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Promotion and Support for Women's Participation
in the International Drinking Water Supply and
Sanitation Decade

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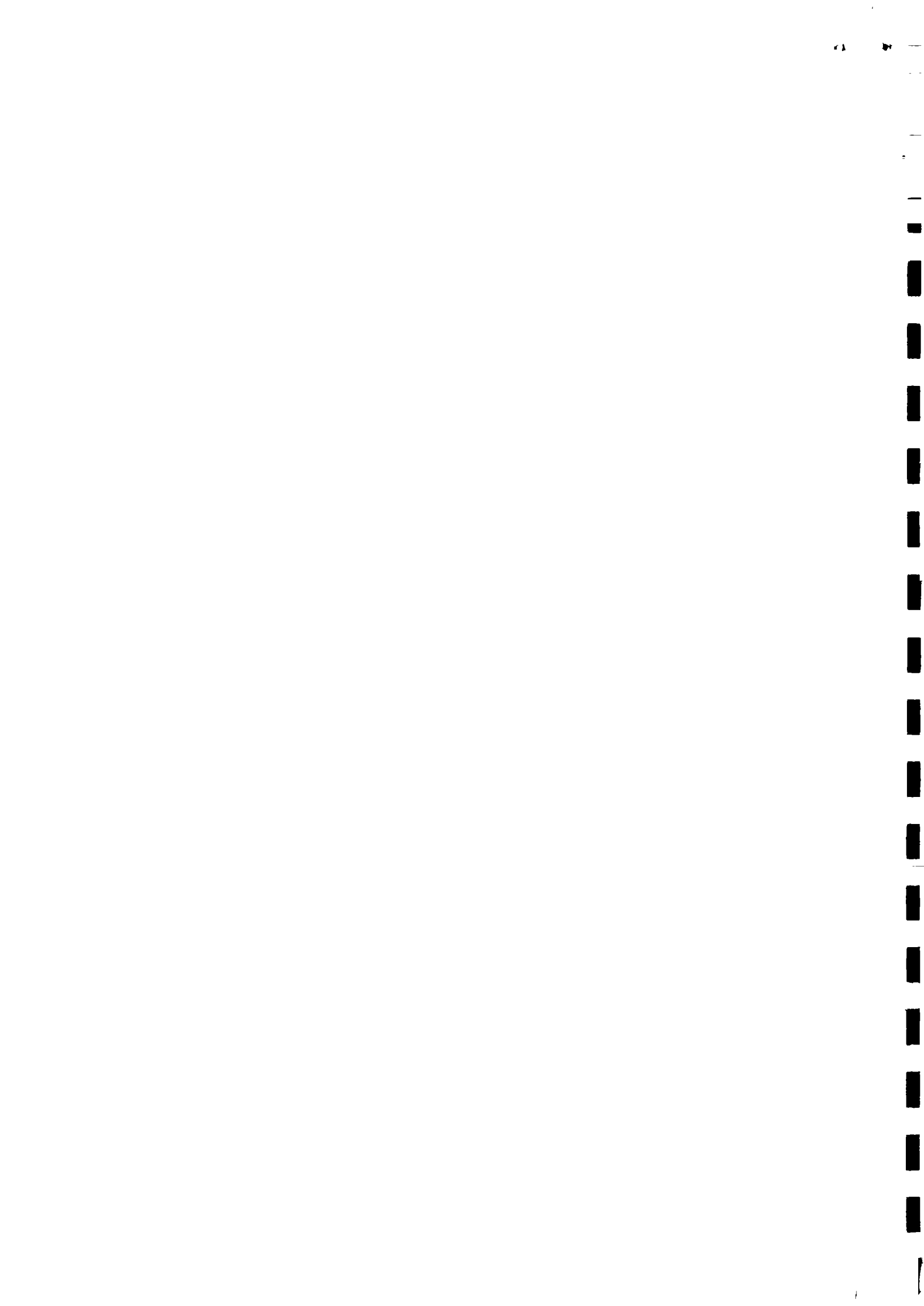
CASE STUDY
ON
PROMOTION OF WOMEN'S PARTICIPATION IN
WATER SUPPLY AND SANITATION PROGRAMMES

Prepared By

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P.O. Box 2254
Baneshwor
Kathmandu
Nepal

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SANITATION (IRC)

World Health Organization
South-East Asia Regional Office
New Delhi, India
1988



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PREFACE

This report constitutes part of an on-going investigation of the promotion of women in Water Supply and Sanitation Programmes currently being undertaken at the regional level. This survey of two pilot project sites establishes the basic parameters against which the impact of the implementation of the projects designed to promote women both as contributors and beneficiaries will be measured.

The study was carried out by Integrated Development Systems (IDS) under the sponsorship of the World Health Organization (WHO). The work was co-ordinated by Indira Shrestha. Mr. Mukunda Panday, Ms. Kanta Singh, Mr. Purushottam Aryal and Ms. Geeta Sewakoti collected the information in Fikkal and Gajuri sites during the months of April-May 1986 and again in September-October 1986. Mr. K. Bhattachan, consultant sociologist analysed the data with a sociological perspective. Ms. Lynne Pajot provided editorial and professional inputs for the final report.

IDS is grateful to WHO for supporting this study.



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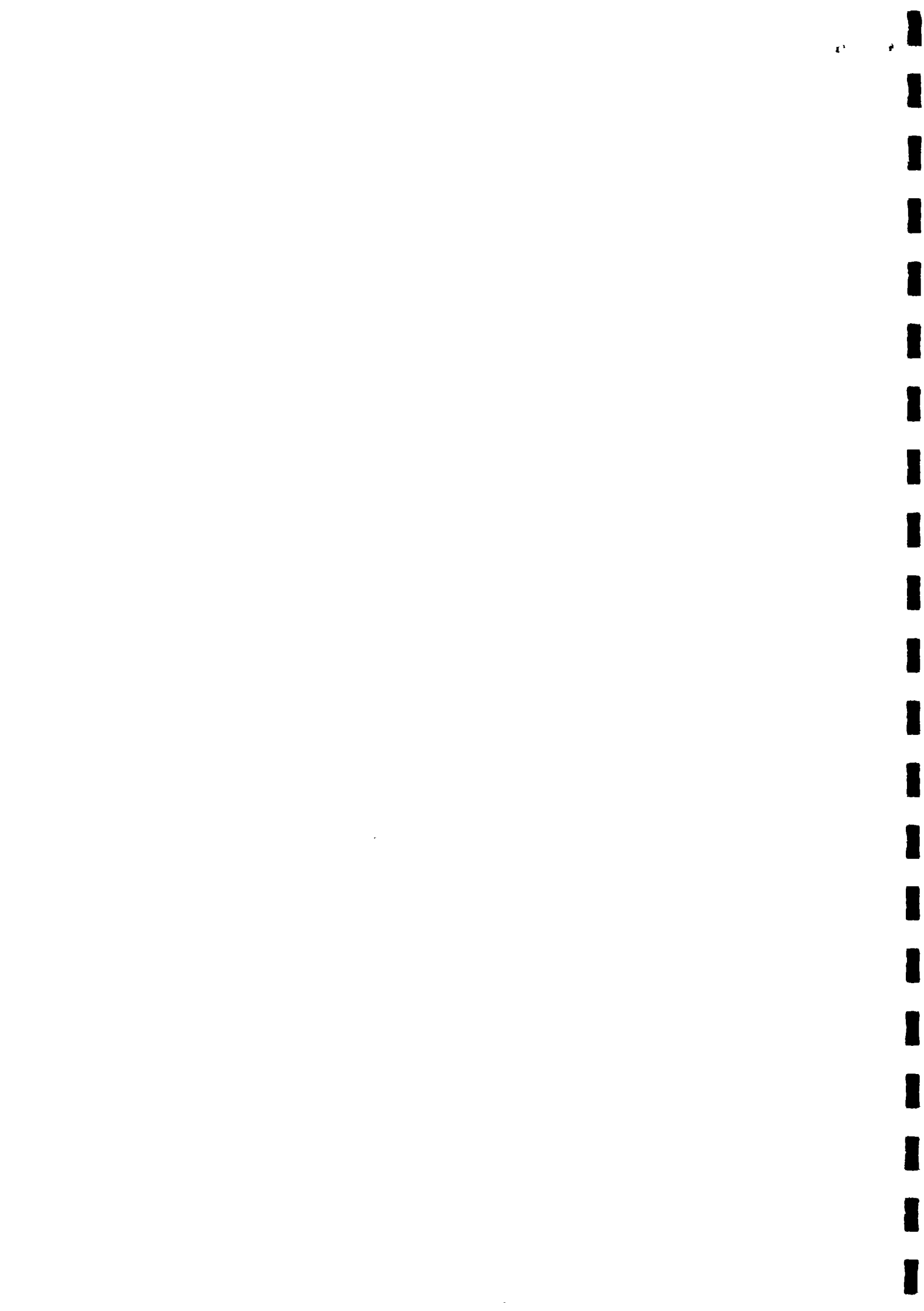


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EXECUTIVE SUMMARY

The baseline survey for the IDWSSD project was undertaken in two villages where drinking water supply programmes were to be initiated by the Women's Development Section (WDS) of the Ministry of Panchayat and Local Development (MPLD). Administrative problems resulted in long delays and the construction of the water supply systems still had not begun. The final report is thus not the intended action-research and impact evaluation. It is a baseline survey of Gajuri and Fikkal villages which will serve to illustrate the roles of women in activities related to water supply and sanitation. An additional purpose of this case study is to provide baseline data to further evolve the intervention design and to establish the parameters against which the impact of the water supply systems could be assessed.

Government Institutions Involved in Water Supply and Sanitation

Three government ministries, Health, Water Resources, and Panchayat and Local Development, shared the responsibility for supplying drinking water in rural areas. In theory the local leaders could approach the district line agencies of His Majesty's Government for the installation of water supply systems in their panchayats. In practice, this was a long process and as a result few districts had been serviced. In Gajuri and Fikkal however, Women Development Officers of WDS, realizing the importance of convenient and safe water sources, had taken the initiative in starting drinking water supply projects. They had been present at both sites for about five years and in that time they had been able to build good working relationships with the people. WDOs had contributed to the development of the villages by supporting income generating activities and training. The people actively supported the WDOs and were anxious to participate in the water supply programmes.

Research Methodology

Research was undertaken by four IDS field staff, two male and two female, for a period of ten days in each site for the baseline survey and five days for the hygiene and water use surveys. Questionnaires were used to collect the quantitative data while participant observation throughout the survey period proved to be an effective means of gathering the qualitative information contained in the report.

Out of a total population of 5463 in Gajuri, 912 people (16.7 per cent) in 147 households were surveyed using questionnaires. In Fikkal 851 (13.5 per cent of a total population of 6279) in 151 households were surveyed. Women in the homes were interviewed but men were often also present. Information was also collected from key informants among whom included village heads (Pradhan Panch), Panchayat village workers, Women's Motivators and health post workers.

General Characteristics of Project Areas

Both project sites were in rural areas of Nepal; Gajuri Panchayat, located sixty four kilometers west of Kathmandu at an altitude of approximately 450 meters, was considered more remote than Fikkal because a two to three hour uphill walk from the nearest road was

required. Fikkal was situated in the easternmost district of Nepal, at an elevation of 1500 meters and had a cooler climate than Gajuri. The villages differed with respect to ethnicity and agricultural activities; Gajuri was dominated by upper caste Hindus (63 per cent of the surveyed population were Brahmins and Chhetris) who lived in large extended families and grew rice, millet, wheat and potatoes while in Fikkal, mongoloid ethnic groups, mainly Rai and Limbu and their nuclear family system, predominated. In addition to the primary food crops listed above, vegetables, tea and cardamom were grown for cash sale in Fikkal. Most households owned at least one cow or goat and a few chickens although, many Gajuri homes had no cow.

According to field staff observation, Gajuri was poorer than Fikkal as much less agricultural surplus was perceived. Water collection was much more time consuming in Gajuri and the water sources were much less convenient, reliable and adequate in supply. Sanitary practices and conditions were more unhygienic in Gajuri than in Fikkal. Life was harder for women than for men in both sites as they had the double burden of domestic chores and farm work.

Major findings

Socio-economic Status

All households in both sites depended on agriculture for their livelihood; farming was the primary occupation for 94 per cent of the respondents both in Gajuri and Fikkal. The average size of land holdings was larger in Fikkal (33 ropanis) than in Gajuri (21 ropanis or almost one hectare) although earnings from agricultural production were higher in Gajuri, 9136 Rs compared to 7370 Rs per year in Fikkal. However Gajuri people seemed poorer and indeed it was found that they produced little agricultural surplus and must even have to purchase food to meet their needs. Cows, goats, oxen and chickens were found in both villages but ownership of these was less evenly distributed in Gajuri than in Fikkal; fortyfour per cent of Gajuri homes had no cow compared to only twentyone per cent of Fikkal homes. This statistic gives some indication of the distribution of wealth in the villages and of the possible health and nutritional implications.

Agricultural work involved full family participation. Although men were reported to be responsible for more than half of the work involved in sowing, weeding and harvesting during the field observation, women were more often seen to be heading to the family plots.

The educational status of the villagers in both project sites was very similar; about sixty per cent of the total population was illiterate. The illiteracy rate for women in both villages was higher than that of men. Only twenty three per cent of the female population had had any schooling.

The vast majority of the people (95 to 99 per cent) in both villages were not active in any official social organization. Both the Nepal Women's Organization and Youth Clubs were present but participation in either was under 3 per cent. However people were active in traditional group activities such as the parma in which members exchanged their labour on each others fields. These labour exchange groups were more active in Gajuri than in Fikkal.

Women's Status

Women's role and status in the sites surveyed reflected the situation of women in the rest of the country; they were responsible for all chores inside the home and also worked in the field but outside market activities were mostly the domain of the men. Decision-making in the household was largely in the hands of the men although in Fikkal twenty per cent of the respondents stated that women made the decisions and another twenty per cent reported joint male-female decision-making, twice as many as were reported in Gajuri. Women's status was clearly undermined in Brahmin-Chhetri dominated Gajuri where, in the extended family system, the daughter-in-law was severely restrained in expression and behaviour. Women must obtain the permission of their husband before participating in non-traditional activities. The person who had the most influence on the behaviour of women was her husband according to eighty per cent of women in Gajuri and seventy per cent in Fikkal.

Women in both sites had a larger volume of work than men, being responsible for time consuming tasks such as water collection, food processing, as well as farm work, animal tending and post-harvest chores. They worked ten to eleven hours per day on average compared to a maximum of seven hours for men. They rose early in the morning (4 AM) and were occupied until well after dark. Leisure for the women was rarely observed whereas the men were often seen to be drinking home brewed alcohol (especially in Fikkal), playing cards and engaging in tea-stall conversation. In both villages however, the men claimed that they performed the hardest and most important work and disregarded women's labour. During the interviews with female respondents the husbands often interrupted and stated that their wives did not have the ability to answer the questions properly.

Water Sources, Collection, and Use

Most households (sixty per cent) in both Gajuri and Fikkal collected their water from both surface and deep wells, surface wells or kuwa being more numerous. Secondary sources included natural water sources with spouts, piped water, and rivers and streams.

Although no water testing was done, field observations concluded that water sources were vulnerable to human, animal and bacterial contamination. The kuwas, particularly in Gajuri were found to contain much surface dirt such as leaves and twigs as well as abundant animal life. Water spouts and wells were the sites of bathing and washing clothes for most people and also of watering for livestock.

The villagers required water for drinking, cooking, feeding animals and washing clothes and dishes. The daily water requirement for the majority of the households (sixty per cent) was between fifty and 150 litres. The per capita consumption was nine litres in Gajuri and fourteen in Fikkal.

The reliability of water sources was seasonally influenced; in the dry months of March, April and May, the water was scarce and most people were forced to use alternative sources which were located

far from the settlements. Seventy per cent of Gajuri respondents reported inadequate supply of water in the dry season compared to fifty three per cent in Fikkal.

Women were the sole collectors for twenty seven per cent of the households in Gajuri and for seventeen per cent of Fikkal homes while adult men were responsible for water collection in only four per cent of Gajuri homes and 4.5 per cent of Fikkal homes. Most respondents stated that all women, men and children, shared this responsibility. Three trips to the water sources, morning, afternoon and evening, were required on average in both communities.

Villagers in Gajuri had to spend much more time collecting water than villagers in Fikkal. This was because the houses were far from most sources and the sources were more affected by seasonal factors. For twelve per cent of Gajuri residents it took close to one hour only to reach the nearest source. In Fikkal, most residents had easy access to water and could reach a source within five minutes except in the dry season.

The total amount of time to fetch 12 litres (one gagri) of water was between one and three hours for fifty per cent of Gajuri households and only for 3.3 per cent of Fikkal houses. The estimated total time spent per day on water collection for an average family consumption of 140 litres was overwhelming in Gajuri : eight to nine hours. For Fikkal two to three hours were required to collect the average quantity of water used by each household.

The communities perception of their priorities reflected the gravity of the water situation in both villages. Gajuri respondents ranked, in order, drinking water, irrigation, health post, fuelwood and fodder as their top priorities. The ranking in Fikkal was similar, drinking water, irrigation, health post, sanitation and road.

Health and Sanitation Conditions and Hygiene Practices

None of the respondents in either survey site reported treating their drinking water. Most didn't know the significance of boiling the water; eighty four per cent of all respondents considered fresh water from natural sources to be the safest for consumption with more women (93%) than men (80%) believing this. This belief did not significantly change with the level of education.

Only seven per cent of the households in Gajuri and twenty per cent in Fikkal covered their drinking water. The water storage containers were found to be much cleaner in Fikkal. Water dippers were stored on the ground in ninety six per cent of Gajuri homes compared to only nineteen per cent of Fikkal homes. Kitchen floors were reportedly cleaner in Fikkal and there were no flies while many flies were present in Gajuri during the observation period. A majority of households covered uncooked and cooked foods to protect them from the contamination of flies and other insects. This practice was more widespread in Fikkal than in Gajuri; ninety five per cent of the respondents covered at least partially their cooked foods in Fikkal compared to sixty five per cent in Gajuri.

Defecation practices were found to be very unhygienic; water was reportedly used for cleaning by ninety eight per cent of Gajuri respondents compared to seventy per cent in Fikkal where the remaining thirty per cent used sticks, stones and grass for anal cleaning. Soil was most often used to clean hands after defecation. As there were only five pit latrines in Gajuri and fifteen in Fikkal, most residents defecated in an open space. Many villagers bathed once a week and others bathed only occasionally. Women bathed more frequently than men, usually when washing clothes or collecting water.

The health conditions were fairly poor in both villages. Gajuri villagers, especially the young, suffered more from water borne diseases than Fikkal residents. Worms and scabies were also very widespread and people reported some incidents of serious illnesses. The nearest health post in Gajuri was a two hour walk away. Some people in both villages went to see a traditional medical practitioner but villagers of Fikkal were more likely to see him/her than people of Gajuri. Health conditions were visibly better in Fikkal due to the cool weather and higher altitude on the one hand, and because of the more hygienic practices related to food and water handling on the other. The larger quantity of water used in Fikkal as compared to Gajuri might also be an important determinant of the health of the community. Another important factor was the location of the family livestock: while almost all homes in Fikkal kept their animals in byres outside the home, one-third of Gajuri households kept their cows, goats, and oxen on the ground floor of the house, in the same room as the kitchen.

Constraints to Women's Participation in Water Supply and Sanitation Programmes Observed During Study Period.

Factionalism in the Villages

The villagers in both sites were divided into several small settlements of five to ten households which were cliquish in nature and often caste specific. The women of one settlement often refused to attend meetings or activities held in another locality. They asserted that any such activity should be held in their own settlement and that the other women should come there to attend. The women felt this way most likely because of the parochial group/caste pride and solidarity and also because of the time involved in walking to another locality (five to thirty minutes) to participate in village activities. This traditional attitude inhibited interaction and co-operation between the various settlements of the village.

Self-assurance of individuals

Many women were convinced that what they asserted was right and what all other said was wrong. Each woman stood by her own arguments and opinions during a gathering and refused to recognize the views of others even if these were sound. These impasses prevented compromises when trying to reach a definitive decision or develop a plan of action. The exception to this situation was an important one; in both villages, women were found to quickly reach a consensus when a highly respected women put forth her ideas and presented a solution. This was normally accepted by all.

Caste System

The restrictions and rules imposed by the Nepalese caste system were present in all rural areas. The high caste villagers still felt strongly about the purity of their caste and retained a sense of defilement from personal contact with the low caste. However, this was not openly expressed in public interactions.

Educational Constraints

Most women were illiterate or had a few years of formal schooling. This had the dual effect of limiting their knowledge and horizons on the one hand and of assuring, to a large extent, the preservation of traditional habits on the other. These traditional habits, especially those related to drinking water, health and sanitation, were often unhealthy and dangerous, and, in the absence of education, they were difficult to change.

Time Constraints

Rural women had very busy daily schedules in which they accomplished most household chores in addition to farm work. On average, Nepali women living in rural areas worked ten to twelve hours per day of which two to eight hours were spent collecting water. Those activities left little time for women to participate in educational programmes or in the construction of water and sanitation facilities.

Minimal Role in Household Decision-making

Most village women, particularly those belonging to the higher Hindu castes held little or no input in household decisions. The husband, father or father-in-law made most important decisions and must be consulted before any action could be initiated. Women must therefore have male consent when considering participation in non-traditional activities.

Economic Constraints

Although many villagers showed willingness to contribute financially to the implementation of a drinking water supply scheme in their village, most could not afford to. As most were subsistence farmers, the little agriculture surplus that they produced had to go towards the purchase of dry goods and other necessities. Very little surplus was transformed into monetary savings that could be used to fund local development projects. Their only economic contribution to such efforts could be the supply of labour and some local building materials.

Mistrust of Local Political Leaders and Lack of Support of Local Institutions

Villagers in the studied areas seemed to have very little trust in their local formal leaders and the local institutions in which these leaders operated. The villagers in both sites felt that village panchayats and the NWO had been ineffective in improving their quality of life. Women had developed some faith in the Women's Development Officers although the lengthy procedures had resulted in implementation delays and some were sceptical about the actual outcome of the proposed intervention programmes.

