Water and Sanitation

A Baseline Survey

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E X E C U T I V E S U M M A R Y

EXECUTIVE SUMMARY

Study Background:

Safe drinking water and proper sanitation are inseparable and critical to rural health. Rajiv Gandhi National Drinking Water Mission (RGNDWM) entrusted Indian Institute of Mass Communication (IIMC) the responsibility of conducting a nation-wide Survey of water and sanitation in order to provide baseline on key parameters and indicators of the effectiveness and success of Water and Sanitation (WATSAN) programme and useful background and insights for evolving Information, Education and Communication (IEC) strategies at various levels to ensure effectiveness and success of WATSAN programme.

This Survey was conducted during 1996-97 in 65 districts of 25 states. In each district 20 villages and in each village30 households were selected randomly to generate both quantitative and qualitative data on select parameters and Indicators.Relevantinformation was collected from households, schools, Anganwadies and Panchayat from selected villages. Information on operation and maintenance of public water supply and latrines was also collected. In addition to this focussed group interviews and case studies were also conducted with users and providers of WATSAN facilities in order to understand their problems and suggestions to solve those problems. As many as 10 instruments were used to generate valuable information on various aspects of WATSAN. The nation wide situation as revealed by the baseline survey on key water and sanitation related parameters/ indicators is summaries here.

The selected villages varied in terms of their location, size of population and infrastructural facilities. Of the respondents selected for the detailed interview majority are male (60 percent), married (83 percent) and literate (52 percent) with average age of 39 years. They came from different social strata.

Water Related Indicators:

There are usually multiple sources of water in most villages. Of the total identified sources about 20 per cent are not functioning due to various reasons such as mechanical fault, electricity failure, pipe burst, etc. Only in a very small proportion of villages facilities for timely repair and maintenance are available. Further, there is no clear develops in the water supply system.

The Study revealed that tap is used by 33 percent, hand pump by 31percent, sanitary well by 8 per cent, open / dug well by 20 per cent, lake by 1 per cent, river / canal by 8 per cent, pond / tank by 4 per cent, and spring by 6 per cent, households at the national level.

Bihar, Uttar Pradesh and Rajasthan in North and West Bengal, Assam and Tripura in NorthEast are relatively more deprived of tap water. Spring is used mostly in Himachal Pradesh, Goa, Meghalaya and Sikkim. Pond / Tank is used mostly in Manipur and Assam and River / Canal mostly in Arunachal Pradesh, Tripura, Assam, Jammu and Kashmir. Open /dug wells are used mostly in Kerala and Karnataka in South, Assam, Meghalaya and Tripura in North East and Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan in North.

The available drinking water is considered clean by 89 per cent and safe by 81 per cent households. Interestingly 69 percent people consider the water they use as clean simply because it looks clean. Only 20 per cent consider it safe only when it is free from germs. In North Eastern states, Goa and Kerala people were more conscious of germs as a determinant of safe water.

The awareness that contaminated unsafe water can cause certain diseases is relatively higher in Haryana, Uttar Pradesh, Rajasthan, Maharashtra, Gujarat, Kerala, Karnataka, Mizoram, Assam, Meghalaya and Tripura than in other states. Almost 50 percent people think diarrhoea, dysentery, cholera and malaria as water born diseases but not so much filaria, jaundice, typhoid and guinea worm as yet.

Mostly (41 per cent) is adult and old women who are primarily responsible for fetching water. This burden is greater on women in Jammu and Kashmir, Madhya Pradesh, Rajasthan, Haryana, Orissa, West Bengal, Maharashtra, Gujarat, Karnataka and Assam. Only 6 percent adult males share this burden, that too mostly in Maharashtra, Tamil Nadu, Andhra Pradesh, Kerala and Meghalaya.

Almost 75 per cent water fetchers have to travel longer upto 500 meters and spend upto half an hour each day. They have to travel longer distances and more time in Rajasthan, Jammu and Kashmir, Himachal Pradesh and Sikkim. As many as 59 per cent people feel that the water they fetched is inadequate and 76 percent feel that it is safe. Inadequacy is more acute in Bihar, Rajasthan, Arunachal Pradesh, Manipur, Tripura and Sikkim than in other states.

Water is considered as clean by 77 percent, muddy by 13 percent, brakish by 2 per cent and containing fluoride and iron by less than 1 percent. Water is muddier in Rajasthan and most of the North Eastern states, brakish in some northern and southern states. Water contained fluoride in Andhra Pradesh and iron in NorthEastern states.

Water is stored mostly in earthern and metallic containers by 28-29 percent people. Vessels are cleaned with water by 29 per cent, with water and ash by 20 percent and with

water and detergent by only 9 per cent people. For water purification people use cloth filter (50 per cent), boiling (33 per cent), Chlorine (5 per cent), Candle Filter (5 per cent), alum (2 per cent) and even seeds.

People in the sampled villages generally get their drinking water from public water sources mainly taps (33 percent) and hanpumps (31 percent). They are put in place by the Government under Panchayat Raj Scheme in 25 per cent villages and under PHED in 35 per cent villages. The water supply is adequate through out the year in 42 percent villages and in slightly higher percentage of villages in Punjab, Himachal Pradesh, Jammu & Kashmir, Bihar, Rajasthan, Gujarat, Goa, Andhra Pradesh and Tripura.

In 22 percent villages, people are willing to pay for drinking water and 32 per cent are willing to bear the expenses for operation and maintenance. They think that it is government's responsibility to install the water supply. However, people are more often willing to contribute in kind and even are willing to take responsibility for and acquire the maintenance, repair and management skills to ensure smooth operation of water schemes. In general, people are willing to bear the operation and maintenance cost and the cost of water used. But hey are not willing to bear the capital costs of installation for the obvious reasons of high capital costs and skills involved.

The responsibility for installation, operation, maintenance and management of the systems created by the government under various schemes is neither shared with or transferred to user groups or communities or the mechanisms they consider as the most appropriate and cost effective.

***Sanitation Related Indicators*:**

Hand washing before and after eating is almost universal in most states. However, hand washing is more a ritual than actual cleaning of hands of dirt etc. before eating their meals. After defecation, 74 percent wash, 4 percent wipe and 16 percent wipe and wash the rectum. After defecation, hand washing is universal. Water and soap is used for washing hands by 34 percent, water and ash is used by 8 per cent and water and sand is used by 19 percent of people.

While 60 percent people have separate kitchen, only 45 per cent have it properly ventilated. For cooking various fuels are used such as wood by 80 percent, dung cake by 28 per cent, straw by 22 per cent, Kerosene by 9 per cent, LPG by 4 per cent, coal by 2 per cent, bio gas by 1 per cent.

People dispose waste water in backyard (30 percent), open pit (21 percent), on the street (17 percent), in open drainage (9 percent), in close drainage (7 percent) and in soak pit (7 percent). People consider drain as the safest method (41 percent) followed by open

pit (11 percent), kitchen garden (10 percent) and soak pit (7 percent). Stagnant water is considered as a cause of disease spread (45 percent), bad / stinking smell (34 percent), mosquito breeding (49 per cent) and inconvenience of some sort (7 percent).

Although most people defecate in open space in most states, only 20 percent households reported having private latrines. Of them, it is noticed that 39 per cent use septic tank, 37 percent single pit, 8 percent, double pit, 8 percent service dry method of private latrine.

Almost 55 percent people are motivated by themselves, 11 percent by family members, 9 per cent by officials, 7 percent by non-officials and 2 percent by neighbours. Among the factors that actually motivated people to have latrines it seems that 30 percent are motivated by convenience, 21 percent by privacy, 4 percent by cleanliness, 2 percent by status, 1 percent by old age and only 2 per cent by subsidy.

So far as material used for latrine construction is concerned, 51 percent have used bricks, 17 per cent stone and 5 per cent mud. Roof is added by 75 percent and door by 87 per cent. Once constructed in 90 percent cases these are used by all family members, by females only (6 per cent) and by the old and children only (2 per cent). On an average 36 per cent latrines are cleared by females, 20 per cent by males and only 9 per cent by sweepers.

