CHAPTER III  
METHODOLOGY

The Communication studies are mostly governed by the scientific method of social sciences. Many researchers have observed that combination of different media into one discipline is to great extent an achievement of social sciences approach. In thirties and forties, social science scholar have felt that audience was the main object of investigation and therefore, the study of media were also integrated. This view is largely accepted. One of its ramifications consists in the prevailing idea that the main subject-matter of training programmes should be the application of the principles, data and methodology of behavioral sciences (Bush: 1956).

Communication research in the words of Wilbur Schramm (1957) is concerned with, how to be effective in communications, how to be clear, how people use mass media and other channels of Communication, how nation can understand one another, how society can use the mass media to its greatest good and in general how the basic process of communication works. Indices of class, caste, social status, and income and so on are
commonly included as essential measures in studies bearing on
development or communication.

In recent years, there has been a need for more qualitative
and holistic approach to understand the role of media as
compared to dominance of quantitative approach in the past. We
should not simply conduct research that is programmatically
influenced by any fixed theoretical perspective (Lull: 1988).

The Communication research came into
limelight after seventies in India, when significant results were
noticed in agriculture sector. The green revolution gave
legitimacy to communication in the field of agriculture extension.
The Satellite Instructional Television Experiments (SITE)
provided scope for assessing the impact of TV programmes on
the rural community and their beliefs and practices (1975-76)

Nordenstreng (1972) elaborates:
"Because the traditional methods of ideological have proved inadequate,
one has been urged forward to search for more effective means to touch
the minds of the masses ...Similarly, at the level of the social sciences,
social forces have needed to turn the positive tradition into a more holistic
approach. It was no longer sufficient to contribute to the manipulative
mechanisms by piecemeal studies and theories that bypass many
significant features in social developments, particularly those generating
dissonance and revolutionary potential."
Likewise, Yogendra (1996) summarizes the sociological research issues since pre-independence days:

"The study of social change has been the central concern of Indian sociology. Even when sociologists or social anthropologists did ethnographic studies of a village, tribe or a community, an implicit focus on change existed in their frame of reference. With few exceptions, from the 1960's, the study of change began to focus upon public policy, administration and the planning process in rural and urban areas. Specialisations in sociology multiplied and studies became more analytical and conscious of theory and methodology. Still, the major analytical categories were those of caste, class, tribe and community. Policy-oriented rural and urban surveys were undertaken, the interest being on planned transformation of society."

Now, the focus of sociological studies is seemed to have been shifted towards the mass communication on the socio-economic and cultural aspects of masses. Muppidi (2007) says that India, by virtue of its multi-ethnic diversity, cultural plurality and lingual uniqueness, is a major laboratory for communication and media studies. It is a fertile ground to
understand the historical significance and the importance of the role of communication media in most plural societies.

Sharma (1987) also elaborate, that the study of communication in India at the present juncture is great. India is in the process of transition and has started a number of welfare and developmental programmes for the betterment of its citizens. The lack of understanding of these programmes by the people is proving a serious bottleneck. The process of rapid change in the Indian society is generating many lags and tensions. Therefore, a proper understanding of the communication process is indispensable, if we want to bring about a rapid socio economic upliftment of the people.

Traditionally, the trend in the mass communication studies has predominantly been one of quantitative empirical investigation. Many of these studies have contributed significantly to our understanding of the dynamics of media particularly television and culture. There is a debate going on about the relevance and effectiveness of methodological aspect of media studies particularly in developed countries where the socio-cultural demographics are entirely different from those of societies of developing countries. As Lull (1988) states:
"I believe that we should not simply conduct research that is programmatically influenced by any fixed theoretical perspective if we are to really 'let the data speak to us: social research that focuses on communication is especially well suited to this theoretical and methodological stance."

Whereas, Ang (1989) raises the essential question of what kind of knowledge empirical research on audiences can produce. She insists that doing research is itself a 'discursive' practice which can only ever hope to produce historically and culturally specific knowledge which are the results of equally specific discursive encounters between researcher and informants. She says:

"Research is thus, always a matter of interpreting (or, indeed, constructing) reality from a particular position, rather than the positivist approach of assuming that 'correct' scientific perspective will finally allow us to achieve the 'utopian' dream of a world completely known in the form of indisputable facts."

