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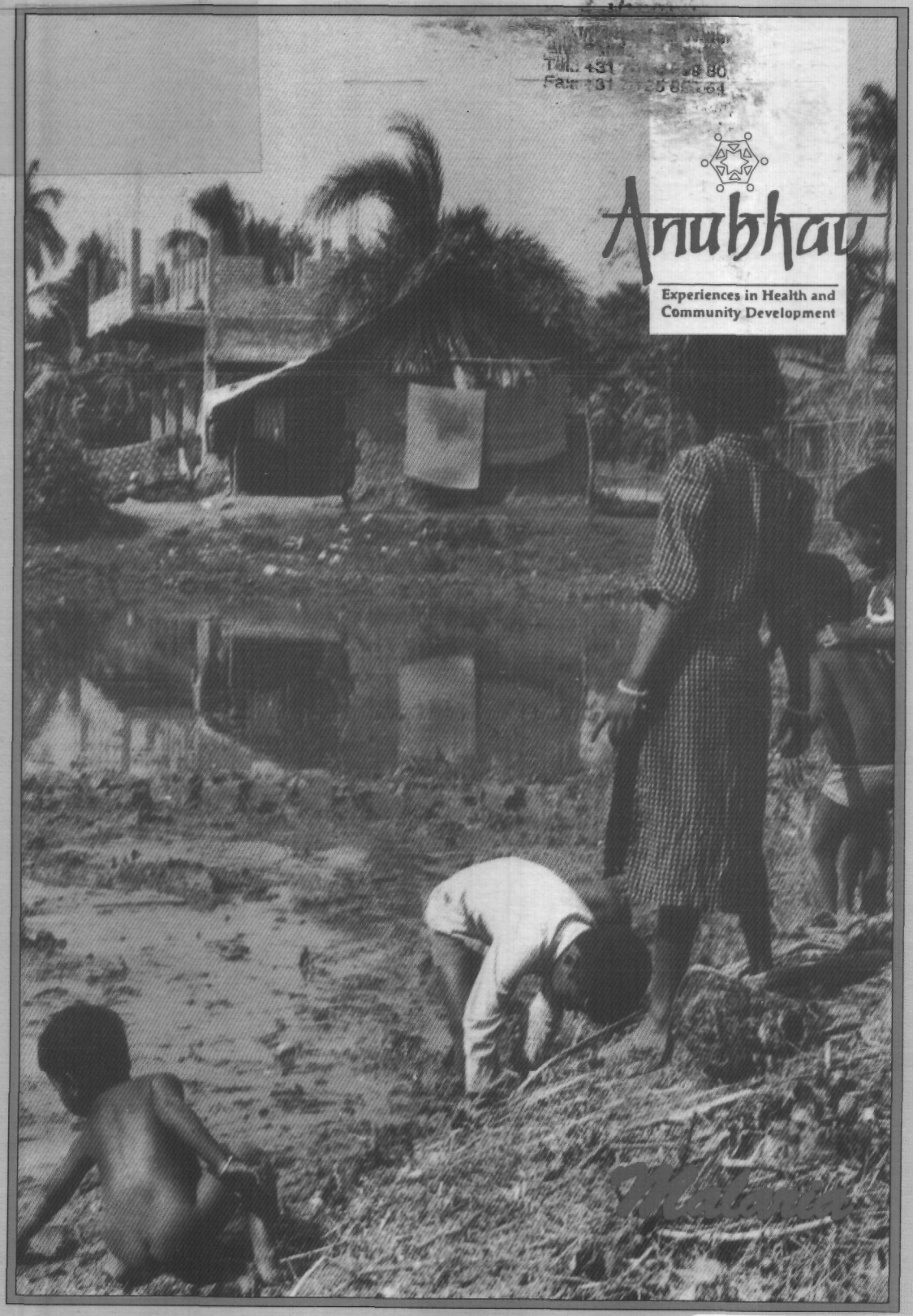

Anubhav

Experiences in Health and Community Development

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The **Anubhav series** is published to disseminate information on innovative projects providing health, nutrition, family planning and community development services in India. The series was developed out of a widely shared concern about what could be done in order to strengthen the performance of health and community development programmes in India. The Indian government has assumed the primary responsibility for the provision of basic services to India's 844 million people, particularly to the disadvantaged living in rural areas. As a pluralistic society, however, India has also witnessed the growth of a rich variety of private efforts, complementing the work of the government. Though limited in resources and scale of impact, many voluntary agencies have been experimenting with innovations learned through many years of extraordinary dedication.

Information about these small, private, and widely dispersed projects has been limited. Lack of descriptive information, project analysis, and presentation in a readable format have prevented the many lessons learned from these innovative efforts from reaching the broader audience of policy-makers, programme managers, academics, social activists, and the interested public. The **Anubhav series** attempts to disseminate the experiences of these voluntary organizations, with the goal of contributing to greater understanding of their work and thereby improving the delivery of health and community development services in India. In the documentation endeavour, effort has been made to stress on the process of development of these voluntary organisations rather than development alone.

Financial support for the production of the **Anubhav series** is provided by the Ford Foundation. Selection and review of the case studies is undertaken by Mr. Alok Mukhopadhyay of the Voluntary Health Association of India, working with an informal committee drawn from those in the field of health and community development.

Individual acknowledgement could not be given due to paucity of space. However, **Anubhav series** would like to express its deepest gratitude to all those but for whom the documentation of these projects would not have been possible.

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Preface

The story of Malaria in India is about great success & great failure. An assessment in 1952 indicated that about 7.5 crore people suffered from the disease while 8 lakh died from it. Then in 1963-64-65, the golden era of malaria control, malaria cases dropped to a vanishing point. Then the worsening phase which began in 1974-75. Malaria cases peaked at 64 lakhs. Due to introduction of MPO in 1977, the number came down to 16.63 lakhs in 1984, but ever since then the disease has been showing a progressive rise reaching 28 lakhs in 1995.

Malaria epidemics in Rajasthan and Assam in the ninetees point out at the serious lacunae in the present health system's prevention & control measures. Therefore there is an urgent need to drastically tone up the Primary Health Care System & integrate malaria control within its ambit.