1. INTRODUCTION

1.1 Background

Under the objective of meeting the basic needs of the people, the provision of safe drinking water and sanitation facilities has assumed increasing importance in the context of Nepal's national development strategies, as is well reflected in the Plan Documents. Nepal's National Programme for water supply and sanitation is consistent with the United Nation's International Drinking Water Supply and Sanitation Decade (IDWSSD-1981-1990). Nepal is one of the signatories of the UN declaration of the IDWSSD - and of Health for All by the Year 2000. In line with these set goals, the Nepal Government (HMG) had taken major steps to develop and improve the provision of drinking water and sanitation facilities throughout the country (table 1.1). Three Ministries of HMG - the Ministry of Panchayat and Local Development (MPLD), the Ministry of Health, and the Ministry of Water Resources -- with the generous support of many international donor agencies such as WHO, UNDP, UNICEF, UNCHS (Habitat), SATA, GTZ and the World Bank - bear the responsibility for providing drinking water and sanitation facilities in urban as well as rural areas. By the year 1990, the National Programme hoped to raise the overall population coverage - from 11% at present to 67%. However, HMG realised the constraints affecting effective and efficient implementation of the Decade Plan. These included, inter alia, lack of financial resources, organizational and managerial difficulties, operational and maintenance difficulties and, above all, the lack of concerted involvement, participation and utilization of women as an important human resource in the effective implementation and development of water supply and sanitation schemes in rural Nepal. The failure of project managers, technical experts and other field staff to consider women's input as primary users and providers of water in the planning, construction, operation and maintenance of water and sanitation projects had often contributed to serious problems and delays in the delivery and proper utilization of water and sanitation programmes. This oversight had also caused the general break-down of systems within a short time of their installation. It was clear that a technological change that failed to take into consideration this and other social, economic and cultural factors and processes could very well include misuse and even project failure.

1.2 Past experiences and inadequacies in implementing water supply and sanitation schemes

In normal practice, the implementation of water supply and sanitation schemes in Nepal begins without an adequate understanding of the prevailing socio-cultural realities of the village where such an intervention is being sought. This was because there was no provision in the project plan for undertaking such a study before the physical structures were planned and constructed. The only local input was the ritualistic "people's participation" in the form of free, unpaid (or forced) labour for digging trenches and carrying local materials through the institutional support of the local village panchayats.

This lack of understanding of the village realities, especially those related to women, stemmed from a number of factors, foremost among them being the lack of will that was required on the part of project planners, managers, technical personnel and the village authorities to complete a simple yet effective socio-economic analysis before planning and construction commenced in a particular village or a cluster of households. Added to this, there was yet another dimension to this problem - while all staff involved in the community water supply and sanitation programme had a technical background, they had neither the training nor the orientation for understanding the "social" aspect of the programme. Very often, the water technician, who was a male, was given the task of the "participation" aspects. Because of social barriers, male staff found it difficult to reach or involve women. Women as potential users and providers of water were generally not consulted or taken into consideration when mobilizing opinions and compiling facts about a village, e.g. location of tap stands, etc. Cases in which such attempts were made were either sporadic or arose out of an extraordinary effort of an enlightened community or a highly motivated person. Even then the effort might fail to achieve its intended result either because the effort was cosmetic or the women themselves did not perceive their important role in the decision-making processes. Because of the inside/outside dichotomy in Nepalese society and the separation of gender roles along this dichotomy, women did not participate in decision-making in situations related to the outside or public sphere, for these matters concerned only men.

1.3 Objective of the study

As spelled out in the Terms of Reference (TOR) contained in the Contractual Service Agreement (CSA) document, (Appendix C), the objective of the case study was to document, analyze and evaluate the process of intervention undertaken by the Women's Development Section [1] (WDS) of the Ministry of Panchayat and Local Development (MPLD) with the basic aim of promoting effective participation of rural women, together with other members of their communities in the installation and management of improved water supply and sanitation facilities in their localities.

To achieve the above objective, the first-phase activities as envisaged in the project document had involved, among others:

- preparation and submission to WHO of the study protocol including survey and evaluation techniques and a detailed work plan for the implementation of the Case Study;
- recruitment and training of field staff;
- pretesting survey materials developed; and

(1) • The WDS/MPLD under contract and with assistance from UNDP Project INT/83/003 is carrying out intervention activities in Gajuri (Dhading District) and Fikkal (Illam District).

- liaison and coordination with WDS, UNDP, WHO and the field staff.

This present study provides baseline data and information and establishes the basic parameters which will permit evaluation, at a later stage, of the impact of intervention activities in the selected target villages - viz, Gajuri and Fikkal.

1.4 Methodology

Previous studies and experience have shown that quantified data alone did not provide a holistic picture of a given situation or of the circumstances under which human lives operate. In order to examine such situations and needs of the rural villagers, a response-system geared towards meeting these needs and priorities was required. For the purpose of this baseline study, therefore, both quantitative as well as qualitative methods were applied in the design and development of data base. The methodologies and guidelines presented and discussed during the inter-country workshop on "Methodology for Case Studies of Women's Participation in Community Water Supply and Sanitation" (26-31 May 1985, Thailand), were deemed appropriate. In addition, some suggested (not prescribed) baseline data, information/observation for survey and qualitative analysis mentioned in Attachment A of the TOR was also used. (See Appendix C).

In accordance with the TOR, indicators and variables of the Baseline Survey were developed. These indicators included demographic, socio-cultural and economic characteristics, physical facilities, community practices and perception on health and sanitation, sources of water supply, and water utilization, structure and management of intervention activities related to water supply and sanitation to be undertaken by the WDS of MPLD. With the help of these indicators and variables identified for the baseline data requirements, a household questionnaire was developed to interview each household in the two project sites. This questionnaire was submitted to WDS/MPLD and WHO for necessary revision and approval. The approved questionnaire was translated into Nepali and pre-tested by interviewing seven households in Pharping a small village located on the fringes of the Kathmandu valley. The questionnaire was then improved and finalized for the baseline survey.

In view of the nature of the study, which required good interviewer-respondent rapport to facilitate responsiveness and openness, the project recruited two female enumerators and one male research assistant on the basis of their academic qualification and field experience in similar spheres of work. They were trained and oriented by means of lectures, discussions and mock interviews in Kathmandu. Two research associates from IDS provided supervision and participated throughout the duration of the study.

The baseline survey was carried out in April and May 1986 in both Gajuri (Dhading district) and Fikkal (Illam district). The project area included wards 3, 5 and 7 of Gajuri Village Panchayat, and ward 5 of Fikkal Village Panchayat. According to the voters' list, these wards comprised 156 and 177 households, respectively. The survey interviewed a total of 147 households in Gajuri and 155 households in Fikkal. The remaining households

were not interviewed because adult members were not available due to permanent or seasonal migration. Efforts were made to contact and interview at least one female respondent in each sample household. In some households, however, male respondents were interviewed because of unavailability of female respondents.

During the interviews with the women, men were often present and a few of them posed some difficulties in our attempts to elicit female responses and accurate information. Husbands would interrupt and present their views on the question, justifying their action by saying that women weren't capable of answering properly and that their opinion didn't matter anyway. Male presence might also have influenced the women's responses.

These factors should therefore be taken into account when studying the findings of this report.

During the field work period, seven key informants each in Gajuri and Fikkal were interviewed to elicit qualitative information on various aspects of drinking water supply and sanitation in their community. These key informants included local panchayat leaders, local social workers, teachers, health workers, local non-governmental organization officials, and local people engaged in water supply and sanitation activities. Females as well as males from different socio-economic strata and age groups were duly represented. Their qualitative information was utilized to substantiate data collected from the household questionnaire.

Also, during the field work period more qualitative data was gathered by participant observation in formal as well as informal settings such as tea shop gatherings, etc. Day-to-day activities, events and impressions related to water supply and sanitation were observed and recorded in the field diary. These observations were helpful in providing local views on water and sanitation issues. Essentially, the qualitative information provided the kind of in-depth knowledge and understanding that is required in the study of women in development, in this case, women in water supply projects.

Completed questionnaires were edited by the research assistants and research association. Preliminary data sheets containing all the information in the questionnaires were prepared. All this data has been processed through the use of a computer and is presented here in the tables in Appendix A.

1.5 Institutions involved in water supply and sanitation

Three government organizations were involved in the implementation of water supply and sanitation projects in Nepal. They were the Ministry of Panchayat and Local Development (MPLD), the Ministry of Health and the Ministry of Water Resources. They were not active in either of the two project sites but the Women's Development Section of the MPLD had been present in both sites for five years and had contributed to the development of the villages by encouraging income-generating activities and leading informal education classes. Women's Development Officers (WDOs) had taken the initiative in starting drinking water supply projects in both areas.

2. PROFILE OF THE PROJECT SITES

2.1 Introduction

Both project sites were in rural hill areas of Nepal; Gajuri Panchayat is located in the Dhading district of central Nepal, 64 km north-east of Kathmandu while Fikkal is in the Illam district of the far east, eighteen hours away from the capital (refer to map on following page). Gajuri Panchayat is just one hour's walk south of the main Kathmandu - Pokhara road at an altitude of about 450 meters. It is divided into nine wards three of which were surveyed for this report. The total population of the Panchayat was 5463 (1984 Census) and 912 for the three wards studied. The average family size was 6.2. The population was predominantly Hindu with Brahmin and Chhetri castes being in the majority.

Fakkal Panchayat, situated at approximately 1500 meters, had a total population of 6279 spread over a larger area than Gajuri. Ward number five was the project area surveyed. It had a population of 1093 and an average of 5.5 people per family. In this region Mongoloid ethnic groups, mainly Rai and Limbu, predominated.

In both these areas subsistence farming was the main occupation and source of livelihood of the people. Maize, millet, rice, wheat and potatoes were the primary food crops grown but in Fikkal tea and cardamom were grown for cash sale. Most households owned livestock for family consumption and some derived additional income from the sale of animal products.

The following section describes in detail the demographic, social, cultural, economic and infrastructural characteristics of the project sites. These characteristics underlie much of the existing community practices and perceptions of drinking water supply and sanitation. An examination of the findings will help to outline both the potentials and the constraints involved in increasing local, particularly women's, participation in the projects.

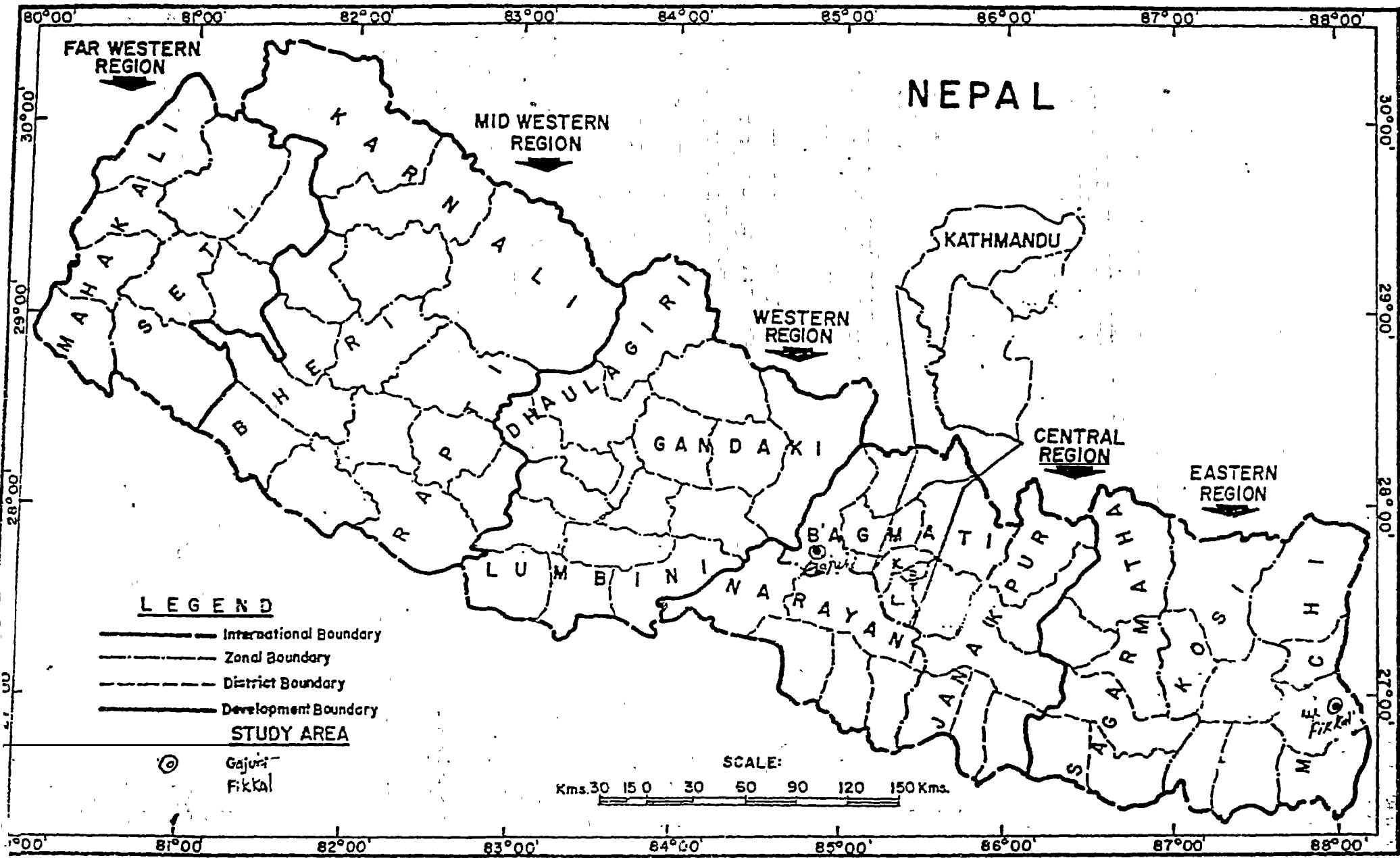
2.2 Demographic characteristics

2.2.1 Population composition

The total population in Gajuri and Fikkal project sites was 912 and 851 respectively (table 2.1). The male/female ratio was higher in Gajuri, 0.53: 0.46 compared to 0.49: 0.50 for Fikkal. The bulk of the population was between 16 and 50 years of age although the portion of the population below the age of 15 was substantial in both project sites: 42% in Gajuri and 45% in Fikkal.

The project sites differed with respect to caste and ethnicity. Both villages were heterogenous but each was dominated by one or two groups. Gajuri was dominated by upper caste Hindus: the Brahmins and Chhetris made up 63% of the population while in Fikkal, Rai and Limbu ethnic groups predominated (table 2.2). The other ethnic groups found in Gajuri were the Newar, Gurung, Magar and Tamang and very few low-caste groups. Only 5.5% of the population belonged to Damai (tailor), Kami (blacksmith) or Sarki





5 A

LEGEND

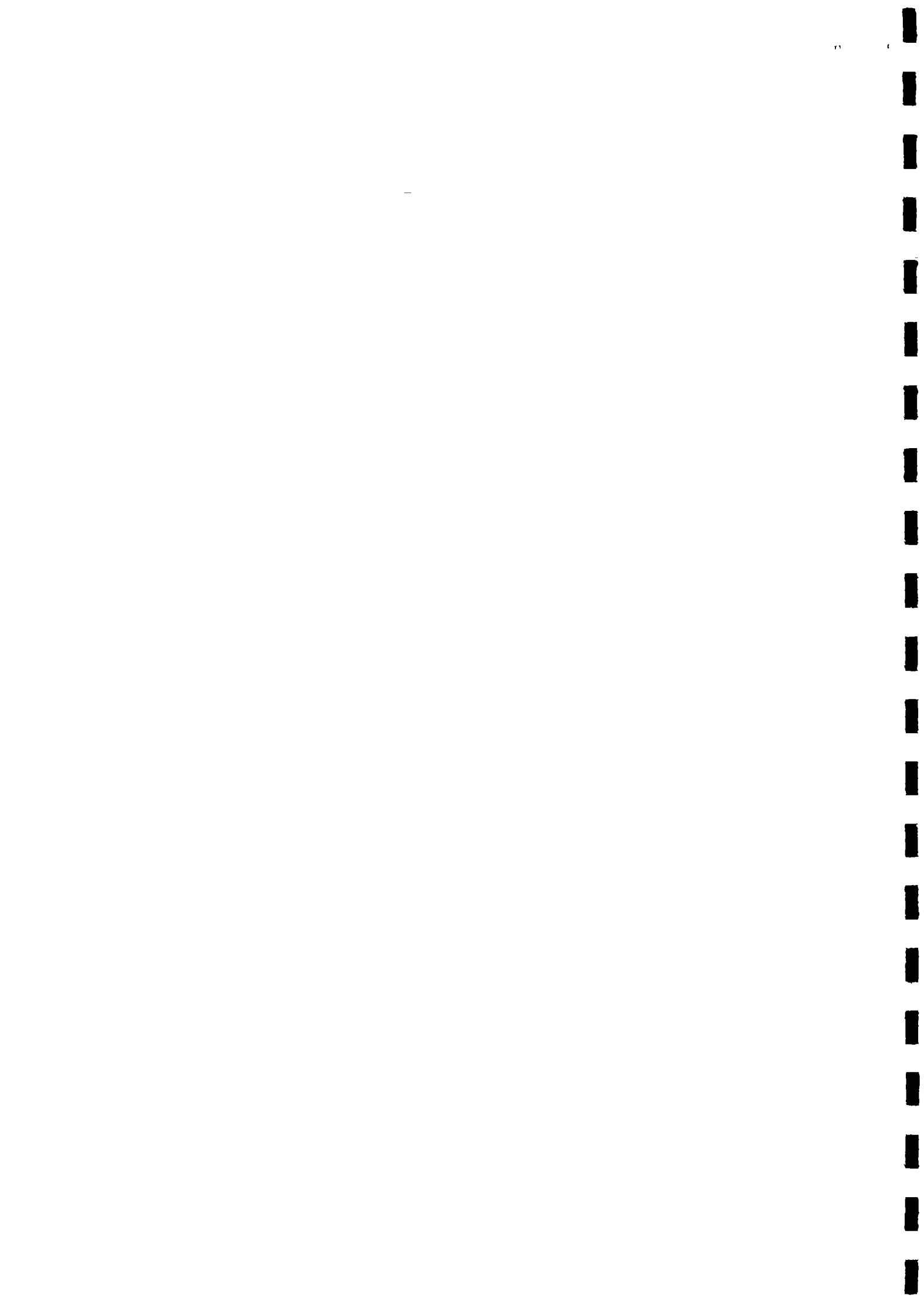
- International Boundary
- Zonal Boundary
- District Boundary
- Development Boundary

STUDY AREA

- ⊙ Gajura
- ⊙ Fikkal

SCALE:

Kms. 30 150 30 50 90 120 150 Kms.



(shoemaker) castes.

Similarly, these groups plus the Tibetan ethnic group was present in Fikkal.

The significance of the heterogeneous caste and ethnic composition of the villages and the ensuing differences in water related practices will be presented below.

2.2.2. Marital status

The ever-married comprised about half of the total population in both project sites (table 2.3). For the adult population this figure was close to 90%. This indicated the predominance of the married status in both villages and underscored the importance of pre-implementation investigation of factors in the husband/wife relationship which could influence participation of either in a project.

2.2.3 Educational status

The educational status of the villagers in both project sites was very similar (table 2.4); out of the total population, 58.8% of the people in both Gajuri and Fikkal were illiterate. None of the villagers had a degree of M.A. or higher. Among those villagers who were literate, the majority of them had primary level school education only. In both sites, the illiteracy level for women was high: 60% in Gajuri and 68% in Fikkal. The levels for men were lower in both sites. Only 23% of the female population had had any schooling.

Although the villagers lacked formal education, some had received some informal education in the areas of health and sanitation. Many of the villagers had had close contact with women facilitators/motivators of the WDS who had extended some basic information about safe drinking water, health and sanitation.

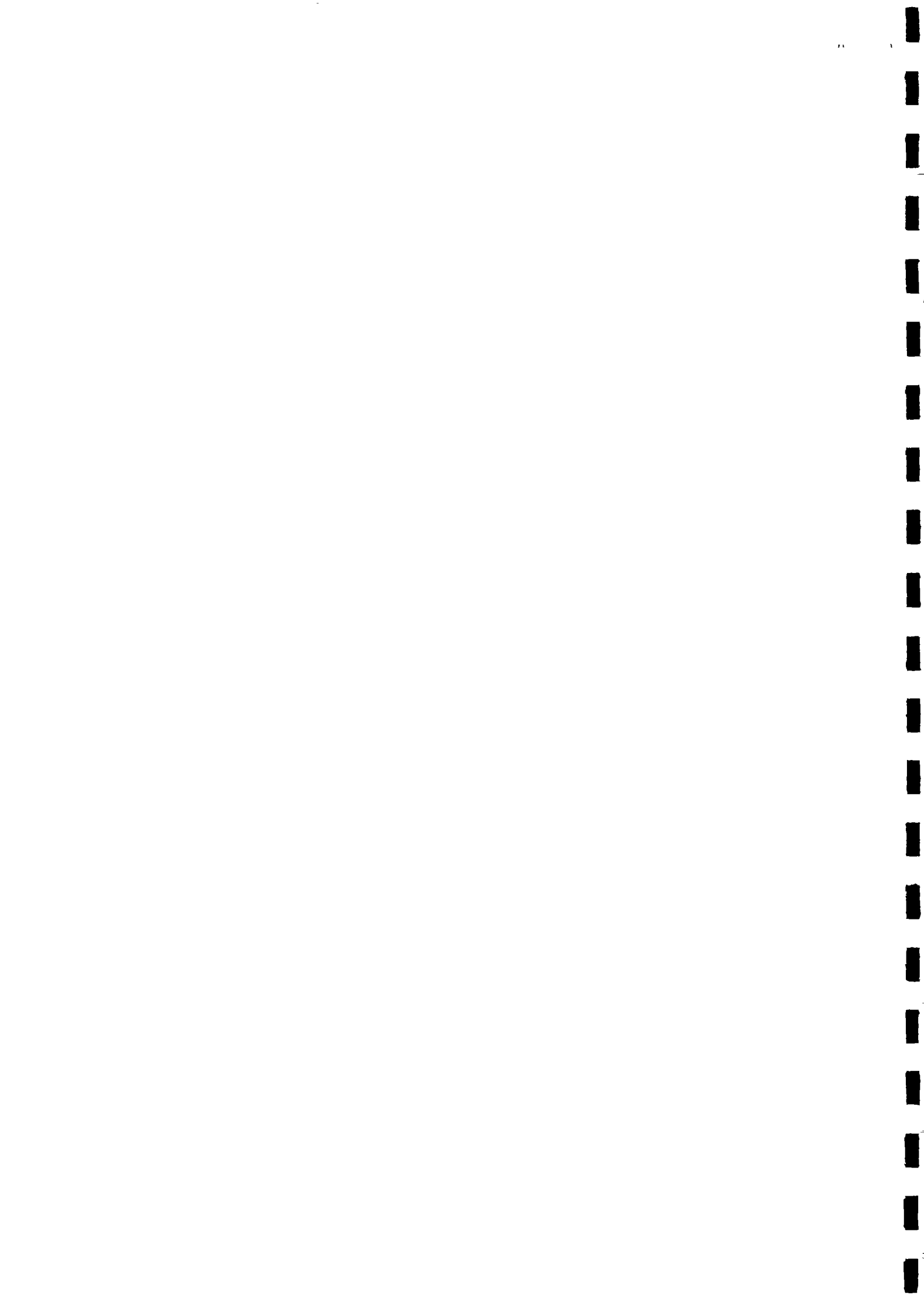
2.3 Social-cultural characteristics

2.3.1 Introduction

Socio-cultural characteristics had a significant bearing on the level and areas of women's participation (as well as men's) in various developmental plans and programmes including drinking water supply and sanitation programmes. Relevant socio-cultural information such as family type, division of labour, household decision making, "significant others", patterns of interaction and attitudes of men towards women's participation will help to understand the community and the factors that could influence participation in a project for improving drinking water supply and sanitation.