Generally there remains the bottleneck in most of such survey based studies, as Heller (1990), rightly points out:

"Answering questionnaires is in itself an abnormal situation for the members of the institutions under investigation. The abnormality of the situation influences the subject-object to a greater or lesser degree. Partly as a result of the abnormality of the situation, partly as a result of the fixed character of the questions and the impossibility of a real dialogue, the owners will not completely express the opinions, ideas and the institutions of the questioned subjects."

However, Johnson (2000) finds only qualitative method suitable for study the impact of television on rural community in context of growth of Indian phenomenon of television explosion. He says that this exploratory stage when hypotheses must still
be developed and sharpened, a qualitative approach to the subject material is believed to be more appropriate. He justified that once a more detailed picture is developed and a deeper understanding of television in the context of village life emerges, then quantitative surveys covering larger population may indeed become appropriate in isolating specific variables.

From this point of view, the present study is relevant and timely effort up to some extent, to fill the gap in this direction. Since, the researcher himself belongs to the rural community and has worked as District Public Relations Officer for more than seven years in Solan district which also falls under watershed project surveyed villages Gol - Jamala and Amlidol, where the working of project was closely observed by the researcher himself. Therefore seems to be the positive factor to deeply and closely understand the various aspects of rural life and development taking place there. Rural background of researcher was also to be helpful in filling up of questionnaire in a proper way, personally involving in the process.

Hence, descriptive method of research was followed in the conduct of the study. Since the purpose of the study was to explore effect of mass communication technologies adopted
during the execution of the project and its loopholes if any viz a viz socio-political and cultural life of village community, it was planned to conduct field survey of some selected villages across the wide geographical range of Himachal Pradesh in the following manner:-

3.1 Research Tool: Questionnaire-cum-Interview Schedule

- The present study was essentially empirical to look into usage of mass media, village life and linkages of both in a transforming rural set-up of Himachal Pradesh. In order to achieve this objective, a specially designed questionnaire-cum-interview schedule was designed for farmers consisting of:

  - Background information of family seeking data on socio-demographic and economic factors i.e. age, gender, caste, marital status, type and size of family, educational and occupational, status of head and wards, family income, type of house, land holding, livestock and material possession.

  - Perceptions with regard to caste, criterion of social status, women status, religiosity, participation in social activities, political activism, and ways and means of communication for seeking information regarding developmental programmes.

  - Use of print media i.e. reading of newspapers, books and magazines, type/preference of reading material, library membership.
• Use of electronic media i.e. radio listening patterns, television viewing patterns, type/preference of programmes, preferences for particular medium, perceptions with regard to role of electronic media in socio-personal life, cable/internet connectivity and its role in social/familial life.

The questionnaire included two types of questions: structure (fixed respond mode) and open ended (no suggested mode of response) for eliciting certain issues of use of media. The content of the questionnaire in the form of questions and statements was selected by reviewing the literature on media and community life and especially those focusing on village life. (Mukherjee, 1979), Media Communication and Development (Suresh Chandra, 1987), The Mass Media and Village Life (Hartmann et al. 1989), Mass Media and Farm Women (Rekha Bhagat and Mathur, 1989), Use and Preference of Mass Media for Transferring Household Messages to Rural Families in India (Ranjit and Gurmeet Kaur, 1992), Role of Mass Media in the Development of Himachal Pradesh (Vir Bala Aggarwal, 1994), Chaupal: A Study of viewing Behaviour (Tiwari et, al., 1997), Media Influence and Media Habits of Indians and Nigerians (Udomisor, 1997), and The Mass Media And Village Life(Paul Hartman,B.R Patil,Anita Dighe1989).
The structure of questions and statements in perception scale was carefully designed keeping in view the guidelines for development of questionnaire (Young, 1996; Best and Kahn, 2007).

The specimen copy of preliminary draft of questionnaire-cum-interview schedule is given as Appendix - I.

3.1.1 Try-Out of Questionnaire-cum-Interview Schedule

The draft of questionnaire was given to farmers, Pradhan of Panchayat in adjoining villages near Nalagarh town, local media persons and field functionaries of forest and public relations of government of Himachal Pradesh and some to expert and teachers belonging to university of horticulture and forestry in solan district, so that researcher himself could get their expert views with regard to relevance of each question/ statement in it. The response mode of some questions was modified and language of some questions was also modified to enable to get an objective response.