Secondly, the present strategy for control of the disease is based on early diagnosis and treatment with anti-malaria drugs. However, this is not working satisfactorily because of lack of involvement of the Community, Panchayats, other local bodies & NGOs working at the grassroots level.

Malaria can strike anyone, but history & experience show that it affects primarily the poorest, most peripheral & marginalised group of population. There is an urgent need to get our act together by ensuring a comprehensive approach to the problem which should include decentralized planning, physical resources, health education, adequate training of staff and flexibility of approach vis-a-vis control measures & management issues. The future will depend not on the temporary relief provided by drugs and insecticides, but increased surveillance and progressive elimination of the malariogenic factors in the environment.

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Evolution of the Malaria Control Programme in India

The history of Malaria can be traced as far back as the 5th Century BC in the days of Hippocrates when it was associated with 'evil air' and swamps and marshes. In the Ayurvedic text of Charaka and Susruta, it had been associated with the bite of mosquitoes thus anticipating a more modern theory of its transmission than the one propagated as is obvious from the word "Malaria" meaning fever caused by bad air.

Two hundred years ago, in places like the foot-hills of the Himalayas, in parts of Orissa and the moist deciduous forests of Kerala, Karnataka, Maharashtra and elsewhere, Malaria was endemic for as long as anybody could remember. The spread of Malaria during the first half of the nineteenth century through large parts of north India was a direct outcome of Colonialism. Before the impact of colonial policies began to be felt, malaria was conceived to be a localized problem of low endemicity and stable transmission atleast in North Western India. However, the indirect outcome of this development led to the growth of Malaria research.

In 1817, when work on the renovation of the centuries old irrigation Canals of Delhi and Tanjore began, within twenty years the effect of the Yamuna Canal upon the revenue as well the country side showed up strikingly. "Noisome and pestilent swamps" due to poor drainage had arisen and remedial action was urgently demanded to relieve the population of marsh fever. An outbreak of fever of epidemic proportion struck Karnal in 1843 for which the Canal was much to blame. A Committee of inquiry, the first modern investigation into malarial fever in India with special reference to the co-relation of climate and irrigation respectively to fever mortality, recommended satisfactory precautions to be taken in the matter of drainage where necessary.

By the middle of the nineteenth Century, major breakthroughs in understanding the epidemiology of Malaria took place as the political and economic trends which had introduced epidemics including those of Malaria, to new areas, continued and intensified. These trends besides the continued spread of irrigation and agricultural colonization of new areas consisted of intensified population movement following in the wake of improved transport and communications, the opening of mines and plantations and increasingly, distress migration following famines.

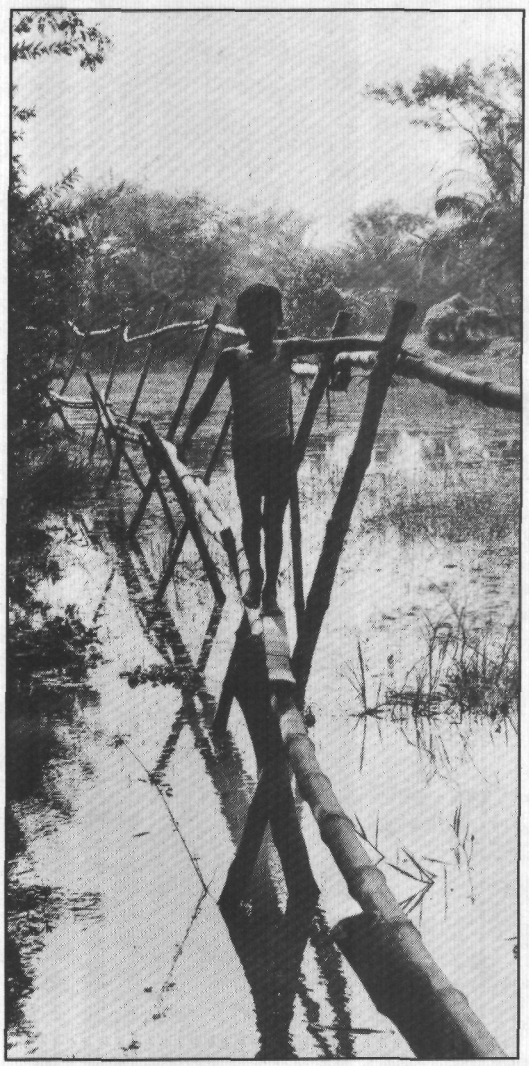
Though population throughout the nineteenth century was kept in check by high death rates caused by famine, plague, cholera, dysentery, influenza and wars, there is good reason to believe that the share of Malaria as a determinant of mortality rate as well as population growth rate increased during this period.

Chronic or epidemic malaria fever had also become a major cause of death in several parts of the country in this century.

National Malaria Control Programme

The extended studies for malaria control established that more than one factor is responsible for the wide difference in the duration of the residual effect, such as vector characteristics, the dosage per sq.ft. local climatic conditions, type of surface and social customs of the people etc.

In April 1953, the Government of India launched a comprehensive indoor residual spray programme in collaboration with the bilateral and international agencies, known as the National Malaria Control Programme (NMCP). The objective of the NMCP was to reduce malaria morbidity in highly malarious areas of the country to such a low level that the disease would cease to be a major public health problem.



National Malaria Eradication Programme (NMEP)

The success of the Control Programme was so assuring in every field that it could be controlled in the manner by which some other countries had attained this objective. The NMCP was, therefore, switched over to the National Malaria Eradication Programme (NMEP) from April 1958.

The NMEP progressed satisfactorily and the malaria incidence was brought down to only 0.1. million in 1965 with complete elimination of deaths due to malaria. This facilitated agricultural, industrial and other developmental activities of the country.

The goal of ending the transmission of Malaria totally, eliminating the resevior of infection and preventing its re-establishment by 1968-69 began to seem feasible. But then things started to go wrong.

Since 1961 focal outbreaks of Malaria began to occur and the annual incidence began to increase. New strains of Malaria began to appear and spread Plasmodia were getting resistant to the standard drug and the mosquitoes were no longer afraid of DDT.

By 1965, the NMEP started going into a decline and put the reasons down to operational, administrative and technical difficulties.