2.3.2 Family type

The joint/extended family has traditionally been the most common family type in Nepal. However, many people speaking a Tibeto-Burmese language like the Thakali, Sherpa, and Rai and Limbu groups had a nuclear family system. In Nepal, the joint/extended family system has been traditionally associated



with agriculture while the nuclear family system was linked to trade and business.

About half of all households in Gajuri were of the joint/extended type. On the other hand, about two-thirds of the households in Fikkal were nuclear families. The former being predominantly a Brahmin-Chhetri community, the joint/extended family was naturally more common while the latter being predominantly a Rai-Limbu community, the nuclear families were more numerous (table 2.5).

2.3.3 Division of labour

Division of labour on the basis of gender was the main factor found to be determining activities in the families of the two villages studied. Traditionally, females were expected to participate in household activities while the males were expected to be responsible for activities in the public sphere. In both project sites, information was elicited to record the involvement of male and female family members in various household and agricultural activities. Women were found to be more occupied than men in both sites and worked an average of 10-12 hours per day. Men worked about 7-9 hours per day but were observed to be enjoying more leisurely activities such as drinking alcohol, sitting in groups, assembling informally at tea stalls (in Fikkal), playing cards and gambling. Women were rarely observed in non-productive activities. Throughout the interviews however, the men who were present would often assert that they performed the hardest and most productive of all the work burdens. Women's work was considered unimportant and thus was easily dismissed.

2.3.3.1 Household activities

Most of the household activities in both the project sites were primarily carried out by adult and young females. They performed almost all (55-87%) the household activities: cooking, washing utensils and clothes, fetching water, collecting firewood, grazing and feeding animals and child rearing (table 2.6). In some families, elderly females and children also performed these activities. Male adults and youths, the elderly and children were also found to be doing such activities in some families. Male family members in most of the households were mainly active in three types of household activities: collecting firewood, tending animals and purchasing necessary commodities in nearby markets.

2.3.3.2 Agricultural activities

Agricultural work involved both male and female populations. There were specialized activities for both adult and young males. Young females contributed as much labour as their male counterparts (table 2.6). Except for ploughing the fields which was done only by males, agricultural activities - wage labour, irrigation, sowing, weeding, harvesting and product marketing - were done by adults and youths of both sexes. In some families, elderly men and women and children also contributed their labour in such activities.



Gajuri women washing clothes and child at public water tap (one of six for forty households). Poor drainage resulting in hazardous water stagnation is common in the village.

2.3.3.3 Other income-generating activities

Very few families were engaged in cottage industries. It was a part-time activity at most and only a secondary source of income (table 2.6).

2.3.3.4 Health and sanitation activities

Like other household activities, sanitation activities were regarded as the responsibility of the females. Females disposed of solid and liquid wastes, human (children's) and animal excreta (table 2.6).

Some of the activities related to health, such as consultations with the local faith healer or visits to the nearby health post for the treatment of a family member's ailment, were regarded as the responsibility of the adult male (table 2.6). In some families, however, these activities were done by the elderly male or female.

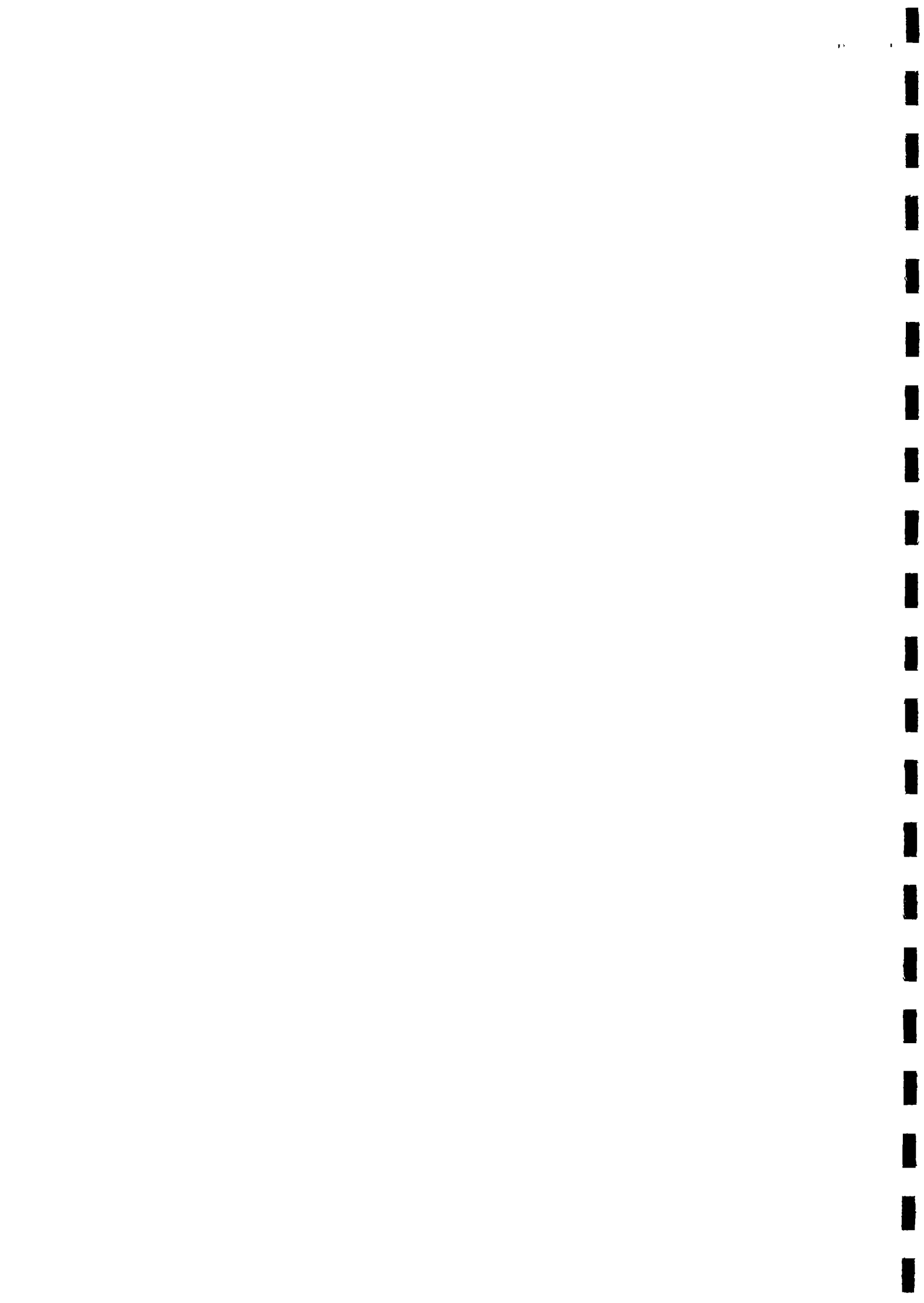
2.3.4 Decision-making in the household

For this question, the respondents who were mainly women, were asked to identify the person(s) responsible for most household decisions. Because of the subjectivity of the question the results should be treated as "women's perception of household decision-making" rather than a true representation of the decision-makers. In Brahmin and Chhetri dominated Gajuri Panchayat, the eldest male, either the father, the father-in-law or husband, was identified as the decision-maker of the home by 55% of the respondents (table 2.7). Major household decisions such as buying, selling and mortgaging properties, possessions and food grains were taken by the head of the household with little input from the other members. In Fikkal, women had some decision-making power and were often consulted; 20% of the households in Fikkal reported joint male/female decision-making compared to only 10% in Gajuri.

2.3.5 Participation in local-level organizations

Each ward of the Panchayat had one ward chairman and four village assembly members who were all locally elected. Fifteen people in Gajuri and five in Fikkal were thus active in the village panchayats. In organizations where membership was open i.e. the women's and youth clubs, very few people participated: only 3% of the female population of Gajuri and none in Fikkal were members of the Nepal Women's Organizations (table 2.9). The youth club was even less popular with only two members in Gajuri and again none in Fikkal (table 2.8).

Thus the vast majority of villagers (95 to 99%) in both project sites were not active in any kind of official social or political organization. However, every household had one member participating in one of the informal traditional labour exchange groups. These reciprocal work groups undertook farming activities for each other on a rotational basis. They were more active in Gajuri than in Fikkal.



2.3.6 Men's attitude towards women's participation in development projects

In about 90% of the households in both project sites, men had an encouraging attitude towards women's participation in decision-making and development activities including drinking water supply and sanitation programme (table 2.10). This figure might be a bit high as the men might have responded positively in the hope that it would help to secure approval of the water supply installation project.

2.3.7 Patterns of interaction to the community

Knowledge about the pattern of interaction of women with family members, peers/friends, neighbours and government officials was important in determining the most appropriate method of dissemination of new ideas and means of mobilizing support for the successful implementation of any participatory development programme.

In Gajuri, the majority of women relied on their peers and friends for advice. They depended on their family members for the basic necessities, for help during a crisis and for money (table 2.11). Similarly, all women in Fikkal were dependent on their family members for food, clothing and money. They depended mostly on their peers, friends and neighbours for advice. In both the project sites, women interacted with government officials only when absolutely necessary.

2.3.8 "Significant other" of women family members

The "significant others" were those who directly influenced the behaviour of an individual, in this case the women. The "significant other" for almost all women was her own husband (table 2.12). This figure was higher in Gajuri: 80% of the women felt this way compared to 71% in Fikkal. Only a few women regarded their father, mother, children or peers as their "significant other". The significant role that the husband could have in encouraging or discouraging women's participation in various activities was thus very evident.

2.3.9 Caste hierarchy

The project sites were divided into three main caste groups. In Gajuri, Brahmin-Chhetris were at the top followed by Matwali (liquor-consuming) castes and untouchables at the bottom of the hierarchy. In Fikkal, on the other hand, Matawali (liquor-consuming castes regarded themselves as superior to the Brahmin-Chhetris who were placed second in the hierarchy. Untouchables were people from the trade castes and were at the bottom of the hierarchy.

Intra-caste relationships were smooth and cordial but inter-caste relations were sometimes strained. The high-caste people (Brahmin and Chhetri) were preoccupied with the traditional concept of purity and the pollution of the lower castes and this inhibited close inter-caste interaction. These attitudes, although not exhibited in public, were very much present in back-stage interaction. Women in the villages appeared to be more

conservative than the men in public dealings but both privately respected the caste hierarchy equally.

2.4 Economic characteristics

2.4.1 Introduction

Indicators of economic wealth such as ownership, employment, sources of income, annual income, expenditure and debt could help to determine the extent of people's potential contributions, monetary or other, to projects as well as to assess their priorities in expenditure and investment. With this in mind, an attempt was made to illustrate the general economic characteristics of both the project sites. Necessary precautions were taken to elicit correct economic information.

2.4.2 Ownership

2.4.2.1 Land

The average size of landholdings in Gajuri was 21 ropanis and 33 ropanis (close to 1 ha.) in Fikkal (table 2.13). These statistics thus made the residents of both project sites small subsistence farmers typical of rural Nepal. Farmers in Fikkal lived in a higher hill area than Gajuri and worked mostly pako or sloped land.

2.4.2.2 Livestock

Most households in both project sites had at least one cow or goat or a few chickens. Ownership of livestock was a fairly accurate indicator of wealth and of its distribution in the setting of one village. Those households which had no cows (44% in Gajuri and 21% in Fikkal) or oxen (42% and 50%) were in general, the poorer families of the village (table 2.14). Goat husbandry was pervasive in Gajuri because of the animal's importance in religious rituals.

People kept animals for family consumption but mostly for market sale of milk, milk products and meat.

2.4.3 Employment

Among the economically active population in both sites, the majority was self-employed on the family farm (table 2.15). A few were either employed by others or by the government. It was interesting to note that there were no unemployed people in Gajuri. Five persons were unemployed in Fikkal.

2.4.4 Occupation

The primary occupation of the overwhelming majority of villagers was agriculture (table 2.16). Wage labour, business and service were secondary occupations. In Fikkal, there were some families that listed portering as a secondary occupation.

2.4.5 Income

Agriculture, wage labour, business, service, and pension formed the main sources of income in the villages (table 2.17).

About two-thirds of the total household's principal source of income was derived from agriculture. The average annual family income from this source was Rs.9136 in Gajuri and Rs. 7370 in Fikkal. The poorer households were often forced to sell their crops before the harvest for cash. Local businessmen bought the crops for 50% of their true value. The average annual family income from service, business and wages was Rs.4570, Rs. 1425 and Rs.1805 in Gajuri, and Rs.694, Rs.4540 and Rs.2290 in Fikkal, respectively.

2.4.6 Expenditure

2.4.6.1 Food

In both project sites, most of the families owned land which they either cultivated themselves or hired share-croppers for the work. Many families were self-sufficient in food grains but a few had to purchase supplements (table 2.18). The majority of families spent less than Rs.1000 a month on food.

2.4.6.2 Clothing

Villagers normally bought clothes once in a year prior to the Dasain Festival. Many villagers were not much concerned with wearing new clothes. The majority of families spent less than Rs.100 in a month on clothing. A few families spent Rs.100 - Rs.200 and only one family in Gajuri spent more than Rs.200 in a month (table 2.18).

2.4.6.3 Education

The economic value of children was high in the rural areas. Therefore, despite the provision of free primary education for all children, many children of school-going age were not enrolled in schools. Instead they were engaged in animal care, farm work and wage labour. Among those children who did go to school, the number of those who dropped out was high because they were considered more productive at home doing the above mentioned chores.

In both project sites, about one-half of the total families spent nothing on education. Among those who had family members enrolled in schools, the majority spent less than Rs.25 in a month (table 2.18).

2.4.6.4 Medicine

Many villagers were not aware about modern health facilities. They preferred to consult the local faith healers for medical treatment. This was particularly true in Fikkal. Some villagers consulted the health assistant of the nearby health post and bought some of the prescribed medicine in the local bazaar. The monthly expenditure was less than Rs.50 -Rs.200 per month on medicine (table 2.18).

2.4.6.5 Rituals and festivals

Many rituals and festivals were observed by the villagers. The main festivals included Dasain and Tihar. The majority of villagers spent less than Rs.50 in a month; a few families spent Rs.50 - Rs.200 in a month (table 2.18).

2.4.7 Expenditure priority

Information on expenditure priority was elicited to determine the villager's willingness to spend on health and sanitation. The expenditure priorities of the villagers in Gajuri were food, clothing, health, sanitation and festivals while the priorities of the people in Fikkal were food, clothes, festival and health and sanitation (table 2.19). The data on actual expenditure discussed above and their attitude towards their priority of needs clearly indicates that the villagers gave less priority to spend money on health and sanitation. They were more concerned with the fulfilment of their basic needs.

2.4.8 Investment priority

The investment priority of the villagers was in agriculture and livestock. A few families, between 5 and 6 per cent in Gajuri had shown interest in investing in cottage industries but less than one per cent in either village seemed to want to invest in cash crop production (table 2.20).

2.4.9 Loan

About one-third of the total families in both project sites took loans from banks. Some families preferred to take loans from money lenders and neighbours (table 2.21). Those families who had taken a loan repaid it by selling their properties and/or food grain (table 2.22).

2.5 Physical facilities

2.5.1 Housing

Most houses of Gajuri were made of stone and those of Fikkal of bamboo thatch. Wealthier families in both villages used wood for house building material. Most homes had one or two rooms and a compound. Forty per cent of households had a compound less than a ropani in size. Almost all the households used their compound for cultivation (vegetable garden) and/or animal shelter.

2.5.2 Ownership of latrines

Only five households had private latrines in Gajuri. Between fifteen and twenty families used pit or hut type latrines in Fikkal. There were no public latrines in either village.

2.5.3 Ownership of water sources

In Gajuri only two private water sources were reported whereas in Fikkal more than fifteen wells or other natural sources were claimed to be owned privately.

3. COMMUNITY PRACTICES AND PERCEPTIONS OF DRINKING WATER SUPPLY AND SANITATION

3.1 Introduction

This section is divided into two parts; 3.2 Water Supply and its utilization, and 3.3 Health and Sanitation, although it is clear that these are interrelated; the condition of each affects the condition of the others. The first section will examine the water quality, source, needs and uses and will also attempt to give some illustration of the importance of water as perceived by women. The second section will present the information elicited on various concepts related to health and sanitation and existing practices in both project sites. Two special short-term but extensive observation studies were undertaken to observe and record practices related to both water use and health and sanitation. These are presented at the end of each section.

3.2 Water supply and use

3.2.1 Water quality at source

Although no testing of the water was undertaken to determine its quality at the source, qualitative information could prove to be very useful. The people of both villages believed that as long as the water came from a natural source, it was safe for drinking. Observations of the field staff however, indicated otherwise. Most wells (source of water supply for more than 60% of households in both villages) were simply dug out, one foot deep, uncovered and had much surface dirt such as leaves and twigs. Tadpoles and frogs inhabited many wells, and cows and other livestock were observed to be grazing near and drinking from the wells. These observations were more common in Gajuri than in Fikkal. Water spouts and wells in both areas were the sites for bathing and washing for most people. Human, animal and bacterial agents were obviously contributing to the contamination of local water sources.

3.2.2 Water needs

The villagers needed water mainly for drinking, cooking, feeding animals, washing clothes and utensils. The daily water requirement in the majority of households was between 50 and 150 litres (table 3.1). A few families (18% in Gajuri and 10% in Fikkal) required 200 to 400 litres of water for various purposes.

3.2.3 Water sources and uses

Most people in both sites obtained their water from wells, both surface and deep wells, although the former (kuwa) were more numerous especially in Fikkal. Secondary sources included natural water sources with spouts (padhera), piped water from natural sources, rivers and streams (table 3.2). On average, one small water source was used by five or six households. The more important (larger) ones were used by fifteen to twenty five homes. Water supply permitting, villagers in both sites generally used the nearest water sources regardless of the water's condition so as to save time and effort.

More than half of the households in Gajuri and sixty per cent in Fikkal used well water for their drinking and cooking needs (table 3.3). Well water was also used by about half of the households in both villages for most other purposes (livestock watering, clothes and utensil washing) except in Gajuri where water from an open channel was deviated and used for irrigating fields.

Specifications of the water sources of both sites are described in Appendix B.

3.2.4 Reliability and convenience of water source

The existing water sources were less reliable in Gajuri than in Fikkal. About 45% of the total households in both project sites had access to less reliable or unreliable water sources, that is, in the course of the year water was sometimes not available at the regular source.

The reliability of water source was seasonally influenced. Most of the water sources - wells, padhera and streams were seasonal, water being scarce during the months of March, April and May.

In both the project sites about 60 per cent of the households got an adequate amount of water and about 35% of the households got a more than adequate amount of water for most of the year (table 3.4).

The situation was different during the months of March, April and May when most of the existing water sources were dry. In Gajuri, about 80% of the total households did not get an adequate supply of water. In Fikkal 53% of the total households had unreliable water supply during the dry season.

The existing sources of water were inconvenient or less convenient for the majority of the villagers (table 3.5). For about 62% of the total household in Gajuri and about 48% in Fikkal, the present source of water was inconvenient. Convenience was measured in terms of time and effort involved in fetching water.

3.2.5 Persons responsible for water collection

Fetching water was traditionally regarded as one of the main domestic activities exclusively performed by female family members. However, in both project sites, other family members were also found to spend a substantial amount of time fetching water for daily use. Women were the sole collectors for 27% of the households in Gajuri and 17% of the homes in Fikkal while adult males were responsible for water collection in only 4% of Gajuri homes and 4.5% of Fikkal homes (table 3.6). About one third of the respondents in both villages stated that all three - adult males, adult females and children - shared this responsibility.

3.2.6 Time of water collection

Villagers fetched water at least once a day. Early morning, and evening were the usual times of the day that people went to fetch water. In Gajuri, two-thirds of the total households fetched



Women and children are the main water collectors in both sites. Here a Gajuri woman collects water at a public water tap (Dilla Panchayat Dharo).



water both in the morning and afternoon while one-third of the households fetched water in the morning and evening (table 3.7). In Fikkal, 75% of the households fetched water three times a day.

3.2.7 Time spent on water collection

Villagers in Gajuri had to spend much more time collecting water than villagers in Fikkal. This was because the houses in Gajuri village were scattered up and down and hill-side so the water sources were far from many households. For 19% of the households in Gajuri, it took close to one hour only to reach the nearest water source and another hour to return after fetching 12 litres of water at one time (table 3.8A). Half of the collectors spent 15 to 20 minutes walking to the nearest water source and about 15 minutes in queue to collect water for a total of 45 minutes to over one hour for each trip to the water source.

In Fikkal, one-half of the total households had easy access to a water source; it took less than five minutes to reach the source, and waiting time was minimal (table 3.8B). For some households it took 5-15 minutes to reach the nearest water source. The total amount of time spent fetching 12 litres of water exceeded one hour for 49% of the households in Gajuri but only for 3.3% of Fikkal homes. These figures rose in both villages during the dry season when the collectors must walk further to reach a water source and wait longer for the water to fill up the containers. Some people had stated that 3-hour trips were very common at that time of the year.

The estimated total time spent per day fetching water for an average family's daily requirements was overwhelming in Gajuri: 8 to 9 hours for an average of 140 litres. The figure for Fikkal was only 2-3 hours. It was common to hear Gajuri villagers state that they spent half the day fetching water. Women were observed to be the most occupied in this task followed by the children and then the men.

3.2.8 Disputes over water use

Because of the scarcity of water in certain settlements, either due to inadequate water supply or a temporary over-crowding at the source, some villagers quarrelled occasionally. Such disputes were usually solved by the elderly in the village. At times, local leaders got involved and their efforts were normally effective in resolving such conflicts.

3.2.9 Communities perceptions of responsibility for private and public water taps and toilets.

Taps were present in only a few households in both project sites. Villagers had expressed a strong desire for piped water in their homes. Most respondents felt that the government should provide grants or subsidies to residents wishing to install a water connection in their homes (table 3.11). Similar opinions were voiced regarding private toilets (table 3.10). As for public taps, more than 85% of the people surveyed held that the government was responsible for their installation but the majority believed that the community should be responsible for their maintenance (table 3.9). Most people felt that the government was also responsible for installing and maintaining public toilets

although to a lesser extent (table 3.9).

3.2.10 Communities perceptions of involvement of people in drinking water supply programmes

Almost all respondents in both project sites felt that all housewives, school teachers, neighbours and panchayat workers should be involved in drinking water supply programmes (table 3.12). They perceived these people as either the most knowledgeable, most appropriate or most conscientious people of the village. Their active participation and support would be valuable in solving some of the existing problems of drinking water supply programme in both project sites.