The questionnaire was administered to 60 people in the village of Basola all benefited from the watershed project near by
in Nalagarh town of Solan District, selected on random basis. The item wise analysis was carried out to find out whether each question/statement can provide a differentiated mode of response pattern to gauge the life style of village community and media use. On the basis of item analysis, some questions were restructured and some statements meant for perceptions with regard to women issues were deleted. The questionnaire was again referred to some media persons and university/college teachers for seeking their expert opinion on the 'pretested' questionnaire in terms of the relevance of each question/statement in the questionnaire pertaining to various facets of village life and use and role of mass communication mode used in rural life.

The specimen copy of final draft questionnaire-cum-interview schedule, after testing and modification is given as Appendix-II.

3.1.2 Reliability and Validity of Questionnaire

As explained above, the question/ item selection in the interview schedule-cum-questionnaire was made from literature pertaining to communication research conducted in rural set-up and following guidelines for the development of the tool. The expert opinion was taken to judge the relevance and
appropriateness of content covered in the questionnaire for an objective measurement. Hence content validation was established. For determining reliability of the questionnaire, it was readministered to 20 farmers, out of 60 already interviewed in the pretesting of the questionnaire. The item-wise comparison of responses on two administrations yielded a consistent pattern on all structured questions, except those having some alterations.

The response pattern on two occasions showed a consistent pattern to indicate a fairly high level of reliability. It may be mentioned that reliable and valid measurement, in any social phenomenon, is essential to objectively assess the issues, under investigation. Hence, keeping in view the scientific principles of tool construction, the questionnaire cum-interview schedule was considered reliable and valid for collection of data to determine mass communication strategy in hill state known as Himachal Pradesh.

3.2 **Universe and Sampling**

The researcher has selected the Himachal Pradesh for the study particularly the districts prone to water scarcity comprising about 90 percent of rural community of the total
population of above 65 lakhs residing in more than 17000 inhabited villages. About 24 percent families have been living below poverty line in the state.

It is one of the scenic state situated in the north part of India adjoining to Jammu and Kashmir, Punjab, Haryana, Uttarakhand and bordering to China. The people of this state, lead a simple life, mainly occupied in the field work related to agricultural and horticultural activities. Himachal Pradesh has many ancient temples, monuments, natural lakes and beautiful snow bound Himalayan ranges besides the rich culture heritage of fairs and festivals, where large number of people can be seen in their rich colorful traditional dresses, which are attractions for tourist also.

Himachal Pradesh is situated between 30° 22' 40" to 33° 01' 20" north latitudes and 75° 45' 55" to 79° 04' 22" east longitudes. The altitude in the Pradesh a mostly mountainous being in the lap of Himalayas, ranges from 350 meters to 6975 meters above mean sea level. Weather conditions also vary from the semi-tropical to semi-artic and these vary from wet-humid sub-temperate situation to dry temperate alpine high lands.
This beautiful state came into existence on 15 April, 1948 as a part 'C' State of the Indian Union, by integration of 31 big and small hill states. Initially it was formed from four districts namely; Mahasu, Mandi, Chamba, and Sirmaur with an area of 27,169 square kilometers. In 1954, the Bilaspur now as independeant district then as state was also merged with Himachal Pradesh. Himachal Pradesh became Union Territory in 1956 after its status of part 'c' state was abolished and got the Statehood on 25th January, 1971. In 1960, the border Chini tehsil of Mahasu district was carved out and district Kinnaur was formed raising the total number of districts to six. In 1st November, 1966, the then Punjab state was re-organised with the formation of Haryana as a separate state and merger of the then Kullu, Kangra, Shimla and some hilly areas of Hoshiarpur district and Dalhousie of Gurdaspur district into Himachal Pradesh constituting four new districts viz. Kullu, Lahaul & Spiti, Kangra and Shimla. With this addition, Himachal Pradesh comprised of ten districts, with an area of 55,673 sq. kilometers. In 1st September 1972, two more districts namely Hamirpur and Una were created after trifurcation of Kangra district. Moreover, then Mahasu district was divided into Shimla and Solan districts and till today the State has 12 districts.
The State boost today literacy rate of 84 percent as compare to all India literacy rate of 65.38 percent. There are 56 Urban Local Bodies, 3243 Panchayts, 75 Panchayat Samiti, 12 Zila Parishads and 75 developmental blocks. There are 12 districts, 52 sub-divisions and 109 tehsils and sub-tehsils in this State.