- Short supply and late arrival of imported DDT due to unavoidable reasons.
- The development of Basic Health Services in many areas did not keep pace with the progress of the NMEP.
- The States had financial and logistics constraints to meet the requirements of the programme and the small scale focal outbreaks could not be contained due to paucity of men, materials and money. This resulted in a flare-up of malaria incidence in several areas which had been made malaria-free.
- Inadequate transport.
- Inadequate laboratory services due to the shortage of staff resulting in delayed remedial measures.
- Low morale of the staff due to the temporary and limited nature of the programme and the drastic retrenchment of staff on entry of malaria units into the maintenance phase.

The Modified Plan of Operation

The number of malaria cases in the country which stood at 1.32 million in 1971 steadily registered an increase in subsequent years and reached the peak of 6.46 million.

A Consultative Committee of Experts was appointed in 1974 to determine 'An Alternate Strategy under the NMEP'. As a result of the recommendations of the Consultative Committee of Experts (1974), the Government of India embarked on a **Modified Plan of Operation (MPO) for NMEP** in 1976, which was implemented with effect from 1.4.1977. The immediate objectives of the MPO were:

- To prevent deaths due to malaria and reduce the period of sickness;
- Maintenance of the status of industrial development and green revolution due to freedom from malaria deaths and reduction of morbidity and;
- To consolidate the achievements obtained so far.

P. Falciparum Containment Programme–To contain the spread of P.falciparum incidence, a special scheme called the **p.falciparum Containment Programme (PfCP)** was launched in October, 1977.

Urban Malaria Scheme–The Urban Malaria Scheme under the NMEP was sanctioned by the Government of India, Ministry of Health and Family Welfare, during the third year of the Fourth Plan.

The Multi-Purpose Worker Scheme and the Village Health Guide Scheme–Simultaneously, with the implementation of the Modified Plan of Operation, there was the development of the Primary Health Care System with the introduction of the Multipurpose Workers Scheme (MPW Scheme) and Village Health Guides Scheme.

In the first half of the 20th century, malaria control activities were initiated in areas of political, military and economic importance to British rulers, such as (i) cantonments; (ii) tea, coffee and rubber plantations; and (iii) port areas for purpose of protection of the Armed Forces, Plantation workers and commerce and trade respectively.

From 1900 to 1936, only anti-larval measures were used in different parts of the country as a method of malaria control. The control of mosquitoes was achieved by the use of larvicidal chemicals.

DDT, first used in India by the Armed Forces in 1944, later came on the scene for civilian use for anti-malaria operations in 1945.

Malaria Trends in the 20th Century

In the pre-independence era Malaria was a major public health problem resulting in huge economic losses and social problems.

In the thirties about a third of the total population suffered from Malaria and at least 10 lakh people died each year as a district effect of the disease.

In 1952 an assessment of the situation indicated that about 7.5 crore people suffered from Malaria each year and about 8 lakh died from it.

The number of Malaria cases estimated at about 75 million annually in 1946 were reduced to about 100000 by 1965. Similarly the number of deaths due to malaria estimated at about 800000 every year prior to the National Malaria Control programme dropped to zero.

Thus Malaria came to near vanishing point and was close to eradication. Sadly enough this euphoria was short lived and the situation started deteriorating rapidly and there was a resurgence of the disease in the country. The number peaked at 64 lakh cases and 59 reported deaths in 1976.

With the introduction of the modified plan of operation for Malaria control in 1977, the number came down to 21.82 lakh in 1982. The number of reported cases was 16.63 lakh in 1987 and there has been a progressive rise reaching 21.20 lakh in 1991. The Malaria situation after 1984 is more or less static though the number of deaths recorded has risen sharply, which may perhaps be due to better surveillance over the last few years. (Refer Table 1).

Table 1: Malaria Situation in India

Year	Malaria Cases (in millions)	P.falciparum Cases (in millions)	Deaths
1976	6.47	0.75	59
1984	2.18	0.65	247
1985	1.86	0.54	213
1986	1.79	0.64	323
1987	1.66	0.62	188
1988	1.85	0.68	209
1989	2.05	0.76	268
1990	2.02	0.75	353
1991	2.12	0.92	421
1992	2.13	0.88	422
1993	2.21	0.85	354
1994	2.49	0.99	1122
1995	2.80	1.09	1061

(Provisional)

Source : NMEP Data (Unpublished)

Classification and Identification of Malaria Prone Areas

During 1994 there was a sudden upsurge in malaria problem resulting in epidemics in the states of Rajasthan, Manipur and Nagaland. Rajasthan recording about four-fold increase in the deaths due to Malaria. An Expert Committee was appointed by the Govt. of India, to identify the high risk Malarious areas inorder to develop specific strategies for different types of problem areas, which are classified as under:-

1. **Hard-core (Tribal) areas:** All the tribal areas in (a) seven North-Eastern States and (b) Tribal areas of 87 districts in the States of Andhra Pradesh, Bihar, Gujarat, Madhya Pradesh, Maharashtra, Orissa and Rajasthan are the worst affected areas. Such areas where malaria control operations over the last four decades have failed to contain the disease are characterized by : mostly difficult terrain areas, predominantly Tribal population, predominantly P.falciparum infection, and stable malaria with transmission period extending upto 9 months or more.