Among the reasons for wanting a latrine in future, convenience (55 per cent) ranks first followed by privacy (37 per cent), health protection (23 per cent) and convenience of the old or infirm (6 per cent). Among the reasons given by people for not having a latrirne so far, non-affordability (82 per cent) appeared at the top, followed by lack of subsidy (15 per cent), lack of material availability (4 per cent) and lack of detailed knowledge (3 per cent), It is interesting to note that almost 40 per cent people are willing to speed upto Rs.500 and 19 per cent even more than Rs.500.

IEC Strategy:

Lack of awareness and proper understanding of role and responsibilities at various levels seem to have acted as barrier in their active participation and contribution to the successful implementation of the WATSAN schemes. Negligence occurs when both public and authority, users and providers of services, fail to define, understand, assume and perform their specific roles and responsibilities that they must perform in order to ensure the success of a programme within a given time frame.

For effective IEC strategy to overcome negligence factor so widely prevalent and motivate the concerned people at various levels it is suggested to tap only those mass media which are already in use by 33 per cent or more. This combination will vary from one state, district or block to another.

Similarly, using the arbitrary cut off point of 25 per cent of some of the village level functionaries/officials frequently interacting with people can be identified for direct and close interaction with WATSAN service supporters and users at the community level. Among them, multi purpose health workers, Anganwadi workers, Doctors and ANMs or Dais from health department; Panchayat member's community development workers and school teachers from other departments are the most crucial.

A new paradigm for IEC strategy is suggested (Fig. 1.p. 43 A). In this figure, there are four concentric circles. The innermost contains the critical mass of real service users, in this case woman. The next outer circle contains the critical mass of service supporters: such as significant members of families, neighbourhood and communities where women live and who have a significant say or facilitating role to play in WATSAN programme. The next outer circle contain the critical mass of officials and non officials who are directly or indirectly responsible for providing various inputs and services required by the WATSAN programme. The outer circle contains the appropriate combination of mass media that are accessible to the critical mass of users.

There are arrows shown coming in and going out of each circle as feed forward of program-related inputs and feedback of problem-related inputs. From outer circle to innermost circle, the programme-related inputs must be provided to ultimately empower the service users in progression. At the same time, from innermost to the outer circle, the problem-related inputs must be provided as a feedback to constantly adjust the nature and flow of new programme inputs in response to the needs and priorities, problems and difficulties of the critical groups in the inner circles in performing their desired WATSAN roles and responsibilities.

The IEC strategy should convert the large unmet need relating to WATSAN into an effective demand by providing programme related IEC inputs in response to problem-related feedback from service providers, supporters and users with a view to make them sufficiently conscious, willing an able to understand, appreciate, accept and perform their corresponding roles and responsibilities that are involved in design, installation, operation, maintenance and management of WATSAN services on a sustained basis.

CHAPTER I

INTRODUCTION

I

INTRODUCTION

The Government's concern since Independence has been raising the quality of life and the health of the people. Several initiatives were taken at policy formulation level leading to various programmes in this direction.

Supply of safe drinking water and provision of sanitation are the most important contributing factors for improving the health of the people in any country. As per a World Health Organization (WHO) report 80 per cent of the diseases are due to unhygienic conditions and unsafe drinking water. It is estimated that every year about 1.5 million children under five years die in India of water related diseases. The country loses over 200 million madness each year due to water and sanitation diseases. Age old cultural practices coupled with illiteracy of safe drinking water has therefore, been given very high priority in Indian Planning.

Providing drinking water in rural areas is the responsibility of the State Governments and the funds were provided for the purpose in their budgets from the First Five-Year Plan. During 1954 National Water Supply and Sanitation Programme was introduced in the social welfare sector. The states built up gradually the Public Health Engineering Departments (PHEDs) to attend to the problems of water supply and sanitation. Under the pogramme 100 per cent grants-in-aid to implement the different water supply schemes for the 'problem villages' were provided by the Government of India. In the mid-1960s it was realised that these schemes were implemented only in the easily accessible villages and in the process the hard core 'problem villages' remained unattended. The Government of India during the Fourth Five-Year Plan took steps to provide assistance to the States to establish special investigation divisions for the problem villages.

In order to accelerate the pace of coverage of problem villages, the Government of India introduced the Accelerated Rural Water Supply Programme (ARWSP) in 1972-73.

During 1974-75 the Minimum Needs Programme (MNP) was introduced because of which the ARWSP was withdrawn but it (ARWSP) was reintroduced in 1977-78 when the progress of supply of safe drinking water to identified problem villages was not found to be satisfactory.

In the year 1977 the United Nations Water Conference separated the issue of drinking water and sanitation from other water issues to stress the seriousness and magnitude of the problem of drinking water. The conference recommended that each country should develop national plans and programme for water supply and sanitation giving priority to the schemes of the population, which require greatest attention. India was a signatory to the resolution seeking to achieve the target by 1991. The water decade programme was launched in India on 1 st April 1981 to achieve definite targets of coverage of entire population by 31 st March 1991.

In August 1985 the subject of rural water supply and sanitation was transferred from Ministry of Urban Development to Department of Rural Development with the objective of securing implementation of the programme and their integration with other rural development programmes.

The National Drinking Water Mission was launched as one of the five societal missions in the year 1986. The mission has been named as Rajiv Gandhi National Drinking Water Mission (RGNDWM) in 1991. Government of India continues to give highest priority to rural drinking water sector through the activities of the Mission and ARWSP. It also forms the part of the state funded MNP and Point No. 7 of the Twenty Point Programme, 1986.

It is claimed that the RGNDWM over the last decade has successfully covered the majority of habitations with hand pumps/stand posts. However, it has now been realised that the objective of supplying safe water would not be achieved to the extent and satisfaction it is expected unless the sanitary aspects of water supply, as well as the issue of sanitation were addressed simultaneously. The focus has now shifted from water to water and sanitation. The mobilisation of large funds and efforts through RGNDWM in this direction have not yielded the desired impact on the health of the general population. Many reasons and explanations could be extended to explain the not so satisfactory results of the efforts under water and sanitation programmes over the years. However, in order to have scientific basis for better understanding of various aspects of prevailing situation in regard to water and sanitation in rural India, a nation wide base-line survey was requested by the Rajiv Gandhi National Drinking Water Mission, Ministry of Rural Development. The Indian Institute of Mass Communication (IIMC) undertook this assignment of a base-line survey in 65 districts spread over 25 states with the following broad and specific objectives.

1.1 Objectives

The base-line survey was contributed in 65 districts to achieve the following general objectives.

- To provide baseline against which the effectiveness and success of water and sanitation programmes could be assessed.
- To provide background data and insights at the district level for evolving a suitable IEC programme and strategy.

Specific Objectives

- to identify the success of drinking water supply in selected villages, their location and suitability;
- to find out the habits, attitudes, perceptions and practices about the storage, handling and consumption of drinking water;
- to find out the habits, attitudes, perceptions and practices about the personal hygiene including hand washing after defecation and before cooking/eating food;
- to find out the habits, attitudes, perceptions and practices about disposal of solids and liquid wastes including human excreta;
- to find out the awareness about the sanitary aspects of water supply, including keeping the water source neat and clean, safe disposal of waste water and solid waste;
- to find out the awareness about the relationship and impact of water and sanitation on the health of the people;
- to document success stories relating to individuals, families and villages/communities about their participation in water and sanitation programmes;

- to evolve parameters and indicators for measuring impact on health due to adoption of water and sanitation programme;

- to find out socio-economic and cultural barrier and resistance to adoption of safe drinking water and sanitation facilities that are being provided under RGNDWM;

- to document the socio-economic and cultural considerations that prompted some to adopt safe water drinking and sanitation practices under RGNDWM;

- to study the factors facilitating or acting as barriers to community participation in the water and sanitation programme to make it not only operation but sustainable as well;

- to assess the role of various organizations and groups such as the panchayat, school, village, functionaries, youth clubs, mahila mandals etc. In implementation of various programmes and schemes;

- to study the problem of repair and maintenance of hand pumps/stand posts and the factors responsible for poor maintenance and suggestions about its solution;

- to identify, document and analyse the various channels of information, education and communication about water, sanitation and health related issues; their strength, weakness and potential for effective IEC strategy;

1.2 Methodology

The various social science research methods and techniques were used to collect primary and secondary data from different sources with a view to gain insight and document the existing perceptions and conditions relating to drinking water and sanitation situation in rural areas of the selected 65 districts. The details are as follows:

Library Research:

The books, study reports and other documents relating to drinking water and sanitation were perused and relevant information were culled out for the present study.