Himachal Pradesh has wide health, education and road network more than 2220 health institutions about 15,300 education institutions and 33,000 kilometer road network is providing services to the people besides this State has achieved cent per cent electrification way back in eighties and cent per cent potable drinking water facility in every village and presently it has giving tap water to more than 84 percent household in the State and has merged as one of the model State due to its all round development.

The State is trying to built a hub for information technology and bio technology. It has achieved 100 percent computerization in all the Govt. offices, regular video conferencing with every district and sub-divisions and providing State wide area network (SWAN) has connected the whole Govt.
machinery from Secretariat to department, district, sub-divisions and Block headquarters for effective e-governance from 5th February, 2008.

There is every nook and corner of the State connected with telecommunication facility even the remotest corner of the State has facility of telephone and mobile services. The people in village today enjoy the cable network, internet, cell phone, besides radio listening and newspaper reading. There are three Radio Stations namely Shimla, Hamirpur and Dharamshala and one Doordarshan Kendra in Shimla catering to the needs of the people. Moreover, the local cable operator are also providing lots of information to the masses. All India Radio covers all most the 90 percent population. Besides this number of low power transmeters are also installed to cover the shadow areas so that better FM services are accessible to the people living in far flung areas. In addition to this three relay centers namely Kalka Shimla MW, Kullu Shimla FM and Kasuali National are covering the State. The television as per the report of PIB, Govt. of India 63.3 population is being covered through Doordarshan except some of the fringe areas which mostly fall in Tribal areas like Kinnour and Lahaul-Spiti and some of areas falling in Bharmour
and Pangí areas of Chamba District where dark to home (DTH) antennas are being installed to facilitate the masses for television viewing. Over 20,000 such DTH has already been installed in Kinnaur, Lahaul-Spiti and Pangí & Bharmour and as per the report from the Information & Public Relations Rs. 50 lac are likely to spent for purchase these DTH for other such areas where television transmission is poor. These DTH are being installed in Panchayats, Mahila Mandal, Yuvak Mandls for better communication of the latest information. The report of the Information & Public Relations Department make it a point that there are still number of fringe zone where the DTH facility is required for television viewing. The newspaper circulation has expended during last 10 years due to commendable literacy rate second after Kerla in the country. Therefore, the circulation has doubled during the decade and today over 5.50 lac copies of different newspaper and periodical are circulated. These newspapers are published from Chandigarh, Dharamshala, Shimla and all other important places of the State. The circulation mostly vary due to sometime closure of the newspaper and periodical time to time.
The study was conducted in three phases on first phase villages and people were selected through field visit, informal interviews and discussion. The efforts were made to gather maximum socio-economic and cultural status of the people living in villages. After field observations with participatory approach, sample survey were conducted with selected people of identified villages in second phase. Samples were drawn in proportions to population so that at least 300 samples are collected representing all section of the people living in the villages. In the third phase role of communication tools used for disseminating information, effects of media were intensively studied with indepth participatory observation. The changes brought by communication strategy in rural life were determined.
All the communication tools under study were categorized to assess their effectiveness as below:

<table>
<thead>
<tr>
<th>Interpersonal Communication</th>
<th>Group Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass Communication</td>
<td>Radio, T.V., newspaper and published material including other Print and Electronic Media</td>
</tr>
<tr>
<td>Traditional Media</td>
<td>Folk theatre, Drama Songs, exhibition etc.</td>
</tr>
<tr>
<td>Institutional Media</td>
<td>Government, leaders, Panchayati Raj institutions, Mahila mandals and Yuvak Mandals</td>
</tr>
<tr>
<td>Urban Contacts</td>
<td>Shopkeeper, traders, Local leaders.</td>
</tr>
<tr>
<td>New Media</td>
<td>Internet, multi-media etc.</td>
</tr>
</tbody>
</table>

**AREA OF STUDY**

The study was conducted in six villages of three districts Solan, Sirmour and Una of Himachal Pradesh, where number of watershed were treated under Kandi Project in first phase. This project was completed successfully and give way to new kandi project phase II later. This project started in the shiwalik hills of Punjab, Haryana, Himachal Pradesh and Jammu and Kashmir.
during 1990-91 and ended in 31-03-1999. The initial results of this project shows that people have positively responded to the programme and made visible progress revival of economy through diversification of traditional cropping pattern to cash crops like vegetable growing, increase in milk yield, green fodder, use of modern agro-techniques and adopting participatory approach to the developmental programmes. However, there are also under developed areas in these districts where still people are mostly dependent on rain God for good crop yield. The farmers living in some of this area still hesitant to adopt new cropping pattern and stick to traditional farming due to scarcity of water. They also rare poor quality animals who do not give enough yield.