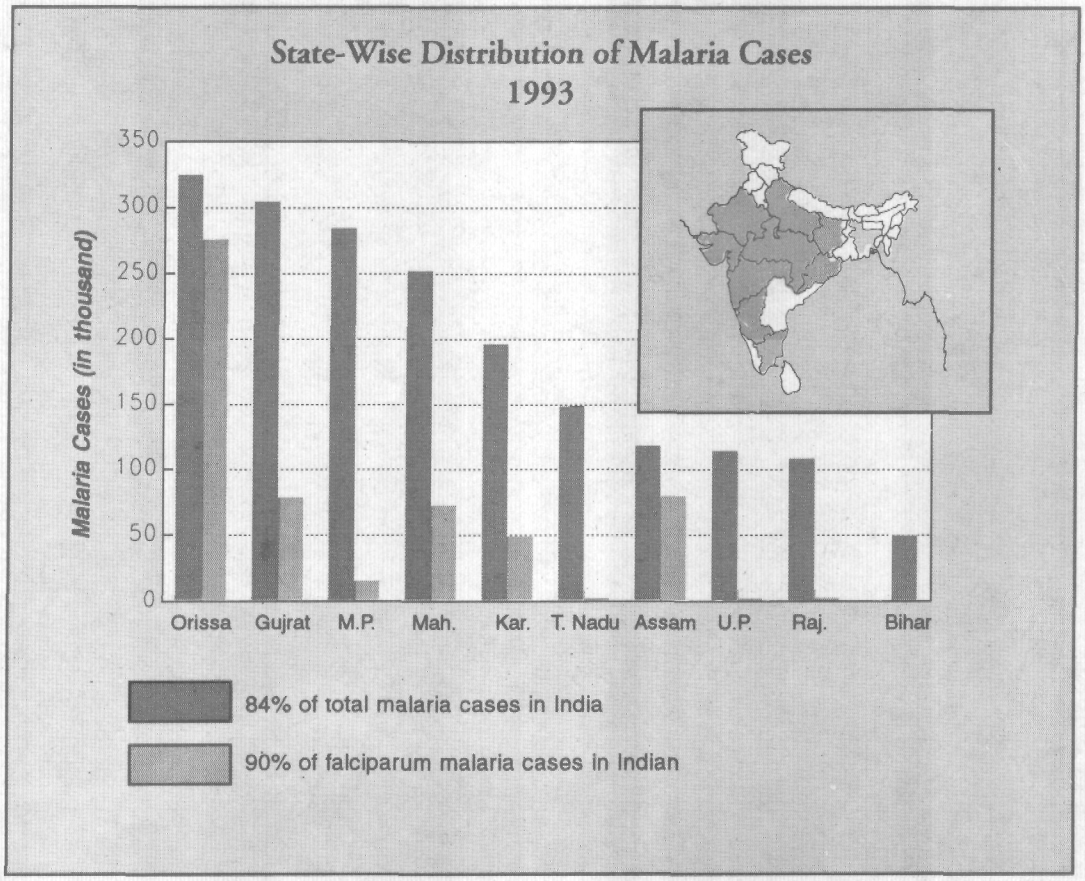
2. **Epidemic prone areas :** are considered to be those which are often prone to malaria epidemics covering about 141 million population living in Punjab, Haryana, Western Uttar Pradesh, Rajasthan, Madhya Pradesh and a few pockets in other States.

3. **Project areas** : With the rapid urbanization and industrialization many Projects have come up both for irrigation and industries which could also be classified as worst affected areas because of influx of large number of susceptible population and different strains of parasite into areas where malariogenic conditions have been created due to projects.

4. **Urban areas** : The review of past data of Urban Malaria Scheme reveals that the following 15 cities are accountable for nearly 80% of malaria cases of Urban Malaria Scheme (UMS) of NMEP. For example, Madras city alone is responsible for nearly half the malaria cases in Tamil Nadu. These Cities are : 1. Delhi 2. Madras 3. Calcutta 4. Bombay (including New Bombay) 5. Hyderabad 6. Bangalore 7. Bhopal 8. Ahmedabad 9. Jaipur 10. Lucknow 11. Chandigarh 12. Vadodara 13. Viskhapatnam 14. Vijayawada 15. Kanpur.

In addition to the above 15 major cities, 14 smaller Cities/Towns have also been reporting high malaria incidence.

According to the WHO Epidemiological Record (1993), during the last 3 years, the overall number of malaria cases in Middle South Asia remained stable with 2.6 to 2.7 million cases reported annually. These figures are strongly influenced by those from India that represent some 80% of all cases recorded. According to conservative estimates, the real malaria incidence in this region is about 6-7 times higher, representing between 16 and 19



Source : WHO Epidemiological Record (1993)

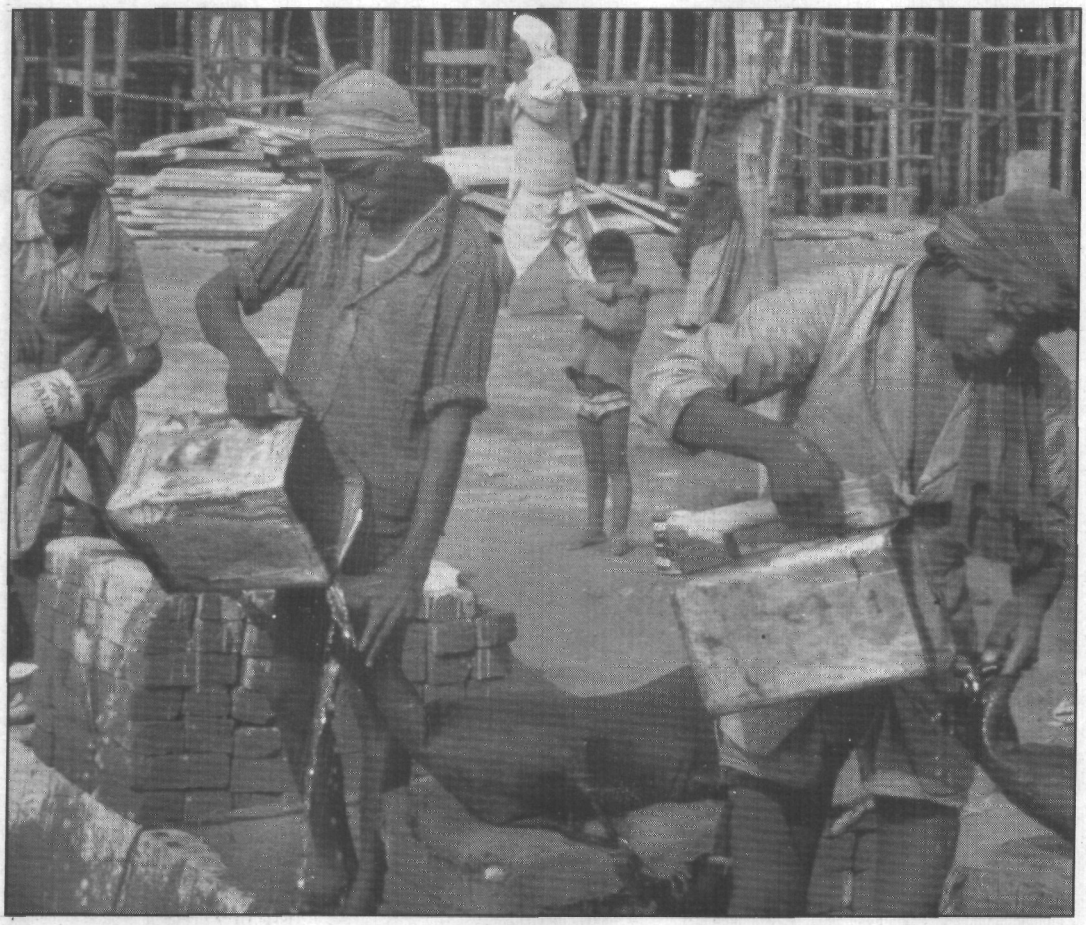
million malaria cases annually. Most of the malarious areas are situated in forests, forest-fringe areas, forested hills, development project areas and their surroundings. Forest-related malaria remains a serious problem causing nearly half of the total number of cases, of which more than 50% are falciparum malaria. Due to the exploitation of their natural resources, forest become more accessible and the movement of populations with low immunity into such areas result in malaria epidemics. Many of these areas are close to international borders, far away from the centres of development. There population is very mobile and the peripheral health structure is lacking and inadequate for the early diagnosis and treatment of malaria.