3.2.11 Education on safe drinking water

Many women were concerned about the methods used for education on issues related to drinking water supply and sanitation. Radio programmes, posters and demonstrations on drinking water as well as sanitation were ineffective, they felt, because they were illiterate and uneducated on the one hand, and too busy with household chores to attend demonstrations on the other. In addition, many households did not own radio sets. Some women suggested that their children - who were the future adults of the village - should be taught sanitation rules and the safe use of water at school. The most appropriate method according to 86% of the respondents (table 3.13), would be to have Women's Development Services motivators instruct village women using formal as well as informal education techniques. WDS leaders had been meeting with the women once a month in both areas and motivators had been visiting women's homes regularly giving them assistance and advice on health and nutrition matters. The women of the village had developed trust in these leaders and participated actively in the activities that the WDS organized.

3.2.12 Priority of community needs

Efforts were made to identify the felt priority needs of the villagers in Gajuri and Fikkal. The informants were requested to prioritize a set of eight needs: irrigation, drinking water, health post, road, sanitation facilities, high school, latrines and fuel wood/fodder. Food, clothing and shelter, as the highest priority needs, were not included in the list.

In Gajuri, the ranking was as follows: drinking water, irrigation, health post, fuel-wood and fodder, latrines, road, high school and sanitation (table 3.14A). In Fikkal, the order of priorities were drinking water, irrigation, health post, sanitation, road, high school, latrines, and fuel-wood and fodder (table 3.14B). Drinking water was identified as the main need in both the project sites while sanitation needs were given much lower priority ranking.

3.2.13 Expected benefits of water supply programme

The villagers, particularly women, were eagerly awaiting the implementation of drinking water supply programmes in their villages. The questions put to the villagers were designed to determine what benefits they expected from the proposed water supply programmes.



A private bamboo water connection in Fikkal



In Gajuri and Fikkal, the majority of women hoped that safe drinking water would be available after the implementation of the programmes (table 3.15). Many women also thought that they and the rest of the villagers would keep themselves cleaner by washing more often at the more convenient water sources. A few women mentioned other benefits such as good health for all family members, convenience, and time savings.

3.2.14 Water collection and water use observation

A separate two week field trip consisting of two staff members was undertaken in October 1986. The team randomly chose six households in each village to observe and record the water collection and water use patterns. The staff observed these activities over a twenty-four hour period.

3.2.14.1 Water collection

Water collection activities were observed in six households of each village. In Gajuri, the average store of water in the morning was about 24 litres. Each household (mainly the women) collected an average of 70 litres, 31 litres and 15 litres in the morning, afternoon and evening respectively (table 3.16A). The average daily household consumption was 124 litres. The per capita consumption for villagers was 9 litres and for livestock, 4 litres (table 3.17A.1).

In Fikkal, the average store of water in the morning was about 7 litres. Each household collected 80 litres, 33 litres and 34 litres in the morning, afternoon and evening respectively (table 3.16B). On average almost 140 litres of water was consumed daily in each household. This was significantly higher than in Gajuri and may explain some of differences in the health conditions in both villages. The per capita consumption of water by the family members was 14 litres per day per capita and livestock consumption was 9 litres table (3.17B.1).

3.2.14.2 Water use

The villagers in Gajuri and Fikkal used water mainly for feeding animals, drinking and cooking. Water was also used to wash utensils and clothes. The 24-hour observation of water use in six households in Gajuri revealed that out of the average 62 litres of water used in the morning, 25 litres were used for feeding animals and 17 litres for cooking morning meals. Only 6 litres of water was used to wash the face, hands, and feet. Eleven litres were used for cleaning the house and utensils. Out of the 36 litres of water used in the afternoon, 25 litres were used for feeding animals and 10 litres for making tea, washing utensils and drinking. Out of the 26 litres of water used in the evening, 15 litres were used for cooking evening meals, seven litres were used for washing and only 1.3 for drinking (table 3.17A).

The villagers in Fikkal also used water for feeding animals, drinking and cooking. In the morning, 35 litres of water was used for feeding animals and 20 litres for cooking. Another 20 litres of water was used for washing, drinking, and cleaning purposes. Out of the 34 litres of water used in the afternoon, 21 litres were used for feeding animals and 13 litres were used for drinking

and washing. Out of the 30 litres used in the evening, fifteen litres and eleven litres were used for washing and cooking respectively. Only 1.2 litres of water were used for drinking (table 3.17B).

3.3 Perceptions of sanitation and health

3.3.1 Concept of clean water

In both project sites, fresh water from natural source was considered pure and safe for drinking. Eighty-four per cent of the total respondents had this belief. Only 76% stated that boiled water was safer for consumption (table 3.18A).

Surprisingly, these beliefs did not change significantly with education. In Fikkal, 90% of the uneducated maintained that well or spring water was safe for drinking while almost the same population (87.5%) of those with one to five years of schooling shared this belief. A higher percentage of the educated (13-40%) stated that boiled water was the safest water for drinking as compared to 3 to 6% for the uneducated (table 3.18B).

Significant differences in clean water perceptions were found between the sexes. More women (93%) than men (80%) believed that natural, untreated water was safe for consumption. Only 4.5% of the women felt that boiled water was the safest compared to 8.8% for the men (table 3.18C). Only a few women were aware of the various purifying methods.

3.3.2 Concept of sanitation

All the villagers regarded a clean house and yard, clean trail, clean surroundings and a clean latrine as sanitary (table 3.19).

3.3.3 Perceptions of human and other wastes

Most villagers regarded all wastes as dirty but did not seem to have internalized a very strong stigma against any one waste. It was interesting to note that most Gajuri respondents (80%) felt that human wastes were dirty, had a foul odour and spread diseases but did not give them trouble or problems. However, 68% of Fikkal respondents stated that human wastes did present problems to the community (table 3.20). Stigmas attached to solid and liquid household wastes were much less pronounced.

3.3.4 Concept of sickness and disease

Most people in both villages (46%) defined a sick person as one who was in bed because of an ailment (table 3.21). In Gajuri, 32% had the criteria of inability to work for defining a sick person. The villagers in both sites believed that disease and sickness was caused by a malfunctioning of body parts but a few people in Gajuri (13%) and many in Fikkal (39%) attributed sickness to a curse or "God's will". Very few in either site blamed unsanitary (dirty) conditions for the presence of disease.

3.3.5 Health conditions

The health conditions of the villagers were fairly poor in both villages but Gajuri villagers suffered much more from water borne diseases than did Fikkal people, according to field worker observations. The incidence of diarrhoea among infants and children was high as was the presence of worms and almost every child had scabies. Adults reported some incidents of poor health and a few serious illness. One health worker per ward treated village patients but the nearest health post in Gajuri was two hours walk away. People in both villages went to see the traditional medical practitioner but villagers in Fikkal were more likely to see him than people in Gajuri. Health conditions were better in Fikkal due partly to the colder weather and the higher altitude.

3.3.6 Drinking water and food conditions

None of the respondents in either project site reported treating their drinking water. Most did not know the significance of boiling the water or mixing potash in it. When asked why they did not treat their water after having been told of its contamination, people stated that boiled water did not taste good and that this practice wasted their time and more importantly, their firewood. Most people in Gajuri drink only water because they could not afford tea while people in Fikkal consumed mainly tea as a beverage, a practice that decreased the risks of succumbing to water-borne diseases. This might also partly account for the better health of the Fikkal community.

Food in both villages was well-cooked and there were no reports of people eating raw vegetables.

3.3.7 Solid and liquid waste disposal

For both the project sites, most villagers threw solid and liquid wastes in a pit or a section of the backyard (tables 3.22 & 3.23). Only very few households scattered these wastes in the open space. Some households utilized the wastes for animal feed.

3.3.8 Human waste disposal

There was a conspicuous lack of latrines in the villages. The urine and excreta disposal system was unsatisfactory and had adverse effects on the general health condition. The most usual place for urine and excreta disposal both by the males and the females, irrespective of their age, was either the field, bush and the forest or the backyard of the house (table 3.24). A few households had pit latrines which were reportedly used by all family members for urination and defecation but field workers inspections revealed that many latrines were too clean to have been used regularly. A few of the households used stream-river banks, nearby ponds and wells as sites for defecation. In Fikkal, however, a few households defecated in an open space in the yard.

3.3.9 Time of defecation

All male and female villagers disposed of excreta in fields, bush, forest, backyards or courtyards early in the morning or the evening. Most females defecated early in the morning (table 3.25).

3.3.10 Material used for cleaning and washing hands after defecation.

Almost all male and female villagers in Gajuri used water for anal cleaning (tables 3.26-3.27). In Fikkal, the majority of villagers used water but about 29% of both sexes used grass, twigs and stones for anal cleaning. A few men and women in Fikkal used ordinary paper for this purpose.

The majority of villagers used clay to clean their hands. A few villagers used soap, water and ash to clean their hands.

3.3.11 Knowledge about latrine types

The majority of the villagers in Gajuri and about one-third of the villagers in Fikkal had no knowledge of any of the latrine types. Only one villager knew about the water seal with a septic tank (table 3.28).

3.3.12 Utensil washing

Almost all the households washed utensils twice a day in water and used materials such as ashes or twigs to wash them. Some households used clay for this purpose.

3.3.13 Washing clothes

Many villagers (mainly women) washed clothes weekly and others washed occasionally. The well was the most extensively used source for washing of clothes. Other sources included piped water, streams and rivers (table 3.29).

3.3.14 Bathing conditions

Many villagers bathed once a week and others bathed occasionally (table 3.30). Women, because they often collected water, bathed much more frequently than men. The most extensively used bathing sites were wells and natural water spouts. In Fikkal soap was used by many villagers but in Gajuri many villagers used mustard cake (peena) for bathing. There were a few villagers who also used red clay to wash themselves.

3.3.15 Livestock watering

Villagers who had livestock had a cattle byre near the house to water their animals there. A few households used ponds, rivers and streams and wells to water their animals (table 3.31).

3.3.16 Hygiene observation

3.3.16.1 Introduction

A week-long hygiene observation was done in Gajuri and Fikkal villages during the month of October 1986. The number of households selected randomly in Gajuri and Fikkal was 28 and 26, respectively.

3.3.16.2 Condition of food and beverages

A majority of households in both Gajuri and Fikkal villages fully covered dry as well as cooked food (table 3.32). About a quarter of the households in Gajuri village usually did not cover food. In Fikkal, most of the households covered their beverages but in Gajuri 6% did not cover them.

3.3.16.3 Drinking water storage condition

Only two households in Gajuri and 5 in Fikkal villages covered stored drinking water. Most of the households generally did not cover water (table 3.33).

3.3.16.4 Condition of water container

About half of the households used a bronze or copper gagri to carry and store water. Some households used a gagri made of brass and aluminium. In Fikkal almost all the households used a gagri made of aluminium. The condition of the water containers was clean in Fikkal and less so in the households of Gajuri (table 3.34).

3.3.16.5 Water dippers

All the households in Gajuri used water dippers for removing water from the water container for drinking, cooking, bathing and washing purposes (table 3.36) while less than half of the sample households in Fikkal reported other uses. This may be another factor influencing the health conditions of the village.

About two-thirds of the total households observed in Gajuri used a bronze ankhora as a water dipper. Other households also used an ankhora but it is made of copper, silver or steel. Almost all the household in Gajuri left their water dipper on the floor (table 3.35). In Fikkal households used a bronze ankhora but other vessels like batuko, kettle and bata were also used as water dippers. Most of the households in Fikkal kept their water dippers on a rack stand made of wood.

3.3.16.6 Condition of kitchen

All the households in Gajuri and a majority of the households in Fikkal had no ventilation in the kitchen (table 3.37). The room was filled with smoke when the firewood was burnt in the hearth. The kitchen floors in both sites were relatively clean; in one third of Gajuri households and one fourth of Fikkal homes the floors were dirty (table 3.34)

3.3.16.7 Presence of flies & insects

In most of the households in Gajuri, flies and insects were found humming around the food and beverages. In Fikkal, there were no flies or insects in the majority of the households. This might be due to the relatively colder weather there (table 3.38).

3.3.16.8 Condition of courtyard/backyard

The courtyard/backyards of most Fikkal households were relatively cleaner than those of in Gajuri (table 3.34).

3.3.16.9 Cattle byres

Almost all households in Fikkal kept their cattle outside the house (table 3.39). In Gajuri, two-third of the families constructed their cattle byres outside the house. Twenty-eight families kept the cattle inside the house in the same room as the kitchen thus adding to the risk of food contamination.

4. PROBLEMS AND ISSUES OF WOMENS PARTICIPATION

4.1 Introduction

The success of any development programme depends primarily on the participation of local people in such programmes. While most development planners and workers generally take into consideration the technical, economic and political factors when planning the intervention strategy, they often fail to assess the socio-cultural practices, attitudes and beliefs of the villagers for whom the programmes are intended.

To adopt the necessary strategies in order to encourage local and, in this case women's participation, it is essential to understand the existing constraints which limit women's participation in drinking water supply and sanitation programmes. An attempt has been made here, on the basis of the findings discussed earlier and the impressions derived from the field survey, to identify some basic social, cultural, economic and institutional problems and issues for promoting women's participation. A summary of the women's profile is first presented. It is hoped that this together with the identification of problems related to women's participation will be useful in the implementation stage of intervention.

4.2 Summary of women's profile

The lives of women in both areas were similar in that the activities in which they were occupied centered around the home. They were also busy with farm work, water and firewood collection and clothes washing - activities which took women outside the home. Most women were responsible for water collection, water-related activities and sanitation-related activities which could take up to ten hours per day. Of the total female population, 64 per cent were illiterate. Generally they maintained that fresh, clean-looking and smelling water from a natural source was safe for drinking and were largely unaware of the various means of purifying water. The linkage of unsanitary practices to contaminated water supply to poor health was also unknown to most women; latrines were few and their sanitary purpose ignored, water was not treated, drinking water was left uncovered, and defecation practices were very unhygienic in both villages, although to a lesser extent in Fikkal.

Women believed they could learn from informal education on matters important to the health and welfare of their families. Women actively supported the Women's Development officials and local volunteers and had the support of their husbands for participation in WDS activities. Women went to their friends and neighbours for advice but the most influential person and main decision-maker in a women's life was her husband.

Women were not active in the Village Panchayat nor in the Nepal Women's Organization mainly because these were government-run political organizations that did little to improve the material conditions of the villages. They believed that participation in the NWO served no purpose and was uninteresting.

4.3 Socio-cultural problems & issues

4.3.1 Factionalism in the villages

The villagers in both sites were divided into several small settlements of five to ten households which were cliquish in nature and often caste specific. The women of one settlement often refused to attend meetings or activities held in another locality. They asserted that any such activity should be held in their own settlement and that the other women should come there to attend. The women felt this way most likely because of the parochial group/caste pride and solidarity but also because of the time involved in walking to another locality (5 to 30 minutes) to participate in village activities. This traditional attitude inhibited interaction and co-operation between the various settlements in the village.

4.3.2 Self-assurance of individuals

Many women were convinced that what they asserted was right and what all others said was wrong. Each woman stood by her own arguments and opinions during a gathering and refused to recognize the views of others even if these were sound. These impasses prevented compromises when trying to reach a definitive decision or plan of action. The exception to this situation was an important one; in both villages, women were found to quickly reach a consensus when a highly respected woman put forth her ideas and presented a solution. This was normally accepted by all.

4.3.3 Caste system

The restrictions and rules imposed by the Nepalese caste system were present in all rural areas. The high caste villagers still felt strongly about the purity of their caste and retained a sense of defilement from personal contact with the low castes. However, this was not openly expressed in public interaction.

4.3.4 Educational constraints

Most women were illiterate or had had little formal schooling. This had the dual effect of limiting their knowledge and horizons on the one hand and of assuring, to a large extent, the preservation of traditional habits on the other. These traditional habits, especially those related to drinking water, health and sanitation, were often unhealthy and dangerous, but, in the absence of education, they were difficult to change.

4.3.5 Time constraints

Rural women had very busy daily schedules in which they accomplished most household chores in addition to farm work. On an average, Nepali women living in rural areas worked 10 to 12 hours per day of which one to ten hours were spent obtaining water. These activities left little time for women to participate in educational programmes or in the construction or the maintenance of water and sanitation facilities.

4.3.6 Minimal role in household decision-making

Most village women, particularly those belonging to the higher Hindu castes had little or no input in household decisions; the husband, father or father-in-law made most of the important decisions and must be consulted before any action could be initiated. Women must therefore have male consent when considering participation in non-traditional activities.

4.3.7 Economic constraints

Although many villagers showed willingness to contribute financially to the implementation of drinking water supply schemes in their village, most could not afford to. As most were subsistence farmers, the little agricultural surplus that they produced went towards the purchase of dry goods and other necessities. Very little surplus was transformed into monetary savings that could be used to fund local development projects. Their only possible economic contribution to such efforts could be the supply of labour and some local building materials.

4.3.8 Mistrust of local political leaders and lack of support of local institutions

Villagers seemed to have very little trust in their local leaders whom they saw as opportunists and dishonest. It followed from this that the people also lacked faith in the local institutions in which these leaders operated. The village panchayats and the Nepal Women's Organisation had so far been ineffective in improving the quality of life of the villagers. Women had developed some faith in the Women's Development Officers although the officialdom and lengthy procedures had resulted in implementation delays and many were sceptical about the actual outcome of the proposed intervention programmes.



TABLE - 1.1

PROPOSED DRINKING WATER SUPPLY AND SANITATION FACILITIES IN
NEPAL BY THE YEAR 1990

	Percentage of population served		
	1980	1985	1990 *
Urban water supply urban sewerage and sanitation:	83.00	89.00	94.00
a) Individual water delivery system	12.25	16.54	12.80
b) Sewerage	6.77	10.72	21.71
Rural water supply rural sanitation	-	2.55	13.12

* estimated.

TABLE - 2.1

POPULATION COMPOSITION BY SEX AND AGE

Age group	Gajuri			Fikkal			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
0 - 14	197 (40.9)	169 (39.7)	366 (40.1)	180 (41.9)	186 (44)	366 (43)	377 (91.2)	355 (41.9)	732 (41.5)
15 - 49	230 (47.2)	197 (46.3)	427 (46.8)	197 (45.9)	198 (46.9)	395 (46.4)	427 (46.7)	395 (46.6)	822 (46.6)
50 +	60 (12.3)	59 (13.8)	119 (13)	52 (12.1)	38 (9)	90 (10.5)	112 (12.2)	97 (11.5)	209 (11.9)
Total	487 (53.3)	425 (46.6)	912 (100)	429 (50.4)	427 (49.5)	851 (100)	916 (51.9)	847 (48.1)	1767 (100)

The source of the information contained in tables 2.1 to 3.39 is the IDS Field Survey conducted in September-October, 1986.

April - May, 1986

TABLE - 2.2

POPULATION BY CASTE/ETHNICITY

Caste/Ethnicity	Number of Households		
	Gajuri	Fikkal	Total
Brahmin	50 (34.0)	3 (1.9)	53 (17.5)
Chhetri	43 (29.2)	12 (7.7)	55 (18.2)
Rai-Limbu	-	67 (43.2)	67 (22.2)
Tamang	13 (8.8)	39 (25.2)	52 (17.2)
Newar	18 (12.2)	7 (4.5)	25 (8.3)
Gurung-Magar	15 (10.2)	2 (1.3)	17 (5.6)
Tibetan	-	21 (13.5)	21 (7.0)
Others (Damai, Kami Sarki, Sunuwar, Baniya)	8 (5.5)	4 (2.6)	12 (4.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 2.3

MARITAL STATUS
MALE AND FEMALE POPULATION

Martial Status	Gajuri	Fikkal	Total
Never Married	482 (52.9)	477 (56.1)	959 (54.4)
Married	389 (42.7)	327 (38.4)	716 (40.6)
Spoused deceased	35 (3.8)	39 (4.6)	74 (4.2)
Separated	5 (0.5)	8 (0.9)	13 (0.7)
Divorced	1 (0.1)	-	1 (0.1)
Total	912 (100.0)	851 (100.0)	1763 (100.0)

TABLE - 2.4

EDUCATIONAL STATUS

Educational Level	Gajuri		Fikkal		Total	
	Female	Male	Female	Male	Female	Male
Illiterate	255 (60.)	283 (58.1)	289 (68.4)	209 (48.7)	544 (64.2)	492 (53.7)
Literate without schooling	56 (13.1)	57 (11.7)	40 (9.4)	87 (20.2)	96 (11.3)	144 (15.7)
Primary: 1 to 5 years of schooling	79 (18.5)	88 (18)	75 (17.7)	95 (22.1)	154 (18.2)	183 (20)
Lower secondary: upto to 10 years of schooling	24 (5.6)	48 (9.8)	77 (9)	35 (8.1)	41 (4.8)	83 (9.1)
School leaving certificate	10 (2.3)	7 (1.4)	-	1 (0.2)	10 (1.2)	8 (0.009)
College or University	1 (0.2)	4 (0.8)	1 (0.2)	2 (0.4)	2 (0.002)	6 (0.006)
Total	425 (100)	487 (100)	422 (100)	429 (100)	847 (100)	916 (100)

TABLE - 2.5

FAMILY TYPE

	Family Type		Total
	Nuclear	Joint/extended	
Gajuri	75 (51.0)	72 (49.0)	147 (100.0)
Fikkal	96 (61.9)	59 (38.1)	155 (100.0)
Total	171 (56.6)	131 (43.4)	302 (100.0)

TABLE - 2.6
DIVISION OF LABOUR BY SEX

	Fikkal		Gajuri		Total	
	Male	Female	Male	Female	Male	Female
A. Household activities						
Cooking	45	172	36	172	81 (19)	344 (81)
Washing utensils	37	171	23	156	60 (15)	327 (85)
Washing clothes	33	166	21	156	54 (14)	322 (86)
Water collection	67	175	64	173	131 (27)	348 (73)
Firewood collection	121	141	99	142	220 (44)	283 (56)
Grazing animals	61	64	96	115	156 (47)	179 (53)
Feeding animals	117	164	69	131	186 (39)	295 (61)
Child care	19	114	16	105	35 (14)	219 (86)
Household marketing	142	31	142	8	284 (88)	39 (12)
B. Agricultural activities						
Ploughing	135	-	127	-	262 (100)	-
Sowing	100	84	128	69	228 (60)	154 (40)
Weeding	162	95	141	80	306 (64)	175 (36)
Harvesting	160	96	141	80	201 (63)	176 (37)
Irrigating	115	38	139	14	254 (83)	52 (17)
Wage labour (agri.)	88	26	37	16	125 (75)	42 (25)
Agricultural marketing	82	14	91	3	173 (91)	17 (9)

TABLE - 2.6 (Contd)

	Fikkal		Gajuri		Total	
	Male	Female	Male	Female	Male	Female
C. Cottage industry activities						
Business transaction	1	1	5	-	6 (86)	1 (64)
Management/accounting	-	2	2	-	2 (50)	2 (50)
Technical Supervision	1	2	3	-	4 (60)	2 (33)
D. Health & Sanitation related activities						
Solid waste disposal	20	78	15	150	35 (9)	328 (91)
Liquid waste disposal	16	91	9	72	25 (13)	163 (87)
Human waste disposal	7	135	8	103	156 (5)	238 (15)
Animal waste disposal	83	189	34	131	117 (29)	280 (71)
Medical (traditional healer or health clinic) visits	151	35	152	14	283 (89)	49 (15)

TABLE - 2.7

A-8

Decision-Maker	Gajuri	Fikkal	Total
Elder male or husband	81 (55.1)	78 (50.3)	159 (52.6)
Elderly female wife	13 (8.8)	30 (19.3)	43 (14.2)
Joint elderly male and female	15 (10.2)	31 (20.0)	46 (15.2)
Father	6 (4.1)	4 (2.6)	10 (3.3)
Mother	-	1 (0.6)	1 (0.3)
Parents jointly	-	1 (0.6)	1 (0.3)
Sister	-	-	-
Sons	5 (3.4)	1 (0.6)	6 (2.0)
Daughters	-	-	-
Collective family	27 (18.4)	9 (5.8)	36 (11.9)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 2.8
PARTICIPATION IN LOCAL ORGANIZATIONS

Type of local Membership organization	Gajuri	Fikkal	Total
Women organisation	15 (1.6)	-	15 (0.9)
Youth organisation	2 (0.2)	-	2 (0.1)
Village panchayat	15 (1.64)	5 (0.6)	22 (1.2)
District panchayat	1 (0.1)	-	1 (0.1)
None	875 (95.9)	848 (99.6)	1723 (97.7)
Total	912 (100.0)	851 (100.0)	1763 (100.0)

TABLE 2.9
WOMEN IN LOCAL ORGANIZATIONS

Local level organization	Gajuri	Fikkal	Total
Nepal Women Organization	15 (3)	-	15 (3)
Village panchayat	4 (.9)		4 (.9)

*Figures in parentheses indicate the level of women's participation as a percentage of total female population.

