source.

(Action DHS)

19. Unsafe drinking water sources in endemic villages reporting guineaworm cases from 1987 onwards should be identified for coverage with chemical treatment. The villages having active cases of guineaworm during 1988 should be covered for temephos application on a priority basis.

(Action DHS)

20. The chemical treatment of large water bodies or unsafe sources with difficult access such as those encountered in the desert areas of Rajasthan should be taken up by district level team as is being done in the Banswara district of Rajasthan.

(Action DHS)

21. The Bioefficacy of temephos treatment should be concurrently monitored for coverage and correct dosages. 10 per cent and 1 to 2% of the temephos treated sources should be randomly cross-checked by the Medical Officer and District Health Officer/State Programme Officers respectively.

The funnel nets provided to the PHCs should be used for recording the presence or absence of cyclops in the pre and post-temephos treatment of water sources and should be recorded in the recommended formats.

(Action DHS of States)

V. **Provision and maintenance of water supply**

22. There is a strong need for close and effective coordination between the Health Department and the Public Health Engineering Department at State/District/PHC levels for monitoring the programme implementation at quarterly basis.

(Action DHS & PHED)

23. A list of 2664 villages with active cases was found to have 2892 step wells and 1446 ponds requiring conversion into safe water sources has been submitted by the NICD to the National Mission on Drinking Water for which the budget has been sanctioned by the Mission. The list of such villages should continuously be updated by 1st April, 1989,jointly by the State Health and PHE Departments and sent to National Mission on Drinking Water and NICD. An action plan should be prepared to provide safe water sources to these villages by June, 1989 for obtaining the funds for this purpose from National Mission on drinking water.

(Action: DHS, PHED, National Mission on Drinking Water)

24 Notwithstanding the norms for providing safe water sources in villages, the guineaworm affected villages should be provided additional safe water sources according to the requirements indicated by the Programme Officers.

Problem areas like coastal districts of Maharashtra (Thane, Raigad, Ratnagiri) require special attention for provision of safe water supplies.

(Action DHS & PHED)

25. There is need for documentation of types of unsafe water sources in endemic states and availability of various options for their conversion into safe water sources. Likewise an alternative strategy should be thought to provide safe water sources in those areas where due to soil problem hand pumps can not be provided. For this purpose the National Mission of Drinking Water should constitute a **Working Group** to suggest suitable plan of action.

(Action National Mission of Drinking Water and State DHS, PHED)

26. The State Governments may be requested to ensure the ban on construction of further step wells.

(Action PHED/National Mission on Drinking Water)

VI. Training

27. In order to keep up-to-date technical skills of medical and paramedical personnel involved in Guineaworm Eradication Programme, one day orientation training programme should be periodically conducted at district and PHC levels by the State Health Departments. Training Syllabus for such training programmes should be prepared by NICD for its uniform implementation in all the States.

(Action DHS of States, NICD)

28. The orientation training programme for the State and District level Mass Media Officers for their active involvement in health education under Guineaworm Eradication Programme should be organised.

(Action NICD, DHS, CHEB)

29. The village based Government functionaries other than health personnel as well as employees of local bodies and opinion leaders, prominent public service minded women of the village should be given orientation training about guineaworm disease and its eradication at PHC/block levels.

(Action DHS of States)

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