In **India**, between 2.1 and 2.2 million cases were recorded annually during the years 1991-1993. The proportion of falciparum infections, which had not varied much during the years 1986-1990, ranging between 35% and 37% decreased from 43% in 1991 to 39% in 1993. Most malaria cases originate from the following states (in decreasing order) : Orissa (324,000 cases), Gujarat (304,000), Madhya Pradesh (284,000), Maharashtra (252,000), Karnataka (196,000), Tamil Nadu (148,000), Assam (118,000), Uttar Pradesh (114,000), and Rajasthan (108,000). These 9 states contributed 84% of all malaria cases. Falciparum malaria cases came mainly from Orissa (275,000), Madhya Pradesh (150,000), Assam (79,000), Gujarat (78,000), Maharashtra (72,000), Bihar

(49,000), and Karnataka (48,000), accounting for nearly 90% of all falciparum cases reported. Comparing 1992 and 1993, the incidence decreased by 44% or more in Sikkim, Chandigarh and Himachal Pradesh and by between 16% and 37% in Jammu & Kashmir, Mizoram, Punjab, Nagaland, Delhi and Uttar Pradesh. However, the number of cases increased in Goa (+163%), Karnataka (+142%), Arunachal Pradesh (+55%), Haryana (+32%), Daman and Diu (+31%), Assam and Maharashtra (both +24%).

Urban Malaria is a major problem in India. About 130 towns in 17 states and 2 Union territories with a population of over 74 million are covered by the Urban Malaria Scheme. Nearly 80% of the cases recorded by this programme originated from 15 cities (in order of population size); Bombay, Delhi, Calcutta, Madras, Bangalore, Ahmedabad, Kanpur, Hyderabad, Lucknow, Jaipur, Bhopal, Chandigarh, Vijayawada, Vadodara and Viskhapatnam (total population: more than 42 million). Resistance of falciparum malaria to chloroquine at various levels is widespread in the north-eastern, eastern and western parts of India. Decreasing sensitivity has been reported from southern India. High-grade resistance has been detected in 4 districts of Karnataka and in Madras City.

The Epidemiological situation of Malaria in the country for the year 1995 and 1996 is given in Table 4.



Construction workers are vulnerable targets of Urban Malaria

Table 4 : Epidemiological situation of malaria in the states/UT's in India during June 1996 (As per reports received upto 14th August 1996) as compared to the corresponding period of 1995)

S. No.	State/UT	Year	BSC	BSE	Positives	PF	% Increase (+) Decrease (-) over 1995 Positve Cases	% Increase (+) Decrease (-) over 1995 PF Cases	Period upto The End of Given Month	Deaths-Period upto the End of Given Month
1.	Andhra Pradesh	1995	3132561	3132561	24857	9932				8
		1996	3398187	3398187	37934	20699	52.61	108.41	May'96	0April'96
2.	Arunachal Pradesh	1995	48588	48588	6951	660				0
		1996	43681	43681	5807	631	-16.46	-4.39	April'96	NR Feb'96
3.	Asam	1995	552222	520584	54067	32726				40
		1996	681728	662889	34078	21281	-36.97	-34.97	May'96	20 April'96
4.	Bihar	1995	278923	278923	29634	5612				1
		1996	398775	398775	17902	11428	-39.52	103.64	May'96	0 Jan'96
5.	Goa	1995	40290	40290	1059	64				0
		1996	51286	51286	3810	352	259.77	450.00	June'96	0 March'96
6.	Gujarat	1995	2443697	2227646	54154	9341				0
		1996	2724677	2709940	42112	6656	-22.24	-28.74	June'96	0 May'96
7.	Haryana	1995	907339	907339	8850	325				0
		1996	1035912	1028190	23831	2269	169.28	598.15	June'96	0 May'96
8.	Himachal Pradesh	1995	232508	232508	1059	0				0
		1996	234048	234048	1389	0	31.16	0.00	June'96	0 May'96
9.	Jammu & Kashmir	1995	105644	101434	1223	4				0
		1996	103730	98101	423	3	-65.41	-25.00	May'96	0 May'96
10.	Karnataka	1995	2716019	2716019	34191	9175				2
		1996	2927202	2629904	91367	6599	-31.91	-28.08	May'96	2 April'96
11.	Kerala	1995	460185	460185	4198	195				0
		1996	543054	543054	5077	290	20.94	48.72	May'96	3 Jan'96
12.	Madhya Pradesh	1995	1594408	1594408	64364	32429				1
		1996	1946269	1946269	80871	44749	25.65	37.99	May'96	0 Jan'96
13.	Maharashtra	1995	4487413	4469385	98008	22527				26
		1996	5321659	5214963	113884	26751	16.20	18.75	June'96	27 June'96
14.	Manipur	1995	39184	39184	1507	704				0
		1996	33249	33249	623	239	-58.66	-66.05	May'96	0 May'96
15.	Meghalaya	1995	97716	97716	6292	4788				10
		1996	84746	84746	6074	3769	-3.46	-21.28	May'96	6 May'96