Sample Survey:

In each of the 65 districts taking into consideration the geographical, socio-cultural differences, 20 villages were selected randomly for the sample survey. In each of these villages a sample of 30 households giving representation to different sections were chosen for data collection relating to water and sanitation. Different instruments of data collection were utilized for sampled individual, family and the village.

The villages were selected using random number table from the list of villages in the district. From this, first complete household enumeration was undertaken and from the list of Households in the villages, 30 household was selected using random table number to cover different social / caste categories proportionate to their relative strength in the village population. In the sampled household any adult male/female available was intensively interviewed on the basis of prepared and pre-tested household interview schedule (HIS - Instrument No. 3).

To get a picture of the selected village, information about village as a whole was collected and various aspects of infrastructural and institutional facilities with a focus on water and sanitation situation in the village. For this instrument No. 2, 4 and 5 were used.

For qualitative information case studies and focus group discussions combined with participatory observations methods were used, which provided rich insights into prevailing condition in regard to water and sanitation.

The different instruments, for collecting both qualitative and quantitative data were developed by IIMC and finalised after detailed discussions with the consultants and participating agencies and pre-testing in the field. A training manual for training the supervisors and investigators was also developed on the basis of which training was imparted to the participating research teams of supervisors and investigators. The data collected were analyses at the IIMC computer facilities. The statewise reports have been prepared. Here we are presenting the national overall picture regarding WATSAN.

1.3 Report Structure :

The key findings and their IEC implications emerging from this study are briefly presented in this report in separate sections on water related beliefs and practices, sanitation related beliefs and practices, access to information and communication, negligence of service users and providers. In each section various dimensions or parameters of problems are described on the basis of state wise facts and figures. State wise information tables are presented in annexures. In each section key findings or observations are highlighted. The IEC model emerging from findings is presented at the end.

CHAPTER II

PROFILE OF STUDY
VILLAGES AND SELECTED SAMPLE

II

Profile of Study Villages and Selected Sample

As stated earlier in each of the identified district 20 villages were selected and in selected village 30 households were identified using stratified random sampling procedures. In selected village Household enumeration was undertaken to get basic information and sampling of the 30 selected households. The detailed data on various aspects of WATSAN were collected by interviewing one adult from each of the sampled household.

2.1 *Private Water Sources & Latrines*:

The selected villages varied in terms of their location, size of population and infrastructural facilities. However, on an average there were 214.6 households with average population of 224.28 persons. About 30 per cent of the Households had their own sources of water and 20 per cent had their own private latrines. Thus, the majority of the rural population depend upon 'public' sources of water and go out in the open for toilets. Comparatively there is higher prevalence of private latrines in North Eastern States, Kerala, Haryana and Punjab. Generally they used septic tank or single pit latrines.

Of the respondents, the majority were male (60 per cent), married (83 per cent), literate (52 per cent) and their average age was 39 years. They came from different social strata. The majority of them were Hindu. And nearly half of them lived in kutcha or partly thatched / pucca houses.

2.2 *Public Water Sources*:

In the sampled villages efforts were made to identify various public water sources and their condition. There were usually multiple sources of water in most villages.

Of the total identified water sources about 20 per cent were not functioning due to various reasons. For example, a handpump may not be working due to mechanical fault or a well or a pond may go dry in summer.

Of the functioning sources of water handpump II and public stand post were considered as the most clean sources of water. Other types of handpumps often yielded muddy ***or*** saline water.

In terms of location of the water sources it was found that the 'mixed' location (58 per cent) was more often reported though 'locality' was also reported in good manner

The common cause for non-functioning of hand pumps is the breakdown of chain or washers which is not attended to for weeks and for months in the absence of any clear understanding about the line of action and the responsibility of maintenance of any specific person or organisation. However, out of the agencies responsible for upkeep and maintenance of hand pumps, panchayat figure causes of disruption are breakdown in electricity was reported in 27 per cent villages and mechanical problems in 23 per cent villages. To solve the problem of water supply, plumbers and mechanics are available in 16 per cent villages and spare parts are available in 35 villages. Plumbers and spare parts were not available in the villages or were available at a distance of 5-6 kms.

2.3 Sickness *Profile*:

Nearly one third suffered from one or the other ailment during the last one-year. Fever was not the most frequent ailment reported by the respondents. But nearly all of them have sought treatment. Two third of them spend on an average Rs. 500/- on their treatment during the year.

Of the various ailments they suffered from during the last one-year the pattern varied from state to state. However, it emerges that many of the diseases suffered were related to unsafe water and unhygienic conditions and practices. The ailments reported may not be technically correct and many a times 'fever' 'cold', etc. Were mentioned as a general disease that many suffered without being specific.

CHAPTER III

WATER RELATED BELIEFS AND PRACTICES

III

WATER RELATED BELIEFS AND PRACTICES

In order to study the water related beliefs and practices Household Interview schedule was administered to one adult in each of the sampled 30 households in each village. Based upon the data collected the picture that emerges is as follows.

3.1 *Drinking Water Sources :*

A lot depends on water source that is available and their perception about the effects of unsafe water. Tap is used by 33 per cent nationally and by lesser percentage in Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, West Bengal, Assam and Tripura than in other states. Hand pump is used by 31 per cent and by even less percentage in Himachal Pradesh, Goa, Kerala, Arunchal Pradesh, Assam, Meghalaya and Sikkim than in other states. Sanitary well is used only by 8 per cent. It is more commonly available in Mizoram and Assam to a great extent and in Gujarat, Tamil Nadu, Karnataka and Kerala to some extent. These three water sources are considered safer than other sources:

Open/ dug well is used by 20 per cent. It is more commonly used in Kerala and Karnataka in South, Assam, Meghalaya and Tripura in Northeast and in Bihar, Uttar Pradesh, Madhya Pradesh and Rajasthan in North. Lake is used hardly by 1 per cent, that too mostly in Tripura and Manipur. Rive/ Canal is used by 8 per cent and mostly in Arunachal Pradesh, Maharashtra, Tripura, Assam and Jammu & Kashmir. Pond/tank is used by 4 per cent and mostly in Manipur and Assam. Spring is used by 6 per cent and mostly in Himachal Pradesh, Goa, Meghalaya and Sikkim 18 per cent in Mizoram, 3 per cent in Jammu & Kashmir and 1 per cent in Rajasthan use rainwater harvesting system. It is clear from this that the availability of water sources considerably varies from one state to another depending on the topography and geography on the one hand and the technology on the other. Interestingly a sizeable population in Himachal Pradesh, Goa, Meghalaya, Arunachal Pradesh and Sikkim considers spring as safer where it is commonly

used. Even water harvesting is considered as safe by 20 per cent in Mizoram and rive/ canal as safe in Goa, Karnataka, Mizoram, Arunachal Pradesh and Sikkim.