TABLE - 2.10

ATTITUDE OF MEN TOWARDS WOMEN'S PARTICIPATION IN
DECISION-MAKING AND DEVELOPMENT ACTIVITIES

Attitudes	Gajuri	Fikkal	Total
Encouraging	131 (89.1)	147 (94.8)	278 (92.1)
Discouraging	2 (1.4)	1 (0.6)	3 (1.0)
Neither encouraging nor discouraging	12 (8.2)	6 (3.9)	18 (5.9)
Don't know	2 (1.4)	1 (0.6)	3 (1.0)
Total	147 (100)	155 (100)	302 (100)

TABLE - 2.11

INTERACTION OF WOMEN WITH OTHER VILLAGE MEMBERS

Persons Contacted	NEED							
	Food Shelter: clothing		Help in crisis		Advice		Money	
	Gajuri	Fikkal	Gajuri	Fikkal	Gajuri	Fikkal	Gajuri	Fikkal
Family member	105 (96)	148 (99)	101 (35)	147 (77)	39 (24)	147 (90)	84 (85)	147 (24)
Friends	-	-	65 (22)	26 (13)	67 (42)	108 (29)	26 (.2)	31 (13)
Neighbours	3 (2)	1 (.6)	88 (36)	17 (8)	51 (32)	108 (24)	10 (10)	50 (21)
Government Officers	1 (.8)	-	33 (11)	-	-	-	1 (1)	-

TABLE - 2.12

"SIGNIFICANT OTHER" OF WOMEN

Relationship	Gajuri	Fikkal	Total
Father	2 (1.3)	98 (12)	20 (6)
Mother	3 (21)	6 (4)	9 (3)
Father-in-law	2 (13)	2 (1.2)	4 (1.3)
Mother-in-law	4 (23)	3 (2)	7 (95)
Husband	115 (80)	109 (71)	224 (75)
Peers/friends	10 (6)	-	10 (3)
Neighbours	-	1 (.1)	1 (3)
Teacher	1 (.6)	3 (1)	4 (.3)
Brothers	-	1 (.6)	1 (3)
Sisters	-	-	-
Self	-	-	-
Son/daughter	-	9 (3)	9 (3)
Father/Mother-in-law	1 (.6)	-	1 (3)
Mother-in-law/ husbands	2 (8)	-	2 (6)
Don't know	3 (1.6)	-	3 (1)
Total	143 (100)	152 (100)	295 (100)

TABLE - 2.13
AVERAGE SIZE OF LANDHOLDING BY CULTIVATION TYPE
(IN ROPANI)

Type of land	Gajuri	Fikkal
Owned cultivated khet	11.04	3.05
Owned rented out khet	4.67	-
Rented khet	7.75	0.32
Owned cultivated Pakho	11.29	28.99
Owned rented out pakho	-	-
Rented pakho	-	0.71
Total cultivated khet	10.89	3.37
Total cultivated pakho	11.24	30.47
Total cultivated land	21.10	33.19

1 ropani = .05 ha.

Khet = irrigated flat land suitable for paddies

Pakho = sloped land unsuitable for paddies

TABLE - 2.14 A
OWNERSHIP OF LIVESTOCK

	Gajuri households			
	Cows	Goat	Ox	Chicken
0	65 (44.2)	25 (17)	62 (42.2)	50 (34)
1	32 (21.8)	23 (15.6)	5 (3.4)	12 (8.2)
2	23 (15.6)	19 (12.9)	64 (43.5)	16 (10.3)
3	9 (6.1)	16 (10.9)	6 (4.1)	13 (8.8)
4	10 (6.8)	16 (10.0)	8 (5.4)	10 (6.8)
5	4 (2.7)	17 (11.6)	2 (1.4)	9 (6.1)
6	-	7 (4.8)	-	6 (4.1)
7 - 10	3 (2)	11 (7.4)	-	22 (15)
11 - 15	1 (0.7)	9 (6.1)	-	5 (3.4)
16 - 20	-	2 (2)	-	3 (2)
21 - 35	-	1 (0.7)	-	1 (0.7)

Total No of Cows: 202

Goats: 714

Ox: 193

Chickens: 524

TABLE - 2.14 B.

OWNERSHIP OF LIVESTOCK

F.K.K.A household				
Number	Cow	Goats	Ox	Chickens
0	33 (21.3)	98 (63.2)	77 (49.7)	46 (29.7)
1	42 (2.71)	6 (3.9)	4 (2.6)	22 (14.2)
2	39 (25.2)	14 (9)	63 (40.6)	13 (8.4)
3	30 (12.9)	13 (8.4)	3 (1.9)	14 (9)
4	12 (7.7)	7 (4.5)	8 (5.2)	17 (1.1)
5	4 (2.6)	7 (4.5)	-	4 (2.6)
6	4 (2.6)	5 (3.2)	-	7 (4.5)
7 - 10	-	4 (23.6)	-	18 (11.7)
11 - 15	1 (0.6)	1 (0.6)	-	7 (2)
16 - 20	-	-	-	-
21 - 35	-	-	-	3 (1.9)

Total No. of Cows = 284

Goats = 210

Ox = 171
Chicken = 784

TABLE - 2.15
EMPLOYMENT STATUS

A:15

Employment	Gajuri	Fikkal	Total
Employed by others	23 (3.2)	44 (6.2)	67 (4.7)
Self employed	535 (73.2)	457 (64.6)	992 (69.0)
Govt. Service	16 (2.2)	13 (1.8)	29 (2.0)
Semi-unemployed	1 (0.1)	-	1 (0.3)
Unemployed	-	5 (0.7)	5 (0.3)
Student	156 (21.3)	188 (26.6)	344 (23.9)
Total	731 (100.0)	707 (100.0)	1438 (100.0)

TABLE - 2.16
OCCUPATION OF HOUSEHOLD

Occupation	Gajuri		Fikkal	
	Primary	Secondary	Primary	Secondary
Agriculture	138 (93.9)	25	145 (93.5)	4
Service	-	15	5 (3.2)	13
Business	-	21	4 (2.6)	21
Cottage Industry	-	3	-	1
Skilled labour	1 (0.7)	1	1 (10.7)	5
Wage labour	8 (5.4)	32	-	67
Porter	-	-	-	6
Others	-	3	-	5
Construction	-	-	-	1
Total	147 (100.0)	155 (100.0)	156 (100.0)	123 (100.0)

TABLE - 2.17
ANNUAL AVERAGE INCOME

Source Income	Gajuri	Pikkal	Total
Agriculture	9136 (147)	7370 (150)	8244
Service/Pension	4570 (16)	6940 (14)	5676
Business	1425 (12)	4540 (18)	3294
Wage	1805 (37)	2290 (84)	2142
Other Sources	1620 (4)	3277 (12)	2863

* Figures in parentheses indicate the number of households within the respective income source category.

TABLE - 2.18

MONTHLY EXPENDITURE

	<u>Gajuri</u>		<u>Fikkal</u>		<u>Total</u>	
	<u>Own</u>	<u>Purchase</u>	<u>Own</u>	<u>Purchase</u>	<u>Own</u>	<u>Purchase</u>
<u>Food (Rupees)</u>						
0 - 500	30	43	63	34	93	77
500 - 1000	22	41	25	26	47	67
1000 - 2000	2	7	3	4	5	11
2000 - 3000	-	2	-	-	-	2
3000 and above	-	-	-	-	-	-
Total	54	93	91	64	145	157

Education:

	<u>Gajuri</u>	<u>Fikkal</u>	<u>Total</u>
None	75	82	157
0 - 25	33	50	83
25 - 50	7	12	19
50 - 100	9	9	18
100 and above	23	2	25
Total	147	155	302

Weddings/Festivals:

None	2	-	2
0 - 25	120	139	259
25 - 50	15	14	29
50 - 100	6	2	8
100 and above	4	-	4
Total	147	155	302

TABLE - 2.18 (Contd)

<u>Medicine:</u>	<u>Gajuri</u>	<u>Pikkal</u>	<u>Total</u>
None	14	13	27
0 - 50	118	121	239
50 - 100	10	17	27
100 - 200	2	2	4
200 and above	3	2	5
Total	147	155	302
 <u>Transportation:</u>			
None	55	92	147
0 - 200	84	60	144
200 - 400	6	3	9
400 and above	2	-	2
Total	147	155	302
 <u>Wage:</u>			
None	81	72	153
0 - 200	55	64	119
200 - 500	6	13	19
500 and above	5	6	11
Total	147	155	302
 <u>Recreation:</u>			
None	55	52	107
0 - 200	85	99	184
200 - 400	7	4	11
400 - and above	-	-	-
Total	147	155	302

TABLE - 2.18 (Contd)

	<u>Gajuri</u>	<u>Fikkal</u>	<u>Total</u>
<u>Clothing:</u>			
None	1	-	1
0 - 1000	128	148	276
1000 - 1500	14	6	20
1500 - 2000	3	1	4
2000 and above	1	-	1
Total	147	155	302
<u>Others:</u>			
None	125	106	231
0 - 500	16	38	54
500 - 1000	5	11	16
1000 and above	1	-	1
Total	147	155	302

TABLE - 2.19
EXPENDITURE PRIORITY

	Gajuri				Fikkal			
	First	Second	Third	Fourth	First	Second	Third	Gourth
Food	85 (58)	11 (7)	8 (5.5)	-	123 (81)	5 (3)	3 (2)	-
Clothing	18 (12)	78 (54)	25 (1.7)	7 (5)	10 (6)	88 (55)	27 (11)	12 (12)
Medicine	2 (1.2)	13 (9)	49 (34)	33 (23)	-	8 (5)	30 (20)	22 (23)
Education	10 (7)	3 (2)	13 (9)	11 (8)	2 (1.3)	3 (2)	9 (6)	12 (12)
Agriculture	8 (5)	17 (12)	12 (.8)	7 (5)	1 (6)	10 (6)	18 (12)	1 (1)
Household	17 (12)	10 (7)	12 (.8)	29 (20)	10 (6)	13 (.8)	6 (4)	8 (8)
Festivals	1 (.6)	7 (5)	18 (12)	49 (34)	-	17 (10)	35 (24)	23 (24)
Wage	3 (2)	4 (3)	7 (5)	6 (4)	5 (3)	4 (2.5)	8 (5.5)	5 (5)
Livestock	3 (2)	1 (.6)	1 (.6)	1 (.6)	-	-	-	-
Travel	-	1 (.6)	-	-	-	2 (8.2)	6 (.4)	4 (4)
Other	-	-	-	-	-	1 (.6)	3 (.2)	9 (9)
Total	147 (100)	145 (100)	145 (100)	143 (100)	151 (100)	161 (100)	145 (100)	96 (100)

TABLE - 2.20
INVESTMENT PRIORITY

Priority	Sa. Juri		Pikkal	
	First	Second	First	Second
Agriculture	95 (66)	29 (20.6)	119 (78.3)	29 (21.5)
Shop	3 (2.1)	14 (9.9)	14 (9.2)	10 (7.4)
Cottage Industry	9 (6.3)	8 (5.6)	-	1 (0.7)
Cash Crops	1 (0.7)	2 (1.4)	1 (.7)	4 (3.0)
Livestock	20 (13.9)	75 (53)	14 (9.2)	87 (64.4)
Building/construction	1 (0.7)	-	-	-
Household	6 (4.2)	7 (4.9)	2 (1.3)	-
N.A.	1 (0.2)	7 (4.9)	-	2 (1.5)
Do not wish to invest with loan	8 (5.4)	-	2 (1.3)	2 (1.5)
Total	144 (100)	142 (100)	152 (100)	135 (100)

TABLE - 2.21
SOURCES OF CREDIT

	Gajur1	Fikkal	Total
Money lender	29 (27.0)	8 (7.0)	37 (16.4)
Neighbour	20 (19.0)	18 (19.0)	38 (16.8)
Bank	56 (52.0)	92 (78.0)	148 (65.8)
Others	2 (2.0)	-	2 (1.0)
	107 (100.0)	118 (100.0)	225 (100.0)

TABLE - 2.22
REPAYMENT OF LOAN

	Gajur1	Fikkal	Total
Food grain sales	21 (15.1)	28 (20.7)	49 (17.9)
Land sales	4 (2.9)	-	4 (1.5)
Other property sales	23 (16.6)	37 (27.4)	60 (22.0)
Loan from others	11 (7.9)	5 (3.7)	16 (5.8)
Livestock, vegetable & other sales	22 (15.8)	21 (15.6)	43 (15.7)
Food grains & land sales	1 (0.7)	2 (1.5)	3 (1.0)
Additional earnings (wage labour)	16 (11.5)	4 (2.9)	20 (7.0)
Savings	6 (4.3)	12 (8.9)	18 (6.6)
Others	35 (25.2)	26 (19.3)	61 (22.0)
Total	139 (100.0)	135 (100.0)	274 (100.0)

TABLE - 3.1
DAILY WATER REQUIREMENT

Quantity (In litres)	Households	
	Gajuri	Fikkul.
24 - 50	4 (2.7)	20 (12.9)
51 - 75	21 (14.3)	39 (25.2)
76 - 100	29 (19.7)	29 (18.7)
101 - 125	23 (15.6)	27 (17.4)
126 - 150	18 (12.2)	10 (6.5)
151 - 175	3 (2.0)	2 (1.3)
176 - 200	22 (15.0)	12 (7.7)
201 - 225	4 (2.7)	2 (1.3)
226 - 250	12 (8.2)	8 (5.2)
251 - 275	-	2 (1.3)
276 - 300	7 (4.8)	2 (1.3)
301 - 400	4 (2.7)	-
401 - 500	-	2 (1.3)
Total	147 (100.0)	(100.0)

TABLE - 3.2
SOURCES OF WATER

	Gajuri	Fikkal	Total
River or stream	2 (1.4)	4 (2.6)	6 (2.0)
Piped	37 (25.2)	47 (30.3)	84 (27.8)
Natural water spout	21 (14.3)	7 (4.5)	28 (9.3)
Well (surface and deep)	86 (58.5)	97 (62.6)	183 (60.6)
Open channel, waterfall and others	1 (0.6)	-	1 (0.3)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.3
WATER SOURCES AND THEIR USE

	Pachera		Well and Kuwa		Stream & river		Piped water		Open channel, water-fall & mountain flow			Total	
	Gajuri	Fikdal	G	F	G	F	G	F	G	F	G	F	
Drinking and cooking	35 (23.8)	17 (10.9)	76 (51.7)	94 (60.6)	3 (2)	2 (1.3)	33 (22.4)	41 (26.5)	-	1 (0.6)	147 (100)	155 (100)	
Livestock watering	17 (18.6)	14 (9.1)	70 (48.3)	87 (56.5)	3 (2.1)	8 (5.2)	31 (21.9)	40 (26.0)	14 (9.7)	5 (3.3)	145 (100)	154 (100)	
Washing clothes	24 (23.1)	17 (10.9)	68 (46.3)	86 (55.5)	6 (4.1)	6 (3.8)	35 (23.8)	41 (26.5)	4 (2.7)	5 (3.2)	147 (100)	155 (100)	
Washing utensils	22 (21.8)	17 (10.9)	73 (49.7)	39 (57.8)	4 (2.7)	2 (1.3)	34 (23)	42 (27.1)	4 (2.7)	5 (3.2)	147 (100)	155 (100)	
Irrigation	18 (19.1)	13 (10)	15 (14.3)	65 (50)	4 (3.8)	9 (6.9)	18 (17.1)	33 (28.6)	43 (45.7)	10 (7.7)	105 (100)	150 (100)	
Total	-	16 (10)	-	93 (53.9)	-	9 (5.8)	-	39 (25.3)	-	7 (4.6)	-	154 (100)	

TABLE - 3.4
RELIABILITY OF WATER SUPPLY

	Dry season		Rest of year	
	Gajuri	Fikkal	Gajuri	Fikkal
Very reliable supply	8 (5.4)	24 (15.5)	37 (25.2)	55 (35.5)
Reliable supply	23 (15.6)	49 (31.6)	99 (67.3)	93 (60.0)
Not reliable/insufficient supply	116 (78.9)	82 (52.9)	11 (7.5)	7 (4.5)
Total	147 (100.0)	155 (100.0)	147 (100.0)	155 (100.0)

TABLE - 3.5
CONVENIENCE OF THE SOURCE

	Gajuri	Fikkal
Very convenient	23 (15.6)	33 (21.3)
Less convenient	33 (22.4)	48 (31.0)
Inconvenient	91 (61.9)	74 (47.7)
Total	147 (100.0)	155 (100.0)

TABLE - 3.6
WATER COLLECTOR(S) OF HOUSEHOLD

	Household	
	Gajuri	Fikkal
Male adult only	6 (4.1)	7 (4.5)
Female adult only	39 (26.5)	26 (16.8)
Children only	1 (0.7)	-
All of the above	44 (29.9)	60 (38.7)
Male & female adult	55 (37.4)	45 (29.0)
Female adult & children	1 (0.7)	15 (9.7)
Male adult & children	1 (0.7)	2 (1.3)
Total	147 (100.0)	155 (100.0)

TABLE - 3.7
TIME OF WATER COLLECTION

	Gajuri	Fikkal
Morning	14 (10.0)	1 (0.6)
Evening	1 (0.7)	-
Morning & evening	43 (30.7)	41 (26.5)
Morning, after-noon & evening	1 (0.7)	113 (72.9)
Morning & afternoon	81 (57.9)	-
Total	140 (100.0)	155 (100.0)

TABLE - 3.8 A

TIME REQUIRED TO FETCH 12 LITRES OF WATER

(1 gagri = 12 litres)

GAJURI HOUSEHOLDS

Time (in minutes)	Time to reach the source	Waiting time	Time to come back	Total time to fetch 12 litres of water
0 - 5	18 (12)	41 (27)	18 (12)	8
6 - 10	21 (14)	30 (20)	20 (8)	5
11 - 15	17 (12)	6 (4)	17 (12)	-
16 - 20	14 (10)	19 (13)	12 (10)	10 (7)
21 - 25	3 (2)	-	3 (2)	-
26 - 30	39 (27)	38 (26)	40 (27)	11 (7)
31 - 35	-	-	1 (.6)	-
36 - 40	1 (.6)	1 (.6)	2 (.6)	18 (12)
41 - 45	5 (3)	-	5 (3)	-
46 - 50	1 (.6)	-	-	10 (7)
51 - 55	-	-	-	-
56 - 60	28 (19)	12 (10)	29 (20)	17 (11)
61 - 80	-	-	-	13 (8.8)
81 - 100	-	-	-	28 (18)
101 - 120	-	-	-	13 (8.9)
121 - 140	-	-	-	6 (4)
141 - 160	-	-	-	6 (4)
161 - 180	-	-	-	9 (6)
Total	147	147	147	147

TABLE - 3.8 B
TIME REQUIRED TO FETCH 12 LITRE OF WATER

(1 gagri = 12 litres)

Time (in minutes)	FIKKAL HOUSEHOLDS			
	Time to reach the source	Waiting time	Time to come back	^{TOTAL} Time to fetch 12 litres of water
0 - 5	80 (52)	133 (86)	79 (51)	-
6 - 10	32 (21)	14 (9)	31 (20)	67 (43)
11 - 15	28 (18)	5 (3)	27 (17)	-
16 - 20	5 (3)	1 (.6)	6 (4)	30 (19)
21 - 25	2 (1.3)	-	2 (1.3)	-
26 - 30	4 (2.5)	1 (.6)	6 (4)	33 (21)
31 - 35	-	-	-	-
36 - 40	-	-	-	11 (7)
41 - 45	-	1 (.6)	-	-
46 - 50	-	-	-	2 (1.3)
51 - 55	-	-	-	-
56 - 60	1 (.6)	-	1 (.6)	4 (2.5)
61 - 80	-	-	-	4 (2.5)
80 - 100	3 (2)	-	3 (2)	-
101 - 120	-	-	-	1 (.6)
121 - 140	-	-	-	-
141 - 160	-	-	-	-
161 - 180	-	-	-	3 (2)
Total	155 (100)	155 (106)	155 (100)	

TABLE - 3.9

RESPONSIBILITY FOR INSTALLATION AND MANAGEMENT OF
WATER AND SANITATION FACILITIES

Responsible group	Public water taps		Public Toilets	
	Gajuri	Fikkal	Gajuri	Fikkal
1	63 (42.9)	62 (40.0)	72 (49.0)	83 (53.5)
2	64 (43.5)	87 (56.1)	48 (32.7)	64 (41.3)
3	-	-	-	-
4	1 (0.7)	-	2 (1.4)	-
5	9 (6.1)	2 (1.3)	17 (11.6)	2 (1.3)
6	10 (6.8)	4 (2.6)	8 (5.4)	6 (3.9)
Total	147 (100.0)	155 (100.0)	147 (100.0)	155 (100.0)

Responsibility to install and manage public water tap toilet

1. Government/district panchayat/local panchayat should install and manage public water taps/toilets.
2. Government/district panchayat/local panchayat should install public water tap/toilets but local community should be responsible for maintenance.
3. Non-government organisations should install and manage public water taps/toilets.
4. Non-governmental organisations should install public tap/toilets but local community should be responsible to maintenance.
5. Local community should install and manage public water taps.
6. Organisations related to womens development should install and manage public water taps.