16.Mizoram	1995	70530	70530	5326	2852				13
	1996	72184	72184	4227	2441	-20.63	-14.41	June'96	3 May'96
17.Nagaland	1995	25407	25407	782	232				0
	1996	25656	25656	878	151	12.28	-34.91	June'96	0 March'96
18.Orissa	1995	923824	923824	91939	77303	35			
	1996	1171905	1155329	136954	118420	48.96	53.19	May'96	1 March'96
19.Punjab	1995	1057658	1057658	4835	18				0
	1996	1076788	1076788	7872	169	62.81	838.89	June'96	0 Feb'96
20.Rajasthan	1995	2170038	2170038	98890	14901				21
	1996	1783872	1783872	49590	6422	-49.85	-56.90	June'96	3 May'96
21.Sikkim	1995	8718	8718	25	2				0
	1996	9751	9751	164	3	356.00	50.00	June'96	0 June'96
22.Tamilnadu	1995	2068354	2068354	30260	3372				0
	1996	2308400	2308400	23858	954	-21.16	-71.71	May'96	0 May'96
23.Tripura	1995	54661	54661	5362	4646				11
	1996	56072	53078	5272	3861	- 1.68	-16.90	May'96	6 July'96
24.Uttar Pradesh	1995	2211090	2193968	14121	713				0
	1996	2700018	2686615	18127	1339	28.37	87.80	May'96	0 Feb'96
25.West Bengal	1995	725382	725382	19188	3664				10
	1996	712144	646811	19561	3576	1.94	-2.40	May'96	0 April'96
26.Andaman & Nicobar	1995	94431	94431	770	167				0
	1996	91387	91387	558	131	-27.53	-21.56	June'96	0 March'96
27.Chandigarh	1995	29762	29762	2068	4				0
	1996	40170	40170	2304	1	11.41	-75.00	June'96	0 March'96
28.Dadra & Nagar Haveli	1995	NR	NR	2085	189				0
	1996	NR	NR	2961	552	42.01	192.06	May'96	0 March'96
29.Daman & Diu	1995	7660	7563	311	11				0
	1996	8278	8204	904	11	190.68	0.00	June'96	0 March'96
30.Delhi	1995	461728	461728	2744	7				0
	1996	523432	523432	2561	6	- 6.67	-14.29	July'96	0 May'96
31.Lakshadweep	1995	2550	2550	1	0				0
	1996	1382	1382	0	0	-100.00	0.00	June'96	0 April'96
32.Pondicherry	1995	91938	91938	262	3				0
	1996	92838	92838	137	3	-47.71	0.00	June'96	0 March'96
Total	**1995**	**27140428**	**26853282**	**769383**	**236566**				**178**
	1996	**30202480**	**29653179**	**741074**	**283756**	**-3.68**	**19.95**		**139**

Source : NMEP - Unpublished Report on Malaria, 1996

Malaria Control Programme: The Need to Decentralize

The MPO in India during 1977 was a bold step to decentralize and involve the general health services under the primary health care system in NMEP operations and also in soliciting the active voluntary participation of the community in malaria eradication activities. Fever Treatment Depots and Drug Distribution Centres were opened throughout the country through public cooperation by involving the Panchayat members, school teachers, etc. for ensuring the collection of blood smears and administration of presumptive treatment.

Inspite of it, where do we stand? The present system is centralized and is highly bureaucratic which does not involve participation of the common man. On paper it might appear that health services are fulfilling their goal but in actuality economic resources and administrative structure does not allow it to happen.

Every five years, high level discussions on health related policies, progress and planning are held, expert committees set up, resources evaluated and new suggestions and recommendations instituted. Yet at the end of it all we find ourselves back in square one, with the disparities between the have and the have nots looming even larger than before. Despite a lot of talk for changing the present system, we have not succeeded in moving any further and the existing system only ends up getting strengthened.

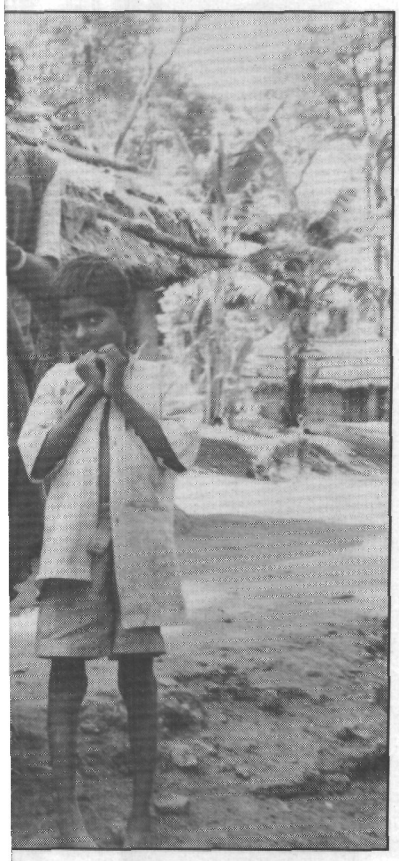
Today's health system is partronizing the common-man and decapacitating the community and the society. It is not improbable or impossible to train an illiterate person about health so as to ensure that he does not have to run after doctors or quacks who will exploit him. communities are capable and have an inherent potential to take on responsibility, once it is placed on their shoulders. With responsibility comes awareness and the realization of their rights and duties. Hence, it is of utmost importance to begin all work with the people themselves and build on their potential and experience for identifying problems and find-

Success in Malaria control requires decentralization of decision ma and strengthening of capabilities of communities such as these

ing solutions which influence their very existence.

The global strategy

The global strategy calls for rational use of existing and future tools to control malaria. It recognizes that Malaria problems vary enormously from epidemiological, ecological, social and operational viewpoints and that sustainable cost effective control must therefore be based on local analysis. Based on decades of lessons from practice, the strategy is firmly rooted in the primary health care approach, and calls for the strengthening of local and national capabilities for disease control , for community participation and the decentralization of decision making for the integration of Malaria control activities with related disease programmes and for the involvement of other sectors, specially those concerned with education, agriculture, social development and the environment.