3.2 Perception of safe water:

Generally the people consider the water they use for drinking and cooking as clean and safe. Mostly people consider clean water as safe water. Drinking water they use is considered clean by 89 per cent and safe by 81 per cent. The same holds true for cooking water. Subtle distinction between clean and safe is noticed only in Manipur and Assam, perhaps because of the use of river or pond water. On being asked about their perception about attributes of safe drinking water, 69 per cent people mentioned that what looks clean is clean and safe. 'Tastes good' was considered as an attribute of safe water by 30 per cent. This perception is more common in Punjab, Rajasthan, Orissa, Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka than other states. 20 per cent people consider that water as safe, which is free from germs. This perception is very poor in Punjab, Haryana, Himachal Pradesh, Bihar, Uttar Pradesh, Madhya Pradesh, Orissa, Maharashtra, Tamil Nadu, Andhra Pradesh and Karnataka. In North Eastern States, Goa and Kerala respondents mentioned more often that water should be free from germs as an important attribute of safe water. This may be because they are more conscious on this score and/ or greater prevalence of germs in water they use effecting their perception about safe water. In some states like Punjab, Haryana, Jammu & Kashmir, Utter Pradesh, Madhya Pradesh, Orissa, Gujarat, and Karnataka more than 9 per cent people perceive water as safe that cooks well.

3.3 Awareness of Water Borne Diseases:

The awareness that unsafe water can cause certain diseases however is relatively greater in Haryana, Uttar Pradesh, Rajasthan, Maharashtra, Gujarat, Kerala, Karnataka, Mizoram, Assam, Meghalaya and Tripura than in other states. At the national level, more than 50 per cent people consider diarrhea, dysentery, cholera and malaria as water borne diseases, but not many think so with regard to filarial, jaundice, typhoid and guinea worm..

3.4 Water Fetching:

Not everyone or anyone in the family fetches water. Mostly it is adult women (41 per cent) or an old person, invariably women again (32 per cent) who fetches water in majority of the states. The burden of fetching water seems to be greater on adult female in Jammu & Kashmir, Madhya Pradesh, Rajasthan, Orissa, West Bengal, Maharashtra, Gujarat, Kerala and Assam as well as on the old ones in Punjab, Haryana, Himachal

Pradesh, Bihar, Uttar Pradesh, Mizoram and Arunachal Pradesh. A lot depends on the prevailing division of labour in the family and social practices that are prevalent in different settings. Only 6 per centadult males share the burden of fetching water. This frequency is higher in Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka and Meghalaya. Male or Female child rarely shares this responsibility.

Almost 76 per cent water fetchers travel upto 500 meters, 3 per cent between 500 and 1000 meters and 1 per cent beyond 1 kilo meter. They have to travel longer distances in certain states like Rajasthan, Jammu and Kashmir, Himachal Pradesh and Sikkim. Almost 74 per cent water fetchers spend upto half hour each day. In some states like Rajasthan, Uttar Pradesh, Orissa and Sikkim they have to spend more time than in other sates. In many states, they have to fetch more than 100 liters of water each day i.e. in Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, Madhaya Pradesh, Orissa, Maharashtra, Gujarat, Tamil Nadu, Derala, Andhra Pradesh, Karnataka and Assam. Only in West Bengal, Meghalaya, Tripura, Manipur, Mizoram and Sikkim they manage with less than 100 liters of water each day. Overall 59 per cent felt that the water they fetched was adequate and 76 per cent felt that it was safe in their own perception. The problem of inadequate and safe water seems to be more acute in Bihar, Arunachal Pradesh, Manipur, Tripura and Sikkim than that in other states.

3.5 Quality of Water:

It is the perception of people only that is presented here in terms of percentages who thought that the water they fetched was clean, muddy, brackish/saline and contained fluoride, iron and germs. Water was considered clean by more than 77 per cent in most states except in Jammu Kashmir, Bihar, Goa, Arunachal Pradesh, Manipr, Assam and Sikkim. It was considered muddy by more than 13 per cent people in Rajasthan, Arunachal Pradesh, Manipur, Assam and Tripura, brackish by more than 2 per cent in Haryana, Uttar Pradesh, Rajasthan, Tamil Nadu and Arunachal Pradesh. People felt that water contained fluoride in Andhra Pradesh, iron in West Bengal, Goa, Arunachal Pradesh, Assam, Meghalaya and Tripura and germs in Jammu and Kashmir, Rajasthan, Mizoram, Meghalaya, and Tripura more prominently than in other states. In the absence of scienrtific knowledge or instruments, they tend to see only that which can be seen or tasted with their sense organs. Emperts feel that very often water they consider as clean is not that clean and it contains more harmful things than they possibly can perceive. People precisely need that kind of feedback from scientists in a way they can understand and appreciate.

3.6 Storage of Water:

For storing water, people use mostly metallic containers (29 per cent), earthen containers (28 per cent), and metallic earthen containers (12 per cent) and sometimes plastic (2 per cent), bucket (4 per cent) or cement tanks (1 per cent). Cement tanks are used only in Goa, Manipur, and Sikkim, plastic in Kerala and Mizoram and bucket in Bihar, West Bengal, and Arunachal Pradesh more frequently than in other states.

The practice of cleaning a covering the vessels used for water storage is linked with health. For cleaning vessels people use water (29 per cent), water and ash (20 per cent) and water and detergent (9 per cent). Detergent seems more popular in Bihar, Uttar Pradesh and Assam than other states. Ash is used more commonly in Haryana, Himachal Pradesh, Madhya Pradesh, Maharashtra, Goa, Arunachal Pradesh, Manipur, Assam and Sikkim than in other states. Covering of vessels is less common in Himachal Pradesh, Bihar, Uttar Pradesh, Mizoram, Arunachal Pradesh and Tripura than in other states.

For water purification people use cloth filter (50 per cent), boiling (33 per cent), Chlorine (5 per cent), alum (2 per cent) and even seeds but only in Punjab and Tamil Nadu, Alum is used more offer in Assam, Jammu and Kashmir and West Bengal; Chlorine in Punjab, Himachal Pradesh and Jammu and Kashmir; cankle filter in Haryana, Jammu and Kashmir, West Bengal, Goa, Kerala and Karnataka in south and almost all states in North East as compared to other states.

3.7 Responsibilities for Water Supply Schemes:

The state under various schemes provides drinking water in rural areas mainly through tap (33 per cent) or hand pump (31 per cent) a less often through sanitary well (8 per cent). Only in Assam sanitary wells are provided in 23 per cent villages. Hand pumps are quite common in Jammu & Kashmir, Bihar Uttar Pradesh, Madhya Pradesh, Rajasthan and Orissa an tap water is given more prominence in Haryana, Himachal Pradesh, Punjab, Goa, Kerala, Arunachal Pradesh an Sikkim.

They were put in place by the Government under Panchayat Raj Scheme in 25 per cent villages an under PHED in 35 per cent villages. The main responsibility for implementing these schemes lies with PWD in Goa, with PHED in Punjab, Haryana, Orissa, Bihar, Madhaya Pradesh, Rajasthan, Gujarat and Karnataka; with Panchayat Raj in Jammu & Kashmir, Maharashtra, Tamil Nadu and Andhra Pradesh and with Rural Development in Arunachal Pradesh and Tripura.

The predominant mode of distributing water is through public stand post in Haryana, Himachal Pradesh, Uttar Pradesh, Tamil Nadu, Assam and Tripura where as it is through house connection in Punjab, Bihar, Jammu & Kashmir, Maharashtra, Gujarat, Goa, Andhra Pradesh and Sikkim. However, both of these modes are extensively used in Punjab, Bihar, Madhya Pradesh, Goa and Kerala.

The water supply was found to be adequate through out the year in 42 per cent villages and in slightly higher percentage of villages in Punjab, Himachal Pradesh, Jammu & Kashmir, Bihar, Rajasthan, Gujarat, Goa, Andhra Pradesh and Tripura. The lowest percentages of villages with adequate water supply are found in Kerala, Assam, Karnataka, Madhya Pradesh, Uttar Pradesh and Himachal Pradesh. The adequacy varies in different seasons in different states but the shortage is experienced mostly in summer in most states.

In 22 percentage villages, people are willing to bear the expenses of drinking water and 32 per cent for operation and maintenance. They think that it is government's responsibility to install the water supply. However, people are more often willing to contribute in kind and even are welling to acquire the maintenance, repair and management skills to ensure smooth operation of water schemes.