TABLE - 3.10

RESPONSIBILITY FOR BUILDING HOUSEHOLD TOILETS

	Gajuri	Fikkal	Total
1.	45 (30.6)	8 (5.2)	53 (17.5)
2.	32 (21.8)	23 (14.8)	55 (18.2)
3.	5 (3.4)	9 (5.8)	14 (4.6)
4.	63 (42.9)	114 (73.5)	177 (58.6)
5.	2 (1.4)	1 (0.7)	3 (1.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

1. Government agencies should provide necessary grants and technical knowhow
2. Govt. agencies should provide necessary subsidy and technical knowhow.
3. Non-govt. agencies should provide necessary subsidy and technical knowhow.
4. Households should take full responsibility
5. Others (specify)

TABLE - 3.11 .

RESPONSIBILITY OF PRIVATE WATER CONNECTION

	Gajuri	Fikkal	Total
1.	59 (40.1)	9.7 (9.7)	74 (24.5)
2.	57 (38.8)	88 (56.8)	145 (48.0)
3.	28 (19.0)	52 (33.5)	80 (26.5)
4.	1 (0.7)	-	1 (0.3)
5.	2 (1.4)	-	2 (0.7)
Total	147 (100.0)	155 (100.0)	302 (100.)

1. Government agencies should provide necessary grants
2. Government agencies should provide necessary subsidy and know-how.
3. Non-government agencies should provide assistance
4. Household should take full responsibility
5. Others (specify)

302
(100.0)

TABLE - 3.12

A-34

SHOULD BE INVOLVED IN DRINKING WATER AND SANITATION RELATED PROGRAMMES

	Gajuri			Fikkal		
	Yes	No	Don't know	Yes	No	Don't know
men	146 (99.3)	1 (0.7)	-	147 (94.8)	6 (3.9)	2 (1.3)
male school teacher	122 (83.0)	19 (12.9)	6 (4.1)	148 (95.5)	2 (1.3)	5 (3.2)
female school teacher	133 (90.5)	9 (6.1)	5 (3.4)	148 (95.5)	2 (1.3)	5 (3.2)
neighbour male	145 (98.6)	-	2 (1.4)	154 (99.4)	-	1 (0.7)
neighbour female	145 (98.6)	-	2 (1.4)	154 (99.4)	-	1 (0.7)
Wardhamat worker	134 (91.2)	6 (4.1)	7 (4.8)	142 (91.6)	4 (2.6)	9 (5.8)

TABLE - 3.13

APPROPRIATE METHOD FOR WATER AND SANITATION EDUCATION

	Gajuri	Fikkal	Total
School	11 (7.5)	13 (8.4)	24 (7.9)
Leaflets and other publication	-	2 (1.3)	2 (0.7)
Radio	-	-	-
Poster	1 (0.7)	7 (4.5)	8 (2.6)
Women motivator (WDS trained)	129 (87.8)	133 (85.8)	262 (86.8)
Demonstrations	6 (4.1)	-	6 (2.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE -3.14 A
PRIORITIES OF THE COMMUNITY

	<u>GAJURI</u>							
	<u>RANK OF PRIORITY</u>							
	I	II	III	IV	V	VI	VII	VIII
Irrigation	3 (2.0)	109 (7.4)	24 (16.3)	3 (2.0)	1 (0.7)	1 (0.7)	2 (1.4)	2 (1.4)
Drinking water	112 (76.2)	12 (8.2)	7 (4.8)	3 (2.0)	1 (0.7)	13 (8.8)	1 (0.7)	-
Health Post	8 (5.4)	12 (8.2)	44 (29.9)	37 (25.2)	17 (11.6)	18 (12.2)	5 (3.4)	6 (4.1)
Road	4 (2.7)	2 (1.4)	28 (19.0)	19 (12.9)	35 (23.8)	30 (20.4)	14 (9.5)	15 (10.2)
Sanitation	3 (2.0)	1 (0.6)	13 (8.8)	26 (17.7)	26 (17.7)	24 (16.3)	36 (24.5)	15 (10.2)
High school	11 (7.5)	2 (1.4)	10 (6.8)	9 (6.1)	24 (16.3)	28 (19.0)	39 (26.5)	23 (15.6)
Toilet	6 (4.1)	2 (1.4)	15 (10.2)	20 (13.6)	28 (19.0)	21 (14.3)	36 (24.5)	20 (13.6)
Fuel wood- fodder	-	7 (4.8)	6 (4.1)	30 (20.4)	15 (10.2)	12 (8.2)	14 (9.5)	66 (44.9)

TABLE - 3.14 B

PRIORITIES OF THE COMMUNITYFIKKAL

	I	II	III	IV	V	VI	VII	VIII
Irrigation	14 (9.0)	111 (71.6)	12 (7.7)	2 (1.3)	3 (1.9)	7 (4.5)	3 (1.9)	4 (2.6)
Drinking water	119 (76.8)	14 (9.0)	17 (11.0)	-	2 (1.3)	1 (0.6)	1 (0.6)	2 (1.3)
Health post	15 (9.7)	14 (9.0)	71 (45.8)	31 (20.0)	11 (7.1)	6 (3.9)	3 (1.9)	3 (1.9)
Food	2 (1.3)	5 (3.2)	21 (13.5)	33 (21.3)	36 (23.2)	20 (12.9)	27 (17.4)	12 (7.7)
Sanitation	2 (1.3)	1 (0.6)	8 (5.2)	58 (37.4)	35 (22.6)	39 (25.2)	8 (5.2)	4 (2.6)
High school	1 (0.6)	10 (6.5)	21 (13.5)	15 (9.7)	41 (26.5)	36 (23.2)	19 (12.3)	11 (7.1)
Toilet	-	-	4 (2.6)	13 (8.4)	21 (13.5)	29 (18.7)	60 (38.7)	28 (18.1)
Fuel wood- fodder	2 (1.3)	-	1 (0.6)	3 (1.9)	6 (3.9)	17 (11.0)	34 (21.9)	91 (58.7)

TABLE 3.15

EXPECTED BENEFITS OF WATER SUPPLY PROJECT

Benefit	Gajuri	Fikkal	Total
Women will have more time for other activities	8 (5.4)	8 (5.2)	16 (5.3)
Safe drinking water will be available	31 (21.1)	86 (55.5)	117 (38.7)
Water sources will be more convenient	23 (15.6)	8 (5.2)	31 (10.3)
Health of family members will improve	19 (12.9)	13 (8.4)	32 (10.6)
Personal hygiene of family members will improve	17 (11.6)	35 (22.6)	52 (17.2)
All of the above	49 (33.3)	2 (1.3)	51 2(17)
Health and hygiene will improve	-	2 (1.3)	2 (0.7)
Health, hygiene and water quality will improve	-	1 (0.6)	1 (0.3)
Total	147	155	302

TABLE 3.16 A

WATER COLLECTION AND CONSUMPTION: GADURI

<u>Water collection</u>	Sample households water collection in litres							Average
	G1	G2	G3	G4	G5	G6	Total	
stock at start	30	7.5	7	30	54	15	143.5	23.9
morning collection	30	90	30	75	162	30	417	69.5
afternoon collection	30	60	30	33.5	-	30	183.5	30.6
evening collection	30	30	30	-	-	-	90	15
Total collection	120	187.5	97	138.5	216	75	834	139
- stock at end	26	15	21	7.5	4.5	16	90	15
Total consumption	94	172.5	76	131	211.5	59	744	124
<hr/>								
<u>Water consumption</u>								
morning consumption	46.5	82.5	16	75.5	135	21	376	62.8
afternoon consumption	30	60	30	33	36	24	213	36.5
evening consumption	17.5	30	30	22.5	40.5	14	154.5	25.8
Total consumption	94	172.5	76	131	211.5	59	744	124

TABLE 3.16B
WATER COLLECTION AND CONSUMPTION: FIKKAL

<u>Water collection</u>	sample households water collection in litres							Average
	F1	F2	F3	F4	F5	F6	Total	
stock at start	-	15-	-	14	-	15	44	7.3
morning collection	25	30	120	84	120	100	479	79.8
afternoon collection	25	67	30	28	3	45	198	33
evening collection	25	20	60	35	36	30	206	34.3
Total collection	75	132	210	161	159	190	927	154.5
-stock at end	12.5	7.5	27	13.5	3	30.5	94	15.67
Total consumption	62.5	124.5	183	147.5	156	159.5	833	138.8
<u>Water consumption</u>								
morning consumption	27.5	29.5	120	74	105	92.5	448.5	74.8
afternoon consumption	15	75	30	31.5	18	37	206.5	34.4
evening consumption	20	20	33	42	33	30	178	29.7
Total consumption	62.5	124.5	183	147.5	156	159.5	833	138.8

TABLE 3.17 A

WATER USE PATTERNS: GJURI

	sample households water consumption (in Litres)							
	G1	G2	G3	G4	G5	G6	Total	Average
<u>MORNING</u>								
cleaning house	-	-	-	7.5	13.5	4.5	25.5	4.25
washing face and hands or bathing	4.5	22.5	1	8	-	-	36	6
cooking	8	30	15	15	27	9	104	17.3
feeding animals	30	30	-	30	54	7.5	151.5	25.25
drinking or making tea	-	-	-	-	13.5	-	13.5	2.25
washing utensils	4	-	-	15	27	-	46	7.67
sub-total	46.5	82.5	16	75.5	135	21	376.5	62.75
<u>AFTERNOON</u>								
drinking and making tea	-	-	-	9	13.5	9	31.5	5.25
feeding animals	30	60	30	15	-	-	150	25
washing utensils	-	-	-	-	9	-	9	1.5
other use	-	-	-	9	13.5	-	22.5	3.75
sub-total	30	60	30	33	36	24	213	35.5
<u>EVENING</u>								
drinking and making tea	-	-	-	6	-	2	8	1.3
cooking	15	30	15	9	13.5	9	91.5	15.25
washing hands and bathing	1.5	-	-	-	13.5	-	15	2.5
washing utensils	1	-	15	7.5	13.5	3	40	6.67
sub-total	17.5	30	30	22.5	40.5	14	154.5	25.75
Total water consumption	94	172.5	76	131	211.5	59	744	124.

TABLE 3.17 B

WATER USE PATTERNS: RURAL

sample households water consumption (in litres)

	F1	F2	F3	F4	F5	F6	Total	Average
<u>MORNING</u>								
cleaning house	5	2.5	-	14	-	16	37.5	6.25
washing hands and bathing	-	-	-	-	15	7	22	3.67
cooking	10	5	45	14	15	30	119	19.8
feeding animals	10	7	75	21	60	37.5	210.5	35.1
drinking or making tea	-	-	-	11	-	2	13	2.2
washing utensils	2.5	15	-	14	15	-	46.5	7.75
sub-total	27.5	29.5	120	74	105	92.5	448.5	74.75
<u>AFTERNOON</u>								
drinking and making tea	2	15	-	10.5	1	-	28.5	4.75
feeding animals	8	30	30	14	15	30	127	21.17
washing utensils	5	-	-	-	-	-	5	0.83
other use	-	30	-	7	2	7	46	7.67
sub-total	15	75	30	31.5	18	37	306.5	34.42
<u>EVENING</u>								
drinking and making tea	5	-	2	-	-	-	7	1.2
cooking	5	5	15	14	17	9	65	10.8
washing hands and bathing	-	-	1	14	-	2	17	2.8
washing utensils	10	15	15	14	16	19	89	14.8
sub-total	20	20	33	42	33	30	178	29.66
Total water consumption	62.5	124.5	183	147.5	156	159.5	833	138.83

TABLE 3.17 A.1

PER CAPITA CONSUMPTION IN LITRES:CAJURI

	G1	G2	G3	G4	G5	G6	Total	Average
total consumption	94	172.5	76	131	211.5	59	744	124
consumption by humans	34	82.5	46	86	157.5	36.5	442.5	73.8
number of persons per household	8	7	4	12	8	4	43	7.1
per capita consumption by humans	4.3	11.8	11.5	7.2	19.7	9.1		10.4
consumption by animals	60	90	30	45	67.5	22.5	315	52.5
number of animals per household	24	17	9	10	8	6	74	12.3
per capita consumption by animals	2.5	5.3	3.3	4.5	8.3	3.8		4.4

TABLE 3.17 B.1

PER CAPITA CONSUMPTION IN LITRES: FERRAL

	F1	F2	F3	F4	F5	F6	Total	Average
total consumption	62.5	124.5	183	147.5	156	159.5	833	138.8
consumption by humans	44.5	87.5	78	112.5	81	92	495.5	82.6
number of persons per household	6	5	7	6	4	9	37	6.2
per capita consumption by humans	7.4	17.5	11.1	18.8	20.3	10.2		13.8
consumption by animals	18	37	105	35	75	67.5	337.5	56.3
number of animals per household	3	2	9	2	4	9	29	4.8
per capita consumption by animals	6	18.5	11.7	17.5	18.8	7.5		9.4

TABLE - 3.18 A
CONCEPT OF CLEAN WATER

Clean water concept	Gajuri	Fikkal	Total
Water from natural source	118 (80.3)	137 (88.4)	225 (84.4)
Water mixed with potash	9 (6.1)	1 (0.6)	10 (3.3)
Filtered water	8 (5.4)	6 (3.9)	14 (4.6)
Boiled water	12 (8.2)	11 (7.1)	23 (7.6)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.18 B
CONCEPT OF CLEAN WATER BY EDUCATIONAL ATTAINMENT

		Illite- rate	Literate without schooling	Up-5	6-10	SLC Pass	IA,BA	Total
sh water	Gajuri	74 (82)	34 (82.8)	4 (66.6)	3 (25)	3 (60)	-	118
ght from ire source	"							
"	Fikkal	95 (90)	29 (90.6)	7 (87.5)	5 (55.6)	1 (100)	-	137
er mixed	Gajuri	6 (66)	1 (2.4)	1 (16.6)	-	-	1 (100)	9
h potash	"							
"	Fikkal	-	-	-	1 (8.1)	-	-	1
ter water	Gajuri	7 (7.7)	-	1 (16.6)	-	-	-	8
"	"							
"	Fikkal	3 (3.8)	2 (6.2)	-	1 (11.1)	-	-	6
ld water	Gajuri	3 (3.3)	6 (19.6)	-	1 (25)	2 (40)	-	12
"	"							
"	Fikkal	7 (6.6)	1 (3.1)	1 (0.5)	2 (11.2)	-	-	11
Total	Gajuri	90 (100)	41 (100)	6 (100)	4 (100)	5 (100)	1	147
"	"							
"	Fikkal	105 (100)	32 (100)	8 (100)	9 (100)	1 (100)	-	155

TABLE - 3.18 C
CONCEPT OF CLEAN WATER BY SEX

		Male	Female
Fresh water from natural source	Gajuri	77 (74)	41 (95.3)
" "	Fikkal	85 (87.6)	52 (89.6)
Water mixed with potash	Gajuri	9 (8.6)	-
" "	Fikkal	1 (1)	-
Filter water	Gajuri	7 (6.7)	1 (2.3)
" "	Fikkal	4 (4.1)	2 (3.4)
Boiled water	Gajuri	11 (10.5)	1 (2.3)
" "	Fikkal	7 (7.2)	4 (6.8)
Total		104 (100)	43 (100)

TABLE - 3.19

CONCEPT OF SANITATION

Concept	Gajuri	Fikkal	Total
Clean house	1 (0.6)	-	1 (0.3)
Clean street	-	-	-
Clean house & street	-	-	-
Clean latrine	2 (1.4)	-	2 (0.7)
All of the above	144 (98.0)	155 (100.0)	299 (99.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

Stigma	Location	Gauri			Fikkal			Total		
		Human Excreta	Solid Waste	Liquid Waste	Human Excreta	Solid Waste	Liquid Waste	Human Excreta	Solid Waste	Liquid Waste
Bad smell		-	1 (0.7)	1 (0.7)	2 (1.3)	2 (1.3)	1 (0.6)	2 (0.7)	3 (1.0)	1 (0.3)
Dirty		2 (1.4)	39 (26.5)	37 (25.2)	4 (2.6)	18 (11.6)	21 (13.5)	6 (2.0)	57 (18.9)	53 (19.2)
Bad smell and dirty		6 (4.0)	5 (3.4)	4 (2.7)	14 (9.0)	7 (4.5)	6 (4.0)	20 (2.0)	12 (4.0)	10 (3.30)
Spreads diseases		4 (2.7)	7 (4.8)	8 (5.4)	-	8 (5.2)	7 (4.5)	4 (1.3)	15 (5.0)	15 (5.0)
Smells bad and spreads diseases		13 (8.3)	25 (17.0)	25 (17.0)	6 (3.9)	14 (9.0)	15 (9.7)	19 (6.3)	39 (12.9)	40 (13.3)
Bad smell, dirty and spreads diseases but isn't a problem		115 (73.9)	36 (24.5)	39 (26.5)	23 (14.8)	66 (42.6)	68 (43.9)	139 (46.0)	102 (33.8)	103 (35.8)
Bad smell dirty & spreads diseases and is a problem		1 (0.7)	4 (2.7)	1 (0.7)	106 (68.4)	33 (24.5)	36 (23.2)	107 (35.4)	42 (13.9)	37 (12.3)
Dirty and spreads diseases		2 (1.4)	7 (4.8)	7 (4.8)	-	2 (1.3)	1 (0.6)	2 (0.7)	9 (3.0)	8 (2.6)
Dirty, spreads diseases and is a problem		2 (1.4)	18 (12.2)	19 (12.9)	-	-	-	2 (0.7)	18 (5.9)	19 (5.3)
Dirty and is a problem		1 (0.7)	4 (2.7)	5 (3.4)	-	-	-	1 (0.3)	4 (1.3)	5 (1.6)
Bad smell isn't dirty		-	1 (0.7)	1 (0.7)	-	-	-	-	1 (0.3)	1 (0.3)
Don't know										
Total		147 (100)	147 (100)	147 (100)	155 (100)	155 (100)	155 (100)	302 (100)	302 (100)	302 (100)

TABLE - 3.21

A-49

CONCEPT OF ILLNESS

<u>Sick person definition</u>	<u>Gajuri</u>	<u>Fikkal</u>	<u>Total</u>
<u>one who:</u>			
- has a fever or ailment	37 (25.2)	30 (19.4)	67 (22.2)
- is in bed because of a fever or ailment	42 (28.6)	98 (63.2)	140 (46.4)
- has consulted the local faith healer or health worker	14 (9.5)	17 (11.0)	31 (10.3)
- Cannot work because of fever or ailment	47 (32.0)	9 (5.8)	56 (18.5)
- All of the above	7 (4.8)	1 (0.6)	8 (2.6)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.22

RELIEFS RE: DISEASE'S ORIGIN

<u>Concept</u>	<u>Gajuri</u>	<u>Fikkal</u>	<u>Total</u>
"God's will"	18 (12.2)	60 (38.7)	78 (25.8)
Curse	2 (1.4)	-	2 (0.7)
Malfunction of the body	77 (52.4)	68 (43.9)	145 (48.0)
A particular kind of sickness	21 (14.3)	14 (9.0)	35 (11.6)
Curse and malfunction of body	17 (11.6)	3 (1.9)	20 (6.6)
Dirtyness	9 (6.1)	7 (4.5)	16 (5.3)
God's will and curse	-	2 (1.3)	2 (0.7)
Don't know	3 (2.0)	1 (0.6)	4 (1.3)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.23
SITE OF SULLAGE DISPOSAL

Site	Gajuri	Fikkal	Total
Back-yard/court yard	31 (21.1)	54 (34.8)	85 (28.1)
Pit	106 (72.1)	77 (49.7)	183 (60.6)
Street	-	1 (0.7)	1 (0.3)
Forest	6 (4.1)	-	6 (2.0)
Pit for animal feeding	3 (2.0)	22 (14.2)	25 (8.3)
Garden (<u>bari</u>)	1 (0.7)	1 (0.7)	2 (0.7)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.24
SITE OF SOLID WASTE DISPOSAL

Site	Gajuri	Fikkal	Total
Back-yard/courtyard	27 (18.4)	52 (33.5)	79 (26.2)
Pit	110 (74.8)	78 (50.3)	188 (62.3)
Street	1 (0.7)	1 (0.7)	2 (0.6)
Pit of animal feeding	5 (3.7)	-	5 (3.5)
Forest	3 (2.0)	-	3 (1.0)
Garden (<u>bari</u>)	1 (0.7)	24 (15.5)	25 (8.3)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.25
SITE OF URINATION AND DEFECATION

Site	Gajuri		Mikkal		Total	
	Urine	Excreta	Urine	Excreta	Urine	Excreta
Field-bush-forest	100 (54)	106 (58)	67 (27)	81 (37)	167 (39)	187 (46)
Stream or river bank	-	4 (2)	-	-	-	4 (.9)
Near pond or well	1 (.5)	1 (.5)	-	-	1 (.2)	1 (.2)
Backyard or courtyard	61 (33)	42 (22)	84 (34)	54 (25)	145 (33)	96 (23)
Street or lane	1 (.5)	-	-	-	1 (.2)	-
Pit latrine	22 (12)	36 (19)	59 (24)	77 (35)	81 (18)	113 (28)
Open space	-	-	38 (15)	7 (3)	38 (9)	7 (1.7)
Total	185 (100.0)	190 (100.0)	248 (100.0)	219 (.00.0)	433 (100.0)	468 (100.0)

TABLE - 3.26
TIME OF DEFECTION

Time of day	Gajuri		Fikkal		Total	
	Male	Female	Male	Female	Male	Female
Dawn/early in the morning	40 (27.2)	60 (42.0)	11 (7.2)	52 (34.7)	51 (17.0)	112 (38.2)
Morning	107 (72.8)	83 (58.0)	142 (92.8)	98 (65.3)	249 (83.0)	181 (61.8)
Total	147 (100.0)	143 (100.0)	153 (100.0)	150 (100.0)	300 (100.0)	293 (100.0)

TABLE - 3.27 A
MATERIAL USED FOR CLEANING AFTER DEFECTION

	Gajuri		Fikkal		Total	
	Male	Female	Male	Female	Male	Female
Grass/twig/stone	3 (2.0)	3 (2.1)	44 (28.8)	44 (29.3)	47 (15.7)	47 (16.0)
Water	144 (98.0)	140 (97.9)	107 (69.9)	104 (69.3)	251 (83.7)	244 (83.3)
Ordinary paper	-	-	2 (1.3)	2 (1.3)	2 (0.6)	2 (0.7)
Total	147 (100.0)	143 (100.0)	153 (100.0)	150 (100.0)	300 (100.0)	293 (100.0)

TABLE - 3.27 B

MATERIAL USED TO WASH HANDS AFTER DEFECATION

	Gajuri	Fikkal	Total
Soap	5 (3.4)	14 (9.0)	19 (6.3)
Soil	129 (87.8)	101 (65.2)	230 (76.2)
Water	2 (1.4)	34 (21.9)	36 (11.9)
Ash	9 (6.0)	-	9 (2.6)
No washing	2 (1.4)	6 (3.9)	8 (3.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.28

KNOWLEDGE OF LATRINE TYPE

	Gajuri	Fikkal	Total
Open pit	39 (27)	87 (56)	126 (42)
Open pit + bucket	-	6 (4)	6 (2)
Open pit, bucket and water seal with specific tank	-	1 (.6)	1 (.3)
No knowledge of any type	108 (73)	61 (39)	169 (56)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.29
SITE OF WASHING CLOTHES