Therefore, if any degree of success is to be achieved in the control of Malaria, the construction of a local decentralized programme becomes absolutely imperative. It should be left to the state governments to plan their own strategies in consonance with the local epidemiological, entomological, ecological and socio-economic conditions and thereby incorporate the management of Malaria into the Primary Health Care system. (WHO 1993)

The Lacunae

- In case of any outbreak it is the local government which should get activated immediately instead of waiting for a central agency like the NMEP to turn up and dole out impromptu solutions which end up being out of context because of the delay in arrival.
- As it is, the reporting systems are not quite efficient and most of the feed-back sent from the district and the state level to the NMEP Head Quarters in Delhi takes a minimum of two months unless there is a major outbreak and it makes media headlines which provides a wake up call to the Central agency to get activated.
- The overwhelming lack of trained personnel in the district health system leaves a gaping hole in the planning and implementation of any health programme, be it malaria or any other health problem.
- Planning too needs to have a dynamic bottoms up approach if the affected community is to be actively involved in its own welfare. The Plan of Action needs to generate from the local to the district level, then to the state level and ultimately to a central plan of action.
- The global strategy time and again lays emphasis on the participation of the communities, on using local information for setting up local plans and putting the local plans under the district structure and further incorporating them into state level plans and so on.

However, if the community's participation is to be elicited then the most important role has to be assigned to the voluntary organizations and the Community based organizations not

Table 2 : Expenditure on salaries for Disease Programmes

(Selected States)

Year	Malaria		Tuberculosis		Leprosy		Blindness	
	As %	Actuals	As %	Actuals	As %	Actuals	As %	Actuals
Andhra Pradesh								
1990-1991	80.00	336.46	82.53	41.85	85.22	153.69	10.21	7.05
1994-1995	93.29	495.42	81.91	71.58	88.88	250.64	8.43	14.36
Assam								
1990-1991	.00	69.32	16.60	13.43	.00	14.02	.00	7.10
1994-1995	9.55	73.51	56.59	18.20	56.64	24.91	.00	15.06
Bihar								
1990-1991	95.25	191.25	2.90	10.34	99.54	130.74	38.66	4.63
1994-1995	86.88301.39		3.24	10.49	104.70	161.19	34.34	4.63
Gujarat								
1990-1991	5.90	113.95	57.38	61.47	68.54	44.22	62.75	21.02
1994-1995	3.80256.03		41.70	105.85	67.63	57.67	79.57	28.10
Haryana								
1990-1991	81.14	98.41	60.75	16.61	58.11	.74	11.76	2.21
1994-1995	77.95	161.51	39.60	60.83	77.27	.66	.00	10.54
Karnataka								
1990-1991	.00	91.97	66.92	48.92	35.60	22.67	.00	7.85
1994-1995	24.06	166.27	48.26	96.65	10.50	48.48	.00	23.80
Kerala								
1990-1991	92.05	31.95	51.96	17.90	97.69	22.04	89.24	4.46
1994-1995	90.80	65.86	53.59	37.90	96.67	57.37	70.80	16.92
Madhya Pradesh								
1990-1991	79.81	190.22	35.36	10.04	83.83	62.72	66.29	18.66
1994-1995	66.18	328.04	73.61	105.56	86.50	85.95	61.13	39.46
Maharashtra								
1990-1991	68.25	372.50	49.66	121.84	80.87	130.39	.00	4.43
1994-95	76.40	448.81	48.48	168.50	78.59	194.07	.00	5.04
Orissa								
1990-1991	82.74	83.14	69.37	22.72	85.53	56.88	92.83	2.79
1991-1992	84.05	89.68	72.72	26.21	86.86	67.75	32.70	4.22
Punjab								
1990-1991	68.28	148.98	79.32	30.41	91.13	2.48	52.94	3.23
1994-1995	83.45	131.15	65.38	53.50	87.05	4.48	55.77	8.75
Rajasthan								
1990-1991	71.46	170.37	67.49	65.61	88.96	10.24	33.53	6.77
1994-1995	71.41	261.16	62.84	101.57	92.04	16.59	17.98	19.85
Tamilnadu								
1992-1993	NA	.00	55.52	67.53	92.93	173.10	78.92	13.66
1994-1995	NA	.00	52.20	94.00	93.32	217.01	85.02	15.75
Uttar Pradesh								
1990-1991	72.48	457.20	86.11	179.33	74.41	143.09	62.14	30.16
1994-1995	70.09	569.33	59.15	172.87	80.34	154.19	50.92	27.20
West Bengal								
1989-1990	96.31	147.75	77.01	96.05	87.97	63.36	92.53	4.82
1994-1995	94.72	230.59	72.52	165.56	91.81	87.87	81.29	12.56
Arunachal Pradesh								
1990-1991	93.39	3.78	88.62	3.25	92.80	1.25	.00	.49
1994-1995	78.52	12.71	68.97	6.67	89.95	1.89	.00	.59
Goa								
1990-1991	78.88	2.32	82.61	6.44	82.78	3.95	92.86	.84
1994-1995	85.93	2.70	86.42	8.10	87.20	5.00	93.10	1.16

Note: Actuals are in Rs millions spent on each disease programme.
Source : Respective State government, Demand for Grants, 1993-94 and 1994-95.
(Source RJH (New Series) Vol:1 (1996) - National Disease Control Programmes (Ravi Duggal, Sunil Nandraj)

forgetting other formal or informal organizations like the NSS, the Mahila Mandals, the Youth groups, NYK, NCC etc.

Unfortunately the NGO sector contributes less than 5% to the health system of the country. Less than 1% of the total money of the health budget of the government flows through the NGOs.

The tremendous potential that exists in this sector of development needs to be harnessed and given the right direction in order to initiate change in the communities.

Budget Allocation

India spends only 17 - 18% of its budget on the social sector which includes health, education,nutrition, social welfare, water supply and sanitation. In comparison Nepal and Srilanka spend 30 -35% on their social sector.

Even within the country, states like Kerala and Tamil Nadu have shown better progress because they have spent much more on their social sector.