In general people are willing to bear the operation and maintenance cost and the cost of water used. But they are not willing to bear the capital costs of installation for the obvious reasons of high capital costs and skills involved.

If people are involved right from the beginning in locating, designing, installation, maintenance, management, and all operations involved in all these stages with a clear cut understanding that the system belongs to them and it is their responsibility to maintain an manage on a continuous and sustained basis once the state has installed and handed over it to the people or their organizations in the real spirit of participatory democracy, Both leaders and administrators have failed to create and strengthen this sense of responsibility among users and their groups or communities for design and implementation, operation and maintenance, management and sustainability of the systems once created.

The responsibility for installation, operation, maintenance and management of the systems created by the government under various schemes is neither shared with or transferred to user groups or communities or the mechanisms they consider as the most appropriate and cost effective. The sense of ownership and thereby the sense of responsibility for the maintenance and management of drinking water systems created by the government is relatively so weak in most states that unless government does something to change it, nothing is going to happen. The state has failed to almost everywhere to create their sense of sharing the responsibility for the whole spectrum without any sincere

efforts to involve people, users and user groups, local organizational and leadership structures to do so at crucial stages.

CHAPTER - IV

SANITATION RELATED BELIEFS AND PRACTICES

IV

SANITATION RELATED BELIEFS AND PRACTICES

An attempt was made in this survey to study not all but only those practices which are directly associated with water, sanitation and personal hygiene.

4.1 Hand Washing:

Hand washing practices before eating and feeding the child and after defecation were studied. Hand washing before eating and after defecation is almost universal in most states. Method of washing however varies considerably. The national average is 87 per cent who use water only for hand washing in case of eating, 65 per cent in case of child feeding. Water and soap is used by more than 10 per cent in Haryana, Himachal Pradesh, Goa, Kerala, Manipur, Meghalaya and Sikkim. They are far more conscious than others in other states. Water and ash and/or sand are rarely used before eating or child feeding.

People wash hands before eating or feeding child because they feel that it removes/cleans dirt (69 per cent), that it protects against disease (18 per cent) and that it is a tradition or practice (13 per cent). Protection against disease seems to be the stronger reason in Punjab, Himachal Pradesh, Jammu & Kashmir, Uttar Pradesh, Goa, Kerala, Mizoram, Manipur, Assam, Meghalaya and Sikkim due to increased awareness of link between germs and diseases.

4.2 Defecation:

Defecation practices are also important to observe and note. After defecation, 74 per cent wash, 4 per cent wipe and 16 per cent wipe and wash the rectum. Wiping is me prominent in Arunachal Pradesh, Meghalaya, Sikkim, Goa and Jammu and Kashmir. Wiping and washing is more prominent in Punjab, Jammu & Kashmir, Goa, Arunachal Pradesh, Manipur, Meghalaya and Sikkim than in other states

.

After defecation, however, water and soap is used for washing hand by 34 per cent, water and ash is used by 8 per cent and water and sand is used by 19 per cent of people on an average. Water and soap is used frequently for washing hands after defecation especially in more developed states like Punjab and Goa. Ash and Sand is used by relatively more in Madhya Pradesh, Himachal Pradesh, Uttar Pradesh, Orissa, West Bengal, Gujarat and Assam; ash is used in Haryana, Maharashtra and Arunachal Pradesh

and sand is used in Jammu and Kashmir and Rajasthan more prominently than in other states.

4.3 Cattle Shed and Cleanliness:

Almost 66 per cent people own cattle, 78 per cent of them provide separate accommodation for cattle and 59 per cent provide kucha accommodation for cattle in or around their houses. Providing separate accommodation is less common in Punjab, Uttar Pradesh, Rajasthan, Gujarat and Arunachal Pradesh and the practice of cleaning cattle shed is less common in Bihar, West Bengal, Maharashtra, Karnataka, Kerala, Andhra Pradesh and Mizoram than other states.

The method of disposing cattle dung in the field is followed by 36 per cent, in garbage pit by 6 per cent, in composite pit by 14 per cent and in the form of dung cakes by 17 per cent people. Garbage and composite pits are more popular in Madhya Pradesh, Orissa, Tamil Nadu, Karnataka, Rajasthan and Himachal Pradesh and dung cakes more popular in northern states than others.

4.4 Kitchen and Cooking:

Place and fuel used for cooking and ventilation also form a part of sanitation. While 60 per cent people have separate kitchen, only 45 per cent have it properly ventilated. Separate ventilated kitchens are more prominent in Haryana, Himachal Pradesh, Madhya Pradesh, Orissa, West Bengal, Tamil Nadu, Karnataka and Kerala than in other states. The condition of kitchen is rather pathetic in Bihar, Maharashtra and Tripura. For cooking, various fuels are used such as wood by 80 per cent, dung cake by 28 per cent, straw by 22 per cent, Kerosene by 9 per cent, LPG by 4 per cent, coal by 2 per cent, bio gas by 1 per cent and electricity by 1 per cent only. Electricity is used in Jammu and Kashmir and Meghalaya, coal in Bihar and West Bengal, biogas in Madhya Pradesh, Orissa, Tamil Nadu and Karnataka more commonly than in other states. Among the most commonly used fuels, straw and dung cakes are hardly used in Goa, Kerala and north eastern states, where wood is mostly used. Straw and dung cake tends to substitute for wood in plains. Smokeless oven/Chula is used by relatively more people in Haryana, Maharashtra, Gujarat, Goa, Karnataka, Mizoram and Meghalaya than in other states. It is one way to reduce the health risk of smoke for women.

4.5 Disposal of Waste Water:

Improper disposal of wastewater also creates health hazard and adds risk to human health. People dispose waste water in backyard (30 per cent), OPEN PIT (21 per cent), on the street (17 per cent), in open drainage (9 per cent), in close drainage (7 per cent) and soak pit (7 per cent). Soak pits and open pits are more common in Maharashtra, Goa, Karnataka, Andhra Pradesh and Sikkim and open or close drains in Punjab, Haryana, Himachal Pradesh, Bihar, Maharashtra and Tripura than other states. People consider drain as the safest method (41 per cent) followed by open pit (11 per cent), kitchen garden (10 per cent) and soak pit (7 per cent).

Stagnant water is considered as a cause of disease spread (45 per cent), bad/stinking smell (34 per cent), mosquito breeding (49 per cent) and inconvenience of some sort (7 per cent). The belief that stagnant water causes disease spread is stronger in Haryana, Himachal Pradesh, Bihar, Rajasthan, Maharashtra, Karnataka, Mizoram and Sikkim and mosquitoes hazard in most of the states except hilly and north eastern states water is scarce and does not stagnate to create such hazards.

4.6 *Use of Latrines:*

Although most people defecate in open space in most states, only 20 per cent household reported having private latrines. Of them, it is noticed that 39 per cent use septic tank, 37 per cent single pit, 8 per cent double pit, 8 per cent service dry method of private latrine. Single pits are not so common in Hindi speaking states, Maharashtra, Goa, Andhra Pradesh, Assam, Tripura and Sikkim, whereas double pits are common in Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan, West Bengal, Gujarat and Kerala than other states. Septic tanks are not so common in North East except Meghalaya and Sikkim.

Most of the private latrines described above were created recently in last five years in most states. Furthermore, although they may be having a latrine at home the respondents many a times was not clear as to what type of latrine it was.

4.7 *Motivating Persons and Factors:*

Almost 55 per cent people were motivated by themselves, 11 per cent by family members, 9 per cent by officials, 7 per cent by non-officials and 2 per cent by neighbours. Most of the motivation has come from within i.e. by themselves and their family,

neighbouurhood and community members. Government and elected officials have produced relatively stronger motivation in Haryana, Himachal Pradesh, Uttar Pradesh, Madhya Pradesh, Rajasthan, Orissa, Karnataka and Mizoram than other states. Among the factors that motivated people it seems that 30 per cent were motivated by convenience, 21 per cent by privacy, 4 per cent by cleanliness, 2 per cent by status, 1 per cent by old age and only 2 per cent by subsidy. Contrary to the established belief, subsidy is the weakest motivator, whereas personal reasons like convenience and privacy are the strongest in many states. Subsidy has produced significant results in Himachal Pradesh and status symbol in Mizoram and cleanliness in Himachal Pradesh, Goa and Arunachal Pradesh. Among those who receive subsidy, 61 per cent of them received upto Rs. 2500 and 14 per cent above Rs. 2500. The cost of contribution for 52 per cent cases is up to Rs. 3000 and for 34 per cent factor by itself, it helps to overcome financial constraint and meet the required expenses. Hardly 4 per cent latrines were constructed using subsidy under various schemes such IRDP, JRY, IWN, UNICEF.