	Gajuri	Fikkal	Total
Ponds	10 (6.8)	-	10 (3.3)
Well	72 (49.0)	81 (52.3)	153 (50.7)
At home	4 (2.7)	15 (9.6)	19 (6.3)
Piped	55 (37.4)	48 (31.0)	103 (34.1)
Stream/river	6 (4.1)	8 (5.2)	14 (4.6)
Kuloo	-	3 (1.9)	3 (1.0)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.30
FREQUENCY OF BATHING

	Gajuri	Fikkal	Total
Daily	5 (3.4)	2 (1.3)	7 (2.3)
Weekly	99 (67.3)	99 (63.9)	198 (65.6)
Occasionally (once, twice a month or less)	43 (29.3)	54 (34.8)	97 (32.1)
Total	147 (100.0)	155 (100.0)	302 (100.0)

TABLE - 3.31
WATERING SITE OF ANIMALS

	Gajur1	Pikkal	Total
Cattle byre	114 (78.1)	144 (96.7)	258 (87.5)
Ponds	14 (9.6)	2 (1.3)	16 (5.4)
River-stream	3 (2.1)	1 (0.7)	4 (1.4)
Piped water tap	4 (2.7)	-	4 (1.4)
Cattle byre + pond	5 (3.4)	-	5 (1.7)
Cattle byre + Piped water	2 (1.4)	-	2 (0.6)
+ Stream river	4 (2.7)	-	4 (1.4)
Well	- (1.3)	2	2 (0.6)
Total	146 (100.0)	149 (100.0)	295 (100.0)

TABLE - 3.32
CONDITION OF FOOD STORAGE

Condition	Village	Food		Beverage
		Uncooked	Cooked	
Fully covered	Gajuri	14 (50)	15 (53)	2 (7)
" "	Fikkal	17 (65)	21 (80)	13 (50)
Partly covered	Gajuri	7 (25)	4 (14)	4 (14)
" "	Fikkal	3 (12)	4 (15)	1 (4)
Mostly uncovered	Gajuri	3 (10)	3 (10)	5 (18)
" "	Fikkal	6 (23)	1 (4)	4 (15)
Uncovered	Gajuri	4 (14)	6 (21)	17 (60)
" "	Fikkal	-	-	8 (10)
Total	Gajuri	28 (100)	28 (100)	28 (100)

TABLE - 3.33
DRINKING WATER STORAGE

Condition	Gajuri	Fikkal	Total
Covered	2 (7)	5 (20)	7 (13)
Uncovered	26 (93)	21 (80)	47 (87)
Total	28 (100)	26 (100)	54 (100)

TABLE - 3.34

CONDITION OF KITCHEN FLOOR, YARD, WATER CONTAINER AND TOILET

Condition		Water container	Kitchen floor	Yard	Toilet
Clean	Gajuri	14 (50)	9 (32)	5 (18)	2 (7)
"	Fikkal	22 (88)	8 (31)	9 (35)	2 (8)
Less clean	Gajuri	14 (50)	9 (32)	21 (75)	6 (21)
"	Fikkal	3 (12)	12 (46)	13 (50)	8 (31)
Dirty	Gajuri	-	10 (36)	-	1 (4)
"	Fikkal	1 (4)	6 (23)	-	3 (16)
Very dirty	Gajuri	-	-	2 (7)	19 (67)
	Fikkal	-	-	(13) ⁴	13 ⁽⁵⁰⁾
Total	Gajuri	28 (100)	28 (100)	28 (100)	28 (100)
	Fikkal	26 (100)	26 (100)	26 (100)	26 (100)

TABLE - 3.35
STORAGE OF DIPPERS

Condition	Gajuri	Fikkal	Total
On floor	27	5	32
In somewhat dirty container	-	-	-
In fairly clean container	-	6	6
On rack stand	1	15	16
Total	28	26	54

TABLE - 3.36
USE OF WATER DIPPERS BY PURPOSE

Age	Use of the dippers for other purpose		Other purposes				
	Yes	No	Drinking	Eating	Cooking	Bathing	Washing hands utensils etc.
ri	28 (100)	-	28 (100)	28 (100)	28 (100)	4 (14)	2 (7)
al	12 (160)	14	12 (100)	10 (100)	12 (100)	1 (8)	1 (8)
Total	40 (100)	14	40 (100)	40 (100)	40 (100)	5 (12.5)	3 (7.5)

TABLE - 3.37

KITCHEN VENTILATION

Condition	Gajuri	Fikkal	Total
Ventilated	-	1 (4)	1 (4)
Partly ventilated	4 (14)	11 (42)	15 (28)
No ventilation, stuffy, very smokey	24 (86)	14 (54)	38 (70)
Total	28 (100)	26 (100)	54 (100)

TABLE - 3.38

PRESENCE OF FLIES AND INSECTS

Village	Some present	None present	Total
Gajuri	27 (100)	1 (4)	28 (100)
Fikkal	11 (42)	15 (58)	26 (100)
Total	38 (100)	16 (100)	54 (100)

TABLE - 3.39

CATTLE BYRES

Location	Gajuri	Fikkal	Total
Inside the house	2 (7)	-	2 (4)
Adjoining the house	8 (29)	-	8 (15)
Outside the house	18 (64)	25 (100)	43 (81)
Total	28 (100)	25 (100)	43 (100)



APPENDIX B

PROFILE OF THE WATER SOURCES

The most important water sources in Gajuri and Fikkal are profiled below. The historical and descriptive information related here was collected by the field staff through informal discussions and interviews with the villagers. Maps adjoining each section indicate water source locations and settlement patterns.

GAJURI

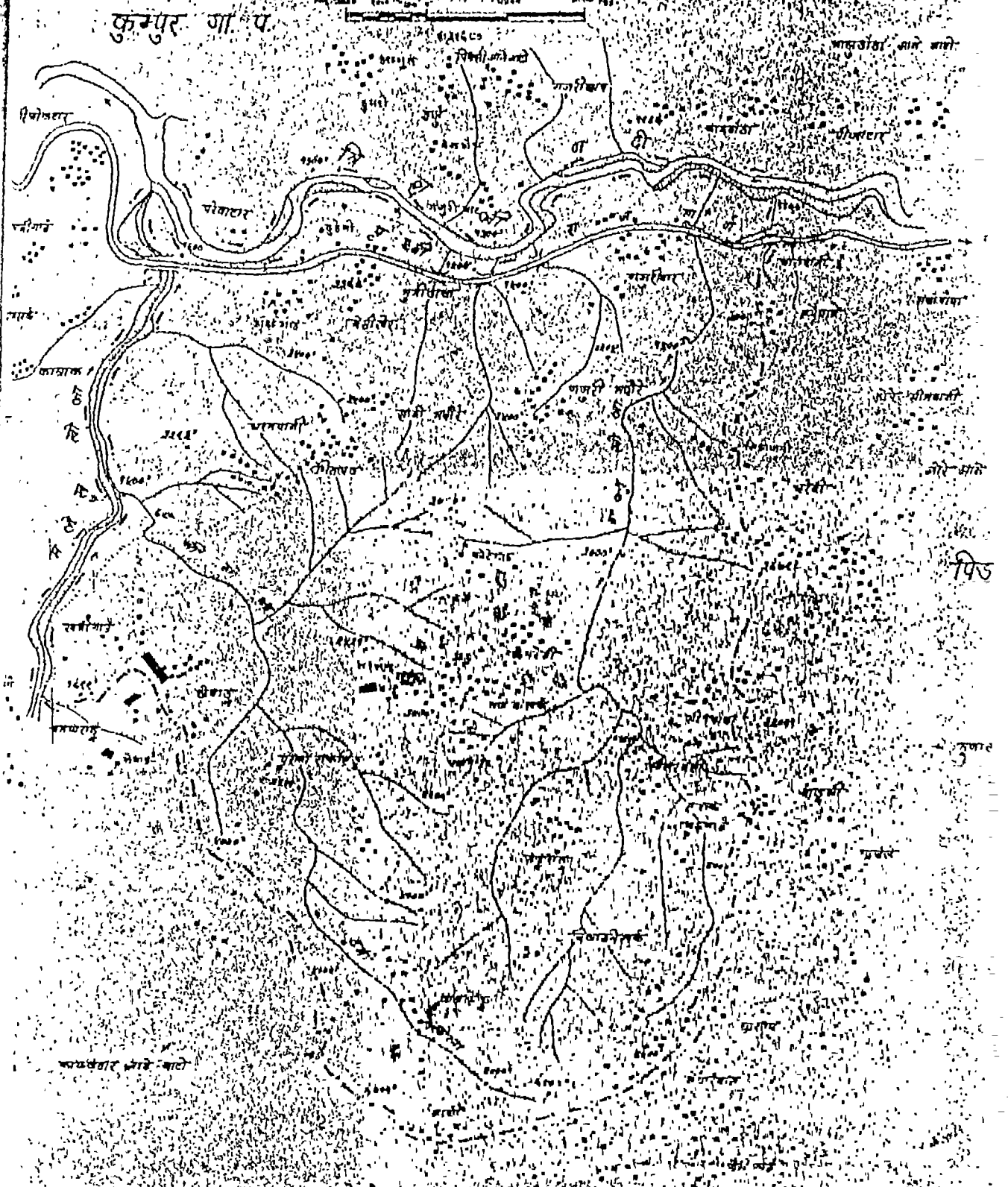
There are over twenty water sources in the project site surveyed in Gajuri. The ten main sources used by the villagers are described below. These sources are used by a large number of households, up to forty for a single source. They are generally located some distance away from the settlements and require a longer waiting time for fill-up than Fikkal's water sources.

1. Mul Kuwa (the main well):

Half of the 38 households (total population: 224) in Raksing use the Mul Kuwa to meet their daily water requirements. This is one of the oldest wells in the village. The amount of water is adequate except during the dry season. A few years ago, the villagers renovated it by constructing walls around the well. The user households contribute labour for its maintenance. It is a fifteen or twenty minute walk

गजुरी गा.पं.

कुम्भपुर गा.पं.



महादिवस्थान गा.पं.

GAJURI
 water source ○
 settlements ■

away for most households, situated in the upper part of the village.

2. Chaite Kuwa

This well, a hour away from Raksing is used by the villager in Raksing during the dry season, when Mul Kuwa dries up.

3. Mul Padhera

This natural water spout serves about 18-20 families living in the lower part of the Raksing village. This is also another old water source of the village. It dries up during the summer.

4. Dhap Padhera

Seven households in Hatiya settlement use dhap padhera for their water needs. This is one of the oldest and most reliable water sources in the village. The source is about 2 km. from the settlement. The user households maintain it.

5. Sano Dhara

This well is located in Baruwal settlement. The residents have recently made some effort to cement its outer surface but, the work is incomplete because of the lack of cement. The villagers use alternate water sources when this well dries up during the dry season.

6. Dhara Pani Padhero

This source located in a nearby forest serves seventeen households normally and twice the number in the dry season. A few years ago the user households contributed money and labour to build a tank for water collection.

7. Padhero Kholn

Only two households are using this private water source located on their land. They use it for drinking water as well as for irrigation.

8. Mul Padhero

The Mul Padhero, the traditional and the most reliable water spout source of Kaurani village serves 41 households (total population:250). A few years ago, the villagers collected money and contributed their labour to construct a water tank but it was damaged by a landslide. The importance of this water source was lessened when the district office built public water taps in 1984 in this village.

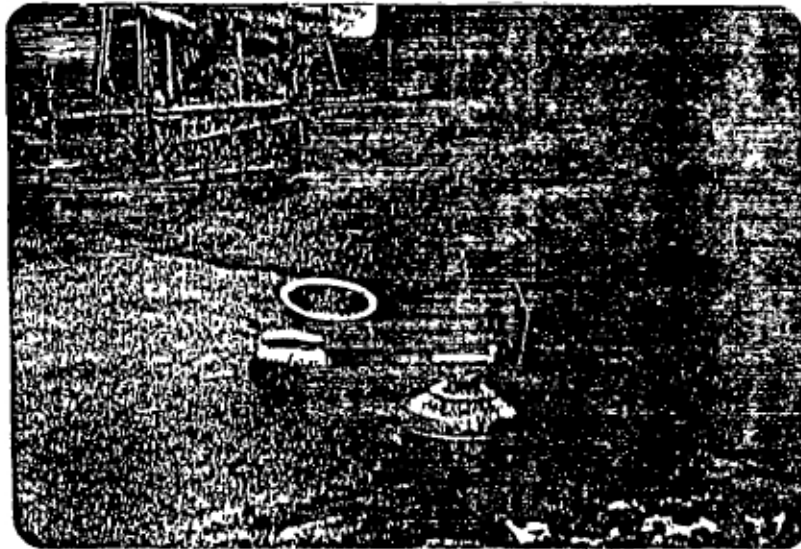
9. Jilla Panchayat Dharo

Through the German Technical Assistance Program (with the grant assistance of Rs.21,000), the Gajuri district Panchayat established public water system in Kayarani village. A water tank and six water taps were established in 1984. The villagers also contributed their labour to make this programme.

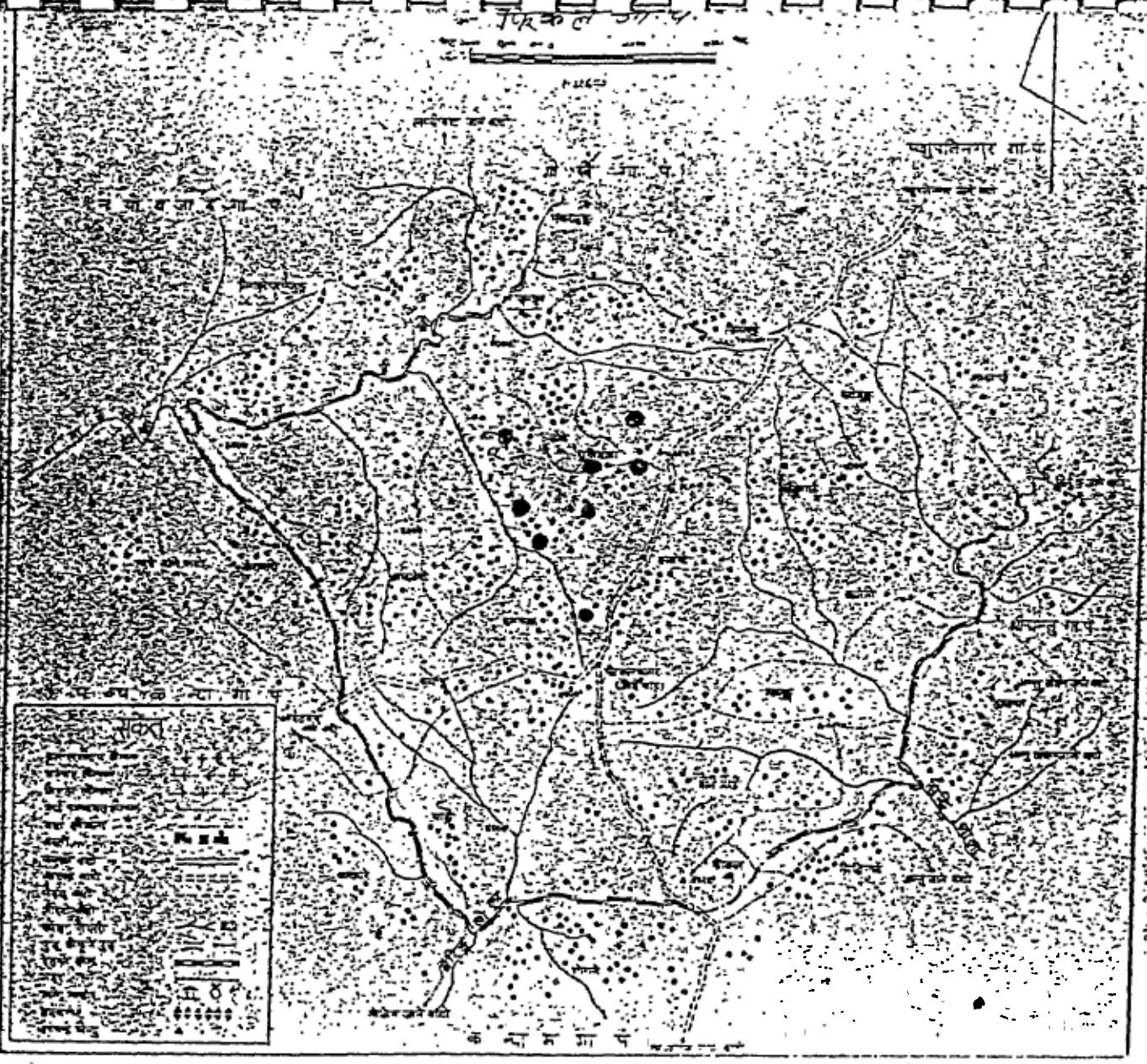
a success. Presently, the villagers do not use this source for drinking or cooking purposes because it smells bad and is dirty. Instead, they use it to feed animals and to wash clothes and utensils. Villagers who used this water for drinking purposes in the past suffered from gastro-intestinal diseases. The villagers suspect that the bad smell may be due to dirt and mud in the water tank.

10. Suwal Padhero

The Khanal family has been using this well located in their own land since the last 12 years.



Private water connection



FIKKAL

water source ○
 settlement ●

4. Gairce Kuwa

This is also a private well located in Tallo Dhoda and is owned by Mr. Lal Singh Tamang. Mr. Tamang is planning to build a water tank and a tap at the estimated cost of Rs.500/-. Five families use the well.

5. Khanien Phed

This well, as its name suggests, is at the root of a Khanien tree and is used by only one household.

6. Lepchas Kuwa

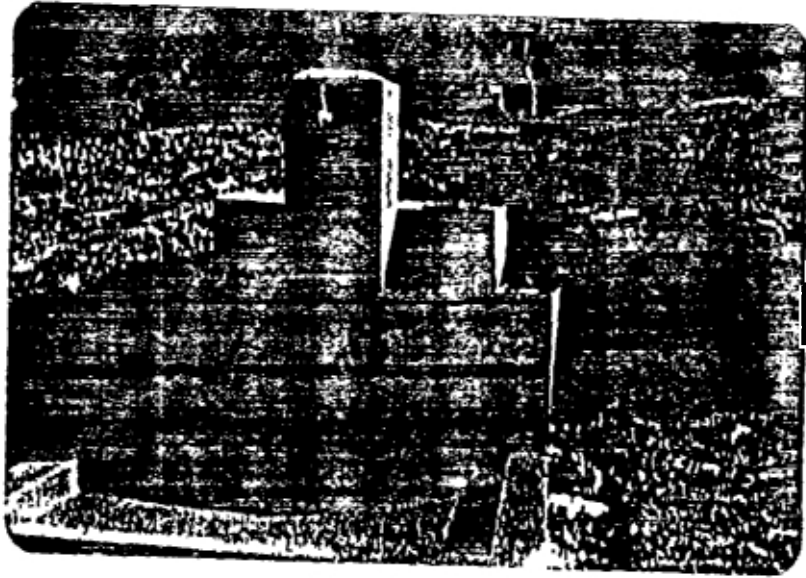
This is a private well owned and used 3 or 4 by Lepcha families.

7. Rai's Kuwa

Rai's well, located at Mathiloo Dhoda, is used by seven Rai families settled there. They maintaining and clean it regularly.

8. Modern water system/piped water

Six water taps were built in 1986 in Kaji Gairo with the help of the UNICEF. The water source is located at the land owned by Mr. Padma Chandra Kaji, ward chairman of the local ward committee. These six water taps fulfill the water needs of about 100 families living in Kaji Gairo.



One of six water taps of the modern water
delivery system in Fikkal

9. Other wells

There are numerous other private wells in the cardomon fields. In addition, new wells are dug by the villagers near their homes.

APPENDIX - C
Terms of Reference

1. OBJECTIVES

To document, analyse and evaluate the progress of intervention undertaken by Women's Development Section* (WDS) of Ministry of Panchayat and Local Development (MPLD) with the basic aim of "Promoting the effective participation of rural women, together with other members of their communities in the installation and management of improved water supply and sanitation facilities in their localities".

2. ACTIVITIES

- a) Develop study protocol including survey techniques, questionnaires and evaluation procedures and prepare a time-bound detailed work plan for the implementation of case study (the methodologies and indicators discussed in the Inter-country Workshop on Methodology for Case Studies of Women's Participation in Community Water Supply and Sanitation, Bangkok, Thailand, 26-31 May 1985 could serve as reference material in the design and development of the research/study methodology).
- b) Submit the comprehensive study protocol developed in (a) above within 3 weeks after signing of the case study contract for review and comments to WHO.
- c) Pre-test survey material developed in (a) above.
- d) Undertake survey, collect and process baseline data and information before and after intervention activities in the selected target villages (some suggested typical data information/observations are shown in Attachment 1).
- e) Keep a close liaison and exchange with the intervention activities throughout the study, also record and document major activities for subsequent evaluation especially during the preparatory phase.
- f) Provide feed-back data for the intervention programme improvement and modification.
- g) To collaborate and work closely with the intervention team and the community in the final evaluation of the project as indicated in "final phase", page 4 of UNDP/WSD enclosed contract.
- h) Provide progress reports to WHO every three months, and draft study reports at interim workshop stage and at end of study.
- i) Finalize case study report and submit 5 copies.

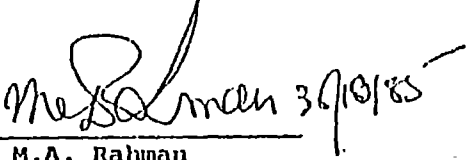
3. The final report in accordance with the suggested outline (Attachment D) will be in English and it will describe and document the case study. The report should clearly show whether the intervention activities have achieved their basic objectives to stimulate and realize the women's participation in water supply and sanitation projects including the expected benefits of such involvement. As part of the basic findings, the report should make special reference to the following in its evaluation.

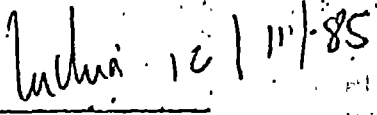
*The WDS/MPLD under contract and with assistance from UNDP Project INT/83/003 is carrying out intervention activities in localities Gajuri (Dhaling District) and Fikkil (Ilam District)

- a) The adequacy and effectiveness of preparatory activities, and the extent of success achieved in drawing up the plan of action and its implementation with people/beneficiaries participation.
 - b) The extent of effectiveness of community action and efforts in mobilizing resources, overcoming administrative difficulties, enhancing community capabilities and obtaining the necessary support from Government Water Supply and Sanitation Agencies with special reference to the role of women as the "facilitator/motivator".
 - c) The impact on women's awareness concerning the importance of safe water supply and sanitation to achieve good health.
 - d) The extent of success achieved in encouraging, facilitating and involving women in local decision making process.
 - e) The impact on both functioning and utilization of the improved facilities and the effects of resulting benefits on well being of the community as a whole and women in particular.
 - f) Recommendations for improvement of the methodologies used in the intervention programme for possible large scale application by planners and decision makers.
4. The contracting institution will provide skilled manpower, expertise, supplies and equipment, transportation and other facilities, as may be necessary for the success of the project.
5. It is expected that the principal investigator of the contracting institution will participate in any inter-country workshops scheduled as part of the project, travel and per diem for the workshops to be funded separately by WHO.