Labour Intensive

Another glaring fact which comes up for comparison is that while in China the budget goes for services, in India it goes for salaries and infra-structure.

Even though one recognizes that the health sector is clearly a labour intensive one where human resource is the most valuable output , it cannot be denied that without adequate drugs diagnostics, etc. the human resource has little value. Thus if in the present situation 80% of the resource goes for paying salaries then the health work force cannot be effective with the meager resources left over to treat patients and for preventive and promotive care (Refer Table 2).

While most states show a fairly high share of expenditure for the malaria programme from the total disease programme budget, it must be noted that most of it goes to salaries of the staff. Hence, what actually is spent on the treatment or control of Malaria may be a very small amount of the national Malaria budget (about Rs.5000 million) which in itself may be quite adequate to fight Malaria under a comprehensive health programme.

Role of the Community

Environment Sanitation work requires community involvement for individual protection, monitoring and cleaning water stagnation in public places and at home. Environment Sanitation is as important as presumptive treatment and the community can be actively involved in the breeding of guppy fish, impregration of bed nets with insecticides, self protection by using mosquito repellent oils and creams, growing of lemon grass etc.

Participation and mobilization of the people is essential for the management of community problems, and it is an undeniable fact that IEC is one of the most important components of any programme for eliciting community response. For the success of any health-related programme it becomes important to educate the people and involve them in looking after their own health by setting up good information systems and help them to use the information meaningfully.

Integration of Malaria related education and training of ICDS workers, other health and development workers, sarpanch, patwaris, school teachers, Mahila Mandals, NYK, NSS, NCC etc. can play an important role to ensure monitoring of the local Malaria control activities as this is the key to rational Malaria care.

Role of the NGOs

An alert community will ensure even the most sluggish of administrative machinery to respond and it is the NGOs who can voice the community's feeling and needs forcefully enough for the government to take action. The flexible non bureaucratic functioning of the NGOs makes innovative work possible. Additionally, the increasing trend towards privatization, with

government handing over responsibilities of provision of health care services of hospitals, PHCs etc. to the private sector including private voluntary organizations, is clearly indicative of a *shift in policy.*

The role of the NGO is not to be second rate contractors to do the Government's job cheaply. The relationship between the NGOs and the Government is of a partnership in development. Each has its own strengths and weaknesses which if put together can help mobilize the community, train the people to identify their problems, recognize their needs and activate themselves to overcome the circumstances.

Role of the Panchayats

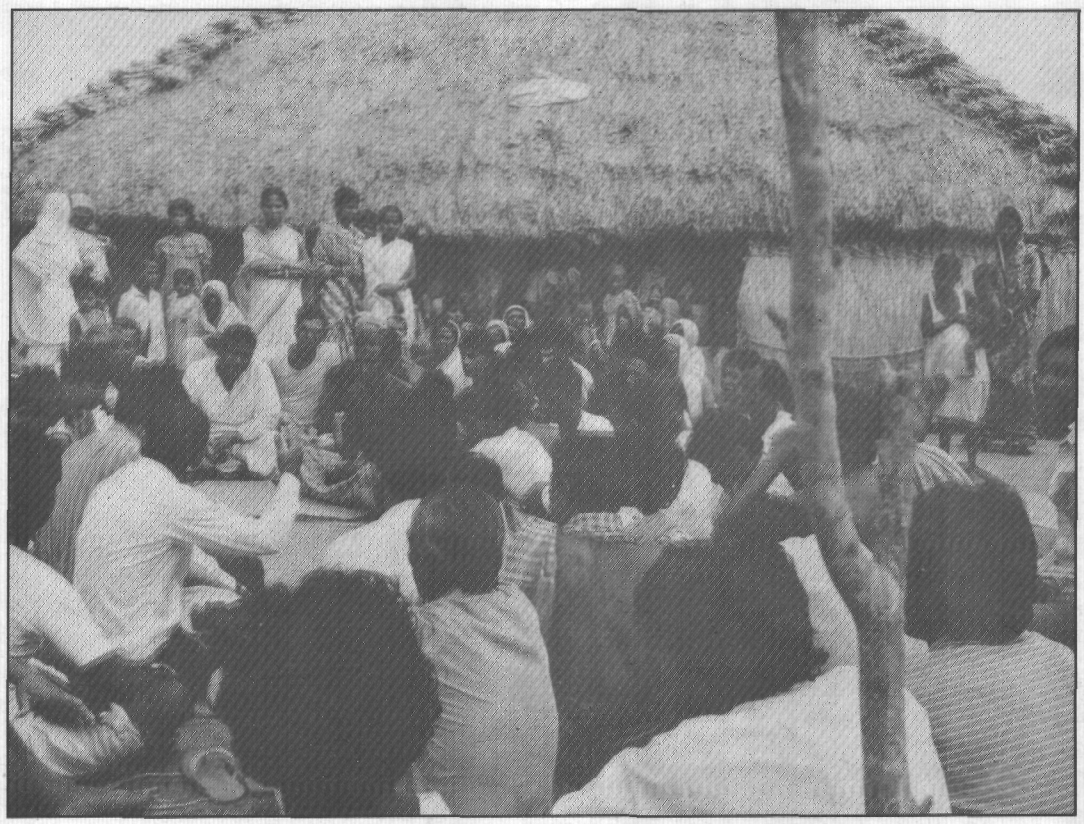
If cooperation and collaboration are to be the key words between the community and the Government then perhaps the one redeeming factor in the country's systems is the Panchayati Raj.

If we can get the system to work meaningfully and pass on the powers to the people who share a stake in the country's progress, there is a great chance for this country to get the people involved into understanding the problem issues.

What the government needs to recognize is that people are quite capable of understanding what the problems are and are managing to deal with these problems with a little bit of support.

One excellent example of such an exercise is that of the **Karnataka Zila Parishad.**

Karnataka had a Malaria epidemic the same year as Rajasthan. The number of reported malaria cases esclated by an alarming proportion (Refer Table 3). What is most creditable is that there was no death recorded in 1993 and only 3 deaths reported in 1994. The entire situation was brought under control by the efficient or-



Who will make the village plans --
none else than the village panchayats themselves