4.8 *Latrine Construction and Use:*

So far as material used for latrine construction is concerned, 51 per cent have used bricks, 1 per cent stone and 5 per cent mud. Roof was added by 75 per cent and door by 87 per cent. Stone is used more commonly in Himachal Pradesh, Rajasthan, Orissa, Goa, Tamil Nadu, Kerala, Karnataka and Sikkim. Bricks are rarely used in North Eastern states and Himachal Pradesh. Mud is prominently used in Maharashtra and to some extent in Punjab, Uttar Pradesh, Goa and Kerala as compared to other states. Doors are rarely used in Goa, Arunachal Pradesh, Meghalaya and Sikkim.

Once constructed almost 90 per cent were used by all family members, 6 per cent by females and 2 per cent by the old and children. The phenomenon of female's only using latrine is noticed more prominently in orthodox states of Jammu and Kashmir, Uttar Pradesh, Bihar, Orissa, Andhra Pradesh and Punjab.

On any average 36 per cent latrines are cleaned by females, 20 per cent by males and only 9 per cent by sweepers. Reliance on sweepers is relatively higher again in orthodox or conservative states like Bihar, Uttar Pradesh, Rajasthan, and Orissa. Only in West Bengal, Goa and all other northern Eastern states except Arunachal Pradesh and Meghalaya, significantly greater percentage of male members have shouldered the responsibility of cleaning latrines themselves. In all other states greater percentage of female members are cleaning the latrines almost like an established social norm or responsibility.

4.9 *Reasons for Use and Non-Use of Latrines:*

Among the reasons for having a latrine as expressed by people, convenience (55 per cent) ranks first followed by privacy (37 per cent), health protection (23 per cent) and convenience of the old or infirm (6 per cent). The more people seek convenience, privacy, hygienic behaviour and protection for women, the greater is the need and demand for private latrines. People go in for latrine for personal and non-health reasons than health reasons.

Among the reasons given by people for not having a latrine so far, non-affordability (82 per cent) appeared at the top, followed by lack of subsidy (15 per cent), lack of material availability (4 per cent) and lack of detailed knowledge (3 per cent). In other words financial constraint is the most important reason due to which people cannot have latrines even when they need them or would like to have them for the reasons described earlier. Preference for open defection (37 per cent) is the top most reason for not having the latrine, which buy bad smell (8 per cent), resource crunch (9 per cent) and space problem (3 per cent). Only when open defecation becomes problematic, inconvenient, hazardous, risky and embarrassing people tend to go in for private latrines in rural areas.

Lack or capital is the real constraint that operates all the time despite the strong motivation that mostly comes from within and for the reasons that are described earlier. Inspite of this, it is interesting to note that almost 40 per cent people are willing to spend upto Rs. 500 and 19 per cent even more than Rs. 500. Willingness to spend more than Es. 500 is comparatively stronger in Haryana, Himachal Pradesh, Jammu and Kashmir, Orissa, Gujarat, Goa, Kerala, Andhra Pradesh, Karnataka and Sikkim perhaps due to their better economic conditions and health consciousness than in other states.

CHAPTER – V

CHANGES DURING 1998 - 96

V

CHANGES DURING 1988-96

Similar nationwide survey on some comparable parameters was conducted in 1988-89 by UNICEF in 22 districts, with the same purpose of designing IEC strategy at district level. Although districts and samples are not comparable in strict sense of the term, an attempt is made here to measure the magnitudes of changes that have taken place during the last 8 years of so on select parameters where comparison is possible. The following main points emerge from the comparison:

I. The use of tap water has increased from 15 to 33 per cent and that of dug well has decreased from 40 to 20 per cent. This is the most significant change that has taken place.

II. While the average family size has decreased from 7 to 6 members, the water consumption per family has increased only marginally.

III. The women's burden of fetching water has decreased from 86 to 41 per cent.

IV. The perception of safe water as that which is free from germs has improved from 12 to 20 per cent, indicting greater degree of scientific consciousness.

V. The link between unsafe water and water-borne diseases has phenomenally increased almost in all diseases listed in the table. This indicates heightened health awareness.

VI. The percentage of people letting out wastewater in the open has significantly decreased from 62 to 47 per cent. People have developed more civic and hygienic sense.

VII. The use of water and soap for cleaning hands after defecation has increased from 14 to 31 per cent.

VIII. The use of dry latrines has dramatically come down from 22 to 8 per cent.

IX. The willing to pay and the contribution for latrine has increased considerably from Rs.570 to Rs.700.

These are the most positive changes that have taken place during 8 years. In spite of these changes, a lot needs to be done to accelerate these processes of change as the task is urgent and Herculean one. New IEC Strategy can help a lot in this regard.

CHAPTER - VI

QUALITATIVE DATA AND INSIGHTS

VI

Qualitative Data and Insights

In addition to the sample survey, the results of which were analyzed and discussed in the sections/chapters II & III, the data were collected about the institutions like schools, anganwadis, panchayat, and other organized groups like youth club etc. to gain insights into their position and role in the WATSAN programmes. Combined with this, the implementers views were also solicited. In order to have an over all view and in depth understanding about the issues, problems and solutions regarding effective implementation of various WATSAN programmes in each of the sampled villages one or two focused group discussions were organized with 5-10 'informed' and 'concerned' villagers. Some case4 studies were also recorded. The results of these qualitative exercises have been presented in three separate reports and have also been incorporated in the State reports. Here, the broad overall picture in qualitative terms has been attempted as a supplement to quantitative survey results and as an input and backdrop to the suggested IEC strategy.

- Most villages have a primary school in the village itself or in a nearby village. In some case middle or high school is also there in the village. These educational institutions can inculcate proper health & Hygiene practices among your children and serves as a role model to emulate at home. But, unfortunately, invariably they do not pay adequate attention to this aspect of their responsibility.

- In majority of the villages studied there were Anganwadis set up under ICDS. Among other function related to proper health care of the young children and pregnant women these are supposed to inculcate and encourage proper health and hygiene practices among the women who come to Anganwadis. But, here too not adequate attention is paid to health and hygiene aspect of their work.

- Youth clubs and other voluntary organizations at village level are almost non-existent and even if there are in some villages, these are not very active in the area of WATSAN or health and hygiene. At present virtually these are not playing any role worth mentioning.

- There are panchayat in most villages, but their association and involvement in WATSAN programmes varies from state to state and village to village, but generally speaking not to the extent it could be and should be. There is not clear understanding of their role in WATSAN which is more often than not looked as the government programme and the panchayat if asked upon can give some minor help.

- The villagers in general are not that aware about the need for clean surrounding. Often the research team noticed many points in and around the village habitation with stagnant water and filth but the villagers were not conscious of their such unhygienic surroundings.

- Group discussion invariably revealed that in installation of common hand pumps or water supply scheme not much consultation was done with the villagers and certainly not the women who were the main user or beneficiary of the scheme.

- In depth interviews and group discussions also revealed that there was invariably no clear understanding about the role and responsibility of maintenance and operation of the public hand pumps, stand posts in particular and water supply scheme in general. As a consequence, on breakdown it could linger in repairs disrupting water supply and causing inconvenience to the villagers.