FOR WORLD HEALTH ORGANIZATION

THE SIGNATORY


Dr M.A. Rahman
Director Programme Management


Ms Indira Shrestha
Integrated Development Systems
P.O. Box 2254
KATHMANDU

SUGGESTED (NOT PRESCRIBED) BASIC LINE DATA, INFORMATION/OBSERVATION
FOR SURVEY AND QUALITATIVE ANALYSIS *Analysis*

I. SOCIO-CULTURAL

- Demography
- Basic economic aspects of project area
- Women's Role in family and community including decision making
- How do women perceive their own roles in decision-making and development activities?
- Attitude of men towards women's participation in decision-making and development
- Cultural beliefs and practices adversely affecting the participation of women in community affairs
- etc.

II. COMMUNITY AWARENESS

- Women's perception of benefits of the water supply and sanitation facilities as it relates to their daily life (convenience, cultural, health, etc.)
- The general cleanliness of houses and village surroundings
- To what extent the community as a whole and women in particular are aware of health benefits of safe water supply and sanitation
- Evidence of interest particularly among women in improving water supply and sanitation facilities
- Literacy level
- Are men aware of women's hardship?
- etc.

III. HEALTH SITUATION

- This could be evaluated through qualitative analysis and in discussion with the local health centres particularly in reference to diarrhoeal and gastro-enteric complaints and general observation etc.

IV. SOURCE OF WATER SUPPLY AND THEIR CONDITIONS

- Is there a water supply system (piped water, hand pump, roof-catchment, etc.)
- The condition of existing systems, do they function?
- Is the quantity of water produced by water supply system adequate for the community daily use?

- Is water reasonably safe for drinking or is it contaminated? (only through observation)
- reliability of the water supply
- convenience of water points
- other open sources used and their general location and quality?
- etc

V WATER UTILIZATION

- portion of household using the existing water supply facilities
- Do people use the safe water for: drinking, cooking and washing?
- The extent that open water sources are used for the above purposes
- The existence or lack of places for women to conveniently wash themselves.
- etc.

VI COMMUNITY INVOLVEMENT

- Existing local committee's, groups, councils etc.
- The role of women in the above local institutions
- The women's groups
- The existing local institution and mechanism which are or can promote local collaboration for water supply and sanitation
- The extent that community have participated in water supply and sanitation in the past.
- Are women involved in planning, implementation, operation and maintenance of water supply and sanitation projects?
- etc.

VII GOVERNMENT AGENCIES

- Referral and back-up support facilities and resources close to community level
- The role of Ministry of Health and other collaborating agencies in water supply and sanitation at community level.
- Attitude of local government staff concerning the women's participation and involvement in WSSS
- etc.

VIII SUMMARY OF MAJOR CONSTRAINTS TO WOMEN'S PARTICIPATION

- Socio-cultural
- Economic/preoccupation with other household works and work in the fields
- Lack of awareness
- Lack of support by Government agencies and community leaders
- etc



APPENDIX - D

Integrated Development Systems
(I.D.S)Household Questionnaire1. Household Identification

1.1 Name of Respondent: - - - - -

1.2. Ethnicity: () ()

- | | | |
|-------------------|------------------|--------------------------|
| 01. Hill Brahmin | 06. Newar-low | 11. Muslim-High |
| 02. Terai Brahmin | 07. Rai-Limbu | 12. Muslim-Low |
| 03. Hill Chhetri | 08. Gurung-Magar | 13. Damai, Kami, Sarki |
| 04. Terai Chhetri | 09. Tamang | 14. Others (Specify).... |
| 05. Newar-High | 10. Tibetan | |

1.3. Age () Years

1.4. Sex: 1. Male 2. Female ()

1.5. Religion: 1. Hindu 3. Hindu-Buddhist ()

2. Buddhist 4. Muslim

5. Others (Specify) ...

1.6. Mother Tongue: ()

1. Nepali 5. Tibetan

2. Rai-Limbu 6. Maithili

3. Newari 7. Hindi

4. Gurung-Magar 8. Others (Specify)

1.7. Address:

Panchayat

Name of locality

Ward No.

2. Demographic Characteristics

2.1 Family Detail:

D-2

S.No.	Name of the Family Members	Relation to household head	Sex	Age	Marital status	Education	Employment status	Membership	Remarks
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

1. Relation to Household head

- 01. Household head
- 02. Spouse
- 03. Father
- 04. Mother
- 05. Son
- 06. Daughter
- 07. Uncle/Aunt
- 08. Brother/Cousion
brother
- 09. Sister/Cousion
sister
- 10. Father-in-law
- 11. Mother-in-law
- 12. Brother-in-law
- 13. Sister-in-law
- 14. Son-in-law
- 15. Daughter-in-law

- 16. Nephew/Niece
- 17. Grand son
- 18. Grand daughter
- 19. Others (specify)

2. Sex

- 1. Male
- 2. Female

3. Marital Status

- 01. Married
- 02. Never married
- 03. Widowed
- 04. Divorced
- 05. Separated

4. Education

- 00. None

6. Membership

- 06. None
- 01. Nepal Women's Org.
- 02. Nepal Youth Org.
- 03. Nepal Adult Org.
- 04. Nepal Labour Org.
- 05. Nepal Farmer's Org.
- 06. Nepal Ex-army Org.
- 07. Village Panchayat
- 08. District Panchayat

5. Employment Status

- 01. Employed by other
- 02. Self employed
- 03. Govt. employed
- 04. Under employed
- 05. Unemployed

3. Physical Facilities

3.1 House Type: (Emunerator completes by observation) ()

- | | |
|------------------|--------------------------|
| 1. Bamboo-thatch | 3. Stone |
| 2. Brick | 4. Others (specify) |

3.2 Story: ()

- | | |
|--------|------------------|
| 1. One | 3. More than two |
| 2. Two | |

3.3 Room: ()

- | | |
|---------------|--------------------|
| 1. One-two | 3. Five-six |
| 2. Three-four | 4. More than seven |

3.4 Use of housing unit: ()

1. Residential
2. Commercial
3. Others (specify)

3.5 Area of house compound: ()

1. Less than a ropani
2. 1 - 5 ropani
3. More than 5 ropani

3.6 Use of house compound: ()

1. Cultivation
2. Cultivation and cattle byre
3. Cattle pasture
4. Others (specify)

4. Socio-cultural Characteristics

4.1 Family type:

1. Nuclear
2. Joint/extended

4.2 Division of labour: (Use code*)

Male		Female	
1. Elderly		1. Elderly	
2. Young/adult		2. Young/adult	
3. Children		3. Children	

* Code:

Activities

<u>Household chores</u>	<u>Agriculture</u>	<u>Cottage Industry</u>	<u>Others activities</u>
01. Cooking	11. Ploughing	19. Bus marketing	24. Solid waste disp.
02. Washing utensils	12. Sowing	20. Managerial activity	25. Liquid waste "
03. Washing clothes	13. Weeding	21. Accounts	26. Human excreta "
04. Fetching water	14. Harvesting	22. Technical supervision	27. Animal " "
05. Collecting firewood	15. Irrigation	23. Others (specify)	28. Visit to the faith healer/loc. health post
06. Grazing animals	16. Wage labour	17. Ag. marketing	29. Other (specify)..
07. Feeding animal	18. Other (specify)...		
08. Child caring			
09. Household marketing			
10. Others (specify)...			

4.5 Household decision maker ()

- | | |
|-------------------|--------------------------|
| 1. Elderly male | 7. Brothers |
| 2. Elderly female | 8. Sisters |
| 3. Both the above | 9. Sons |
| 4. Father | 10. Daughters |
| 5. Mother | 11. Collectively |
| 6. Parents | 12. Others (specify).... |

4.3.1 (If male takes decision) consultation with female:

- | | | |
|--------|-------|-----|
| 1. Yes | 2. No | () |
|--------|-------|-----|

4.3.2 (If yes) matter of consultation: ()

1. Buy land, jewelery etc.
2. Sale/land, jewelery etc.
3. Mortgage and loan
4. Investment
5. Others (specify)

4.4 Attitude of men towards women's participation in decision making and development activities: ()

1. Encouraging
2. Discouraging
3. Neither encouraging nor discouraging

4.5 Significant others of women family members: ()

- | | |
|-------------------|--------------------------|
| 01. Father | 08. Peers |
| 02. Mother | 09. Neighbour |
| 03. Father-in-law | 10. Teacher |
| 04. Mother-in-law | 11. Brother |
| 05. Husband | 12. Sister |
| 06. Children | 13. Other (specify)..... |
| 07. Friends | |

4.6 Pattern of interaction of women:

<u>A. Frequency of interaction</u>	Family members	Peers friends	Neighbour	Govt. officials
1. Daily				
2. Weekly				
3. Occassionally				
<u>B. Basis of interaction</u>				
1. Food, cloths. & Shelter				
2. Help during crisis				
3. Advice				
4. Money				
5. Other (specify) ...				

4.7 Stigma

Stigma against human excreta, solid waste and liquid waste:

Response	Human excreta	Solid waste	Liquid waste
1. Smells bad			
2. Dirty			
3. Both the above			
4. Carries diseases			
5. Smells bad and carries diseases			
6. Smells bad dirty & carries diseases			
7. No stigma			

4.8 Opinion on the participation of women in community affairs: ()

1. Women are dependent on male, therefore, they should participate in community affairs.
2. Women should not work together with men in community affairs.
3. Women are capable to work in community affairs, therefore, they should participate in it.
4. Women need training and orientation to participate in community affairs.

5. Economic Characteristics:

5.1 House ownership: ()

1. Own

3. Relative's

2. Rented

4. Others (specify) ...

5.2 Land ownership:

Land (unit)	Own		Other's rented
	Self cultivated	Rented to others	
Khet			
Pakho			

5.3 Livestock ownership:

Ownership of Domastionted Fowls:

	<u>Livestock</u>	<u>Number</u>
1.	Cow	
2.	Goat	
3.	Sheep	
4.	Water Buffalo	
5.	Ox	
6.	Pig	
7.	Bangoor	
8.	Other (specify) ...	

	<u>Fowls</u>	<u>Number</u>
1.	Poultry	
2.	Dock	
3.	Pigeon	
4.	Others (specify) ...	

5.4 Ownership of shop: ()

0. None
1. Tea shop
2. Grocery
3. Cloths
4. Local liquor
5. Others (specify)

5.5 Primary occupation: ()

- | | |
|---------------------|-------------------------|
| 1. Agriculture | 5. Skilled labour |
| 2. Service | 6. Wage labour |
| 3. Commerce | 7. Porter |
| 4. Cottage industry | 8. Others (specify) ... |

5.6 Secondary occupation: ()

- | | |
|---------------------|-------------------------|
| 1. Agriculture | 5. Skilled labour |
| 2. Service | 6. Wage labour |
| 3. Commerce | 7. Porter |
| 4. Cottage industry | 8. Others (specify) ... |

5.7 Average monthly household expenditure (1985-1986)

A. Food ()

- | | |
|----------------------|----------------------|
| 1. Less than Rs.500 | 4. Rs.2000 - Rs.3000 |
| 2. Rs.500 - Rs.1000 | 5. Rs.3000 - Rs.4000 |
| 3. Rs.1000 - Rs.2000 | 6. More than Rs.5000 |

B. Education ()

- | | |
|--------------------|--------------------|
| 1. Less than Rs.25 | 3. Rs. 50 - Rs.100 |
| 2. Rs. 25 - 50 | 4. More than 100 |

C. Rituals/festivals ()

1. Less than Rs.200
2. Rs.200 - Rs.400

3. Rs.400 - Rs.600
4. More than Rs.600

D. Medical Treatment ()

1. Less than Rs. 50
3. Rs. 50 - Rs. 100

3. Rs. 100 - Rs.200
4. More than Rs. 200

E. Travelling/transportation ()

1. Less than Rs.200
2. Rs.200 - Rs. 400

3. More than Rs. 400

F. Clothes ()

1. Less than Rs.200
2. Rs.300 - Rs.500

3. Rs.500 - Rs.1500
4. More than Rs.1500

G. Wages ()

1. Less than Rs.200
2. Rs. 200 - Rs.400

3. Rs. More than Rs.400

H. Entertainment ()

1. Rs.50 - 100
2. Rs.100 - Rs.200

3. Rs.200 - Rs.300
4. More than Rs.300

I. Other expenditure

1. Rs.50 - Rs.200
2. Rs.200 - Rs.400
3. Rs.400 - Rs.600

4. Rs.600 - Rs.800
5. Rs.1000 - Rs.1200
6. More than Rs.1200

5.8 Expenditure priority:

- 1.
- 2.
- 3.
- 4.

5.9 Source of income (1985/86):

	(Production (yrs))			Cash (Rs.)		
	Unit	Quantity	Daily	Weekly	Monthly	Yearly
A. Agriculture						
a) Paddy						
b) Maize						
c) Wheat						
d) Soyabean						
e) Millet						
f) Others ...						
B. Service						
C. Commerce						
D. Remittance						
E. Pension						
F. Wage						
G. Others ...						

5.10 Monthly Saving:

()

- | | |
|--------------------|---------------------|
| 0. Saving | 5. Rs.400 - Rs.500 |
| 1. Less than 100 | 6. Rs.500 - Rs.600 |
| 2. Rs.100 - Rs.200 | 7. Rs.600 - Rs.700 |
| 3. Rs.200 - Rs.300 | 8. Rs.700 - Rs.800 |
| 4. Rs.300 - Rs.400 | 9. More than Rs.800 |

5.11 Nature of Saving:

()

- | | |
|-----------------|-------------------------|
| 1. Bank deposit | 3. Lend others |
| 2. Buy jewelery | 4. Others (specify) ... |

5.12 Concept of debt:

()

- | | |
|------------|---------------|
| 1. Bad | 3. Good |
| 2. Not bad | 4. Don't know |

5.13 Concept of loan:

()

1. Good despite high interest rate
2. Good if the interest rate is low
3. Bad
4. Don't know

5.14 Concept of grant:

()

- | | |
|---------------|----------------|
| 1. Desirable | 2. Undesirable |
| 3. Don't know | |

5.15 Problem with repayment of loan

()

- | | |
|-------------------------|--------------------------|
| 1. Sale food grains | 3. Sale other property |
| 2. Sale land | 4. Land loan with others |
| 5. Others (specify) ... | |

5.16 Source of credit: ()

- | | |
|-----------------|------------------------|
| 1. Money lender | 4. Bank |
| 2. Neighbour | 5. Others (specify)... |
| 3. Relatives | |

5.17 Investment priority (specify two most preferred areas for investment)

- | | |
|-------------------------|--------|
| | 1. () |
| | 2. () |
| 1. Agriculture | |
| 2. Shop | |
| 3. Cottage industry | |
| 4. Others (specify) ... | |

6. Community Practices and Perception on Health and Sanitation

6.1 Concept of clean water ()

- | | |
|--|-----------------|
| 1. Fresh water brought from the natural water source | 3. Filter water |
| 2. Water mixed with potash | 4. Boiled water |
| 5. Others (specify) ... | |

6.2 Concept of sickness ()

- | | |
|---|---|
| 1. Who has some fever/ailment | 3. Who has to consult a local faith healer/health assistant |
| 2. Who is in bed because of fever/ailment | 4. Who can not work because of fever/ailment |
| 5. Others (specify) ... | |

6.3 Origin of disease:

()

1. God's will
2. Curse
3. Malfunctioning of body parts
4. Course of death
5. A particular kind of sickness
6. Others (specify) ...

6.4 Concept of Sanitation:

()

1. Clean house
2. Clean street
3. Clean house & street
4. Clean toilet
5. All of the above
6. Others (specify) ...

6.5 Morbidity of family members in the last ten years:

D-15

Identifi- cation	Type of sickness/ diseases	Type of medicine used	Duration of treat- ment (Day)	If the treat- ment was ter- minated before its compila- tion		Place of treatment	Cost of treatment	Outcome	Remarks
				Howlong	Causes				

Type of treatment

- | | |
|--------------------------------|--------------------------|
| 1. Faith healer (Dhami-Jantri) | 4. Health Asst. |
| 2. Eaidhya | 5. Compounder |
| 3. Guvaju/Tantrik | 6. Others (specify) |

esent source of water: ()

- River water
- Pipe water
- Tap
- 4. Well
- 5. Others (specify) ...

arrel for using water source: ()

- Frequently
- 2. Occassionally
- 3. Never

8.1 (If quarrel frequently) who solves the disputes ()

- 1. Local leader
- 2. Influencial villagers
- 3. Committee members
- 4. Old people

ffectiveness of their decision: ()

- Very effective
- Somewhat effective
- . Not effective

ource of fuel for cooking food: ()

- . Fire wood
- . Cow-dung
- . Others (specify) ...

lace for cloth washing: ()

- . Pond
- . Well
- . At home
- 4. Tap
- 5. River/stream
- 6. Others (specify) ...

requency of washing clothes: ()

- .. Daily
- .. Weekly
- .. Occassionally

6.12 Bathing Place: ()

1. Courtyard
2. Stream-river
3. Tap
4. Well

6.13 Frequency of bathing: ()

1. Daily
2. Weekly
3. Occassionally

6.14 Bathing material: ()

1. Peena (sustard cake)
2. Red soil
3. Soap
4. Others (specify) ...

6.15 Frequency of dish washing (daily): ()

1. Once
2. Twice

6.16 Materials used to wash utencils: ()

1. Ash-twigs
2. Soil
3. Soap
4. Others (specify) ...

6.17 Water feeding place to animals: ()

1. Cattle byre
2. Ponds
3. River-stream
4. Others (specify) ...

6.18 Solid waste and sullage disposal: ()

1. Backyard court yard
2. Pit
3. Stream
4. Feed animals
5. Others (specify) ...

6.22a. Materials used for anal cleaning:

	Materials used	Male	Female
1.	Grass-twig-stone		
2.	Water		
3.	Ordinary paper		
4.	Others (specify) ...		

6.22b. Things used to wash hands after excreta disposal: ()

1. Soap
2. Soil
3. Pinh (M stard Cake)
4. Hush
5. Ash
6. Others (specify) ...

6.23 Use of raw human excreta/compost excreta: ()

1. Used as manure
2. Not used

6.24 Knowledge of latrine types: ()

1. Open pit
2. Open pit and bucket
3. Open pit, bucket and water seal with septic tank

6.25 Expected benefits after the implementation of drinking water supply and sanitation (WDSS) project: ()

1. Women will get time to do other activities
2. Comfortable
3. All family members health will be good
4. The villagers will look tidy
5. Safe drinking water will be available
6. Others (specify)...

6.26 Communities priority of needs: ()
(Rank order)

- | | |
|---------------------|--------|
| 1. Irrigation | 1. () |
| 2. Drinking water | 2. () |
| 3. Health Post | 3. () |
| 4. Road | 4. () |
| 5. Sanitation | 5. () |
| 6. High school | 6. () |
| 7. Toilet | 7. () |
| 8. Fuel wood-fodder | 8. () |

6.27 Appropriate development agent related with water supply and sanitation: (Rank order)

- | | |
|--|--------|
| 1. Govt. agencies-local panchayat | 1. () |
| 2. Non-government agencies | 2. () |
| 3. Local community | 3. () |
| 4. Organisation related with women's development | 4. () |

6.28 Responsibility to install and manage public water taps: ()

1. Government/district panchayat/local panchayat should install and manage public water taps.
2. Government/district panchayat/local panchayat should its maintenance and cleanliness.
3. Non-government organisations should install and manage public water taps.
4. Non-governmental organizations should install public taps and local community should manage its maintenance and cleanliness.
5. Local community should install and manage public water taps.
6. Organisations related with womans development should install and manage public water taps.

6.29 Responsibility to install and manage public toilets: ()

1. Government/district panchayat/local panchayat should install and manage public toilets.
2. Government/districts panchayat/local panchayat should install public toilets and local community should manage its maintenance and cleanliness.
3. Non-government organisations should install and manage public toilets.
4. Non-governmental organisations should install public toilets and local community should manage its maintenance and cleanliness.
5. Local community should install and manage public toilets.
6. Organisations related with womans development should install and manage public toilets.

6.30 Responsibility of private water connections: ()

1. Government agencies should provide necessary grants.
2. Government agencies should provide necessary subsidy.
3. Household should take full responsibility
4. Others (specify) ...

6.31 Responsibility of making household toilet: ()

1. Government agencies should provide necessary grants and technical knowhow.
2. Government agencies should provide necessary subsidy and technical knowhow.
3. Non-government agencies should provide necessary subsidy and technical knowhow.
4. Household should take full responsibility
5. Others (specify) ...

6.32 Should the following person participate in water and sanitation related activities:

	<u>Yes</u>	<u>No</u>	<u>Don't know</u>
1. Housewife	()	()	()
2. Female school teacher	()	()	()
3. Male school teacher	()	()	()
4. Neighbour (female)	()	()	()
5. Neighbour (male)	()	()	()
6. Panchayat worker	()	()	()
7. All of the above	()	()	()

6.33 Appropriate method of water and sanitation educated:

()

1. School education
2. Documentary
3. Radio
4. Poster
5. Women motivator
6. Demonstration

7. Source of Water Supply and Utilization

7.1 Quantity of daily water needs: (in gagri)...

7.2 Adequacy of water:

Source	Padhera	Well/ kuwa	Stream river	Ground water	Piped water	Others (specify)
Winter						
Summer						

Code: 1. More than adequate

2. Adequate

3. Not adequate

7.3 Use of water:

Source of water

S.No.	Use	Pa- dhera	Well/ kuwa	Stream river	Ground water	Piped water	Other (specify)
1.	Drinking & cooking						
2.	Cattle feeding						
3.	Washing clothes						
4.	Washing utencils						
5.	Irrigation to K.G.						
6.	Other (specify)						

7.4 Distance of water source:

Mile..... Km..... hr.....

7.5 Total time to fetch one gagri (unit) of water:

S.No.	Activity	Hour	Minute
1.	Going		
2.	Waiting		
3.	Coming back		

Total quantity
needs

7.6 Water collector:

()

1. Male
2. Female
3. Children
4. All of the above

7.7 Time of water collection:

()

1. Early morning
2. Afternoon
3. Evening
4. Morning-Evening
5. Others (specify)...

7.8 Reliability of source:

()

1. Reliable
2. Less reliable
3. Unreliable

7.9 Convenience of source: ()

1. Very convenient
2. Less convenient
3. Unconvenient

7.10 Nature of contribution for maintenance of the water source: ()

1. Voluntary labour
2. Donation in cash-kind
3. Other (specify)...

7.11 Bathing place for women: ()

1. Cortyard backyard
2. Pandhera
3. Stream-river
4. Tap
5. Others (specify)....