- From in depth interviews and group discussions it also emerged that the villagers all over India view WATSAN primarily as a Government programme, though they may not be clear as to which particular department of the government. And as it is government scheme they are not required to 'contribute' at any stage of its implementation, maintenance or operation. But water being essential for their living and often scarce commodity and even not safe, the villagers in depth discussions come around and realize that they should contribute, both in cash and kind in successful implementation of the programme.

- Thus, lack of awareness and proper understanding of role and responsibilities at various levels seem to have acted as barrier in their active participation and contribution to the successful implementation of the WATSAN schemes. Proper information, education and communication (IEC) strategy and better coordination among various implementing agencies can go a long way in support of the WATSAN ensuring successful implementation of various schemes.

CHAPTER - VII

I E C STRATEGY

VII

I E C STRATEGY

7.1 Use of Mass Media:

As a part of the study, information was gathered on access and use of mass media and folk forms and frequency of interaction with officials particularly the different village level functionaries.

The actual use of mass media such as radio, TV, newspaper and magazines is usually greater than the personal or family access in many states as people tend to share the media accessible with others.

From the analysis it emerged that access and exposure to mass media is higher in southern states and comparatively lower in the northern Hindi speaking states and Orissa. If we take 33 per cent as a critical threshold, it emerged found that the actual use of radio is less than 33 per cent in Punjab, Haryana, Madhya Pradesh and Maharashtra. The usage of TV is less than 33 per cent in Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Orissa, Maharashtra, and North Eastern states. The usage of newspaper is less than 33 per cent almost in all states except Gujarat, Goa, Kerala and Karnataka and that of magazine is less than 33 per cent in all states except Karnataka. The use of film is less than the critical 33 per cent in all northern states and that of folk form is lower than the threshold only in Haryana and Andhra Pradesh.

It is suggested to use that combination of information sources, i.e. mass media, and folk forms, which have crossed the critical threshold of 33 percent for effective IEC strategy. For example, that combination may include TV and folk form in Punjab; and radio, TV and folk form in Rajasthan.

7.2 Interaction with Officials/Village Functionaries:

Interaction with village level functionaries varies but it was noticeably low (17 per cent) with the functionaries associated with the water supply scheme.

Using the similar logic of another critical threshold of 25 per cent usage of inter-personal communication, only the following combination of officials having inter action

with users looks most ideal i.e. village level worker, multi purpose health worker, village revenue worker, Anganwadi worker and attendant, ANM, Doctor/Avid, school teacher and Panchayat secretary/member/head. They have more frequent interaction with people for various inputs and services relevant to water and sanitation program. They as service providers have relatively far more significant influence over people as service users.

7.3 Negligence:

In the absence of a more appropriate term 'negligence' is used here to capture the overall apathy.

Negligence occurs when both public and authority, users and providers of services, fail to define, understand, assume and perform their specific roles and responsibilities that they must perform in order to ensure the success of a programme within a given time frame. Not being conscious, willing and able enough to perform the necessary roles and responsibilities are the essential indicators of negligence on the part of both public and authority, service users and providers.

Both quantitative and qualitative data gathered through survey and focused group interviews and case studies with service users and providers as well as others as supporters who have a significant role to play in WATSAN program have clearly brought out 'negligence' as a major problem that might have come in the way of effective implementation of the program in many states. For example

- Adult females are principal service users but never or seldom involved in the program planning and implementation.

- Adult male members in the family, neighbourhood and community have a key, positive, helping and facilitating role to play in the whole process but they've failed to provide the required support. Not only that many a time they played a hindering role instead.

- Concerned officials and non officials at community, block, district, state and national levels have a joint and collective but distinct and crucial roles and responsibilities to perform in installation, operation, maintenance and management of WATSAN activities. However, they have not functioned in coordinated manner and failed to perform them at crucial junctures.

- Mass Media or an effective combination of appropriate mass media at various levels crossing the critical thresholds of reaching the public, service users, providers and supporters have a pivotal role to perform the necessary and desirable IEC functions but they have failed to assess an d meet critical IEC needs of various actors and parties involved in the whole programme. Instead of this, they have functioned as unilateral, one way, arbitrary and non-professional manner without providing constant feed forward and feed back at corresponding levels of interaction between service users, providers and supporters.

All observations articulated in this manner have brought out that when necessary, desirable and helping roles and responsibilities were performed well by all concerned, remarkable successes have occurred but when they were not performed or hindering roles were performed, miserable failures have also occurred. WATSAN programme is full of such successes and failures.

7.4 New Paradigm:

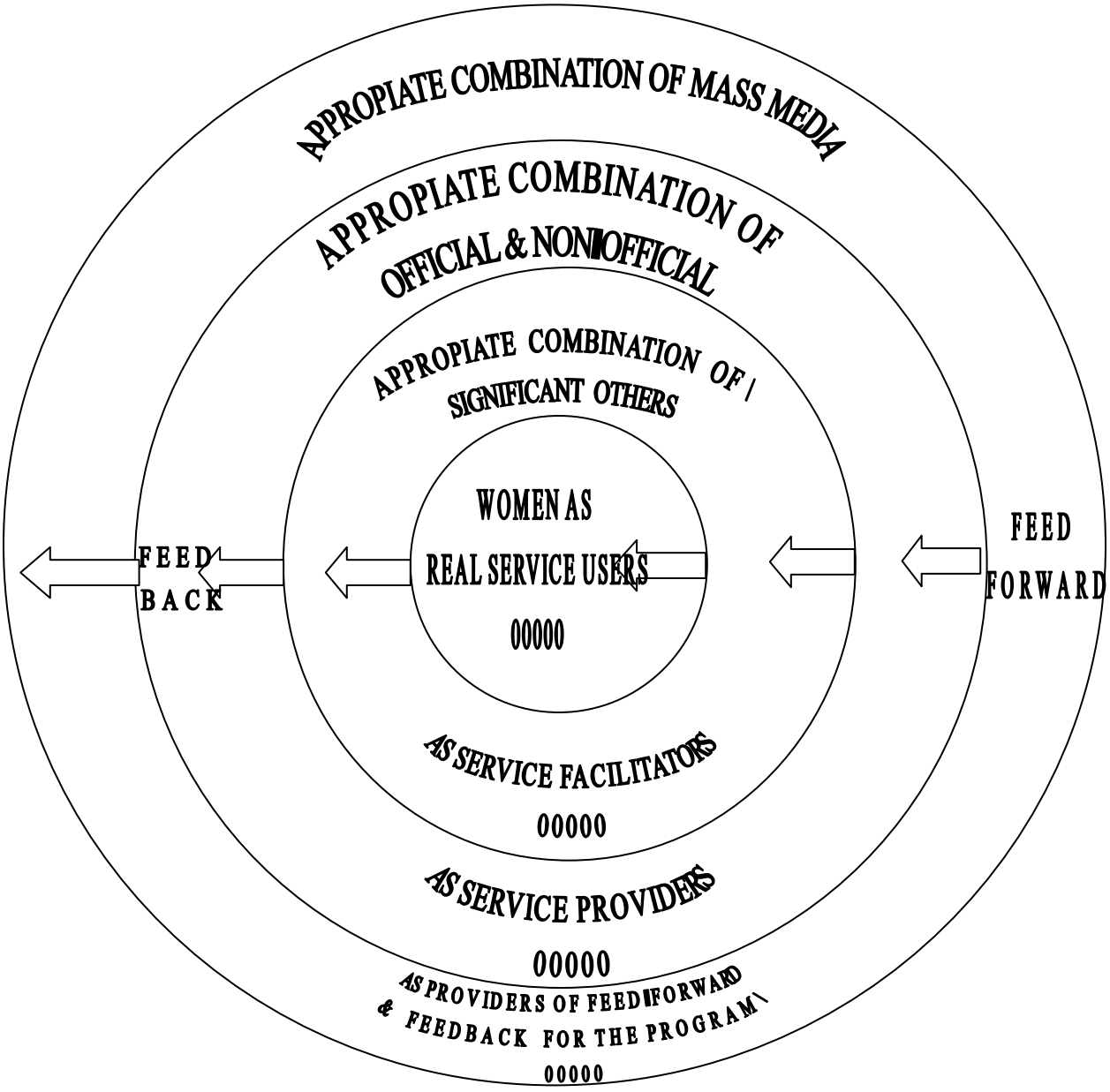
In order to learn the lessons from these successes and failures observed though empirical sample survey focused group interviews and case studies with service users, providers and supporters, a new paradigm or model of IEC is urgently required. An attempt is made to provide one such alternative model to ensure the success of WATSAN program. **See Figure 1.**

In this figure, there are four concentric circles. The innermost contains the critical mass of real service users, in this case woman. The next outer circle contains the critical mass of service supporters: such as significant members of families, neighbourhood and communities where women live and who have a significant say or facilitating role to play in WATSAN programme. The next outer circle contain the critical mass of officials and non officials who are directly or indirectly responsible for providing various inputs and services required by the WATSAN programme. The outer circle contains the appropriate combination of mass media that are accessible to the critical mass of users.

There are arrows shown coming in and going out of each circle as feed forward of program related inputs and feedback of problem-related inputs. From outer circle to innermost circle, the programme-related inputs must be provided to ultimately empower the service users in progression. At the same time, from innermost to the outer circle, the

problem-related inputs must be provided as a feedback to constantly adjust the nature and flow of new programme inputs in response to the needs and priorities, problems and difficulties of the critical groups in the inner circles in performing their desired WATSAN roles and responsibilities. The critical mass in outer circles must be sensitive enough to the feedback's constantly received from the critical mass placed in the next inner circle in this diagram in order to be effective in achieving the goal of making service providers, supporters and users increasing conscious, willing and able enough to understand, accept and perform the necessary and desired roles and responsibilities involved in the WATSAN programme.

The IEC strategy based on this paradigm is presented in the next section.



<u>Empowerment Model of IEC for WATSAN Programme</u> :
Critical Mass of People in each circle providing constant
Feed-forward and feed-back in order to perform necessary
And desirable WATSAN roles & responsibilities

7.5 IEC Strategy:

The need for WATSAN facilities is greater for women than men in rural areas. It is mostly women who need them the most and it is they who are mostly responsible for them as real service users.

The need for services is universal in that everyone needs or wants to have them. It is only due to real financial, material and operational and maintenance constraints they cannot have them. The unmet need for WATSAN services is therefore great and real everywhere.

The IEC strategy should convert that unmet need into an effective demand by providing programme related IEC inputs in response to problem-related feedback from service providers, supporters and users with a view to make them sufficiently conscious, willing and able to understand, appreciate, accept and perform their corresponding roles and responsibilities that are involved in installation, operation, maintenance and management of WATSAN services on a sustained basis.

For this purpose, the concept of 'critical mass' of service providers, supporters and users to be placed in relevant concentrating circles as described in the new paradigm is useful. In order to reach and empower the minimum required number of service providers, supporters and users with limited resources in a shortest possible time in such a manner that the programme gains momentum thereafter.

Even if it is arbitrary to fix cut-off points as thresholds for determining critical mass in each category, it is both necessary and desirable to do it strategically. It is suggested to have that cut off point at 33 per cent (of people reached by mass media) to choose the optimum appropriate combination of mass media to be placed in the outer circle. It is suggested to tap only those mass media, which are already in use by 33 per cent, as it is secondary to increase the usage of mass media beyond that point. This combination will vary from one state, district or block to another. For example, the combination of TV and folk form might be more appropriate in Punjab where as the combination of Radio, TV and folk form might be more appropriate in Rajasthan.

In each combination, some media may be more appropriate for sending program related feed forward such as TV and radio and some for receiving problem-related feedback such as folk form in these states. In this way one medium in a given combination will complement and supplement the other one and also reinforce and enhance the quality and effect of messages or inputs provided.

While selecting the different media for IEC, their respective strength and limitations in the context of the target audience should be kept in view.

In the next inner circle, another combination of officials and non officials who are directly and indirectly involved in WATSAN programme, more frequently interacting with the service users and supporters and who have considerable role and responsibility in the totality of the programme can be identified that is most appropriate in a given district.

Again using the arbitrary cut off point of 25 per cent (frequently interacting with people) some village and cluster level health, education, community development and local self government (panchayat) officials and officials can be identified for direct and close interaction with WATSAN service supporters and users at the community level. Among them, multi purpose health workers, Anganwadi workers, Doctors and ANMs or Dais from health department; Panchayat members community development workers and school teachers from other departments are the most crucial.

These are the grass root officials and non officials who could be well equipped with audio-visuals and small media and skills in using them for the critical mass of service users and supporters at the right time and places where water is available, health facilities are located, panchayat and development workers meet and assemble, and women and others come together for various purposes.

In the next inner circle, the most active and highly respectable and influential persons at community and neighbourhood levels (both men and women) should be identified as supporters, facilitators and active partners in the WATSAN programme inputs. They can play the role of facilitator, motivator, enabler land supporter. They will have to rely mostly on interpersonal and group contacts with the real end-users of the programmes. Their meetings with and the visits of officials and non officials will have to be synchronized and regularized to maintain both constancy and consistency of key messages designed to inform, educate and motivate user groups to be responsive and responsible for the WATSAN services.

In the inner most circle, a critical mass of about 25-33 per cent most receptive, responsive and responsible women as WATSAN service users will have to be identified to build the critical mass quickly and then reach the rest through them afterwards as a natural momentum or process. It has to be done locality wise and water source wise to the extent possible. All those who form the critical mass in outer circles will provide programme

related IEC inputs on the one hand and receive problem-related feedback simultaneously in order to empower the critical mass of end users directly.

The programme related IEC inputs must flow from outer to inner circles in such a manner that one reinforce and enhances the other in progression. Similarly, the problem related feedback should also flow from the innermost to outermost circle in such a manner that corrective decision and actions are taken at each level instantly.

The programme and problem related IEC inputs should mutually enlighten and empower the critical mass of service providers, supporters, and end users in corresponding circles on the following questions: Which are on suggestive not necessarily exhaustive or in that order.

- What are unsafe WATSAN practices prevalent in the locality/district?

- What are the harmful effects of those practices on the health and well being of rural people?

- What are the ways and means by which safeness and cleanliness of those practices can be achieved to mitigate harmful effects?
- What are the genuine and practical difficulties and problems involved in following good practices even when almost all of them sincerely want to follow them?

- What are the alternatives, options and opportunities available under various programmes by which these practical difficulties and genuine constraints can be overcome?

- Who are the persons who form the critical mass of WATSAN service providers, supporters and users who ought to play a crucial role in the promotion of safe and clean WATSAN practices as efficiently and effectively as possible?

- What are their indispensable roles and responsibilities in the installation, operation, maintenance, management and cost recovery of WATSAN services that need to be understood, accepted and performed either individually or collectively.

- What are the difficulties involved in performing those roles and responsibilities an how to overcome them by appropriate socio technical interventions at the right time?

- What are the most appropriate, simple, cost effective, affordable, feasible, manageable, culturally suitable, techniques and methods that are available for people to accept quickly within their real constraints and limitations?

- What are the structurals, behavioral an attitudinal hurdles that interfere in the process of providing WATSAN facilities efficiently and equitably to all sections and segments of communities?

- What are the ways and means by which these hurdles can be removed by the critical mass of providers, supporters and users of WATSAN services themselves in a definite manner?

Based on the district level information, the message planning teams of persons in the critical mass identified at district and other levels, should try to find some reliable, convincing, satisfactory answers to these questions first and then select key IEC inputs to be provided through appropriate media vehicles in the manner that is most appropriate for the specific categories of people forming the critical mass at various level.

In fact an attempt should be made to prepare linear responsibility charts in which persons responsible from the critical mass can be listed on the left, their roles and responsibilities at the top and key IEC messages in each corresponding cells where rows and columns meet. Messages centering on responsible persons and revolving around their key responsibilities will be far more effective in generating demand and fulfilling their responsibilities for safe and clean WATSAN methods and practices than the conventional one way traffic of simplistic and stereotyped messages.