How communication strategy through people participation stimulated these poor peasants by active role of Government and NGO's functionaries and provide benefits of modern technology to rejuvenate their economy, was the main focus of the study. Besides highlighting the weaknesses and strong points of Communication techniques, which can be taken care in future for executing and formulating programmes.
3.3 Integrated Watershed development Project
(Area of study Himachal Pradesh)

Watershed development is a strategy for safeguarding the livelihoods of people living in fragile ecosystems experiencing soil erosion, depletions of water resources, denuding vegetation cover and giving way for flash floods, which ultimately leads to ecological imbalance. Therefore main objective of watershed is to provide sufficient drinking water, fuel wood and fodder and raise income and employment to farmers. Watershed development is over three decades old in India and continuous efforts have been going on for improving its strategy.

The Government of India had constituted Technical Committee which submitted its report in 1994 to ministry of Rural Development (Report from Economic and Political Weekly November 4, 2000:- Special Article Watershed Development in India Recent Experience and Emerging Issues). This Technical Committee recommended planning on watershed basis through the participation of the people at all stages, active involvement of voluntary organizations and coordinated effort resulting in convergence of treatment by the concerned government departments. The Technical Committee had given recommendation on the basis of success stories through which
they have undergone during their studies and survey on existing watersheds.

Moreover how in emerging approaches to the process of development focuses on man and the development of human beings themselves. So the action can be relevant if carried out by and with the people thus emphasizing people’s willingness, cooperation and participation. Above all of all these first and foremost is to create awareness and ensure people’s participation. This is the area where all communication needs to be geared up but only after assessing which medium, where, with what effect and what kind of media mix be there and for purpose. This requires communication strategy and media planning.

Acute drought due to insufficient rain and other conditions had put fourth the need to protect fragile ecosystem protection of people living in such area. Strategy of watershed development in this direction is a strategy for survival, to ensure availability of drinking water, fuel wood and fodder. Moreover the successful implementation of watershed development programme has also helped people to increase their income through improvement of
Agriculture production, opportunities of employment to farmers (H. Hanumantha Rao)

A watershed is a geo-hydrological unit, which drains into common point. In watershed project main thrust is on improvement of social and water conservation besides afforestation. It comprises of 500 hectare according to new guidelines issued by Department of Land Resources, Ministry of Rural Development, Government of India (Revised -2001). Dr. C. H. Hanumantha Rao headed a Technical Committee on DPAP (Drought Prone Area Programme) and DPA (Desert Development Programme) in 1994. Who gave recommendations to formulate certain guidelines for implementation of watershed development programme. On the recommendation of this Technical Committee Ministry of Rural Development formulated guidelines for watershed Development in the year 1995. These guidelines placed before Institutionalized mechanism mandated to strive for the active involvement from very beginning of user communities.

The broad objective under the watershed programme was overall economic development. Many projects designed within this approach were at different points of time taken up by the Government of India (DPAP, DDA-1987, IWDP-1989). Integrated
Waterland Development Programme aimed at development of wasteland on watershed basis under the aegis of NWDB.

Water is one of the important natural resources, which is used in number of ways for sustainable development. India being an agrarian country largely depends on water for food production and economic development of rural areas. Today massive deforestation and increasing population pressure has led to depletion of water resources, undoubtedly watershed development has become the main intervention for natural resource management besides improving the socio-economic life of the people, protect and conserve the environment. The success of watershed development project depends on the need of landholders and village community. Watershed development has also become necessity in the wake of drought, a natural hazard affecting our country. This underlines the need to conserve water through multiple, low cost, location specific techniques besides setting up of grain bank, fodder bank and rain water harvesting.

Training is an important component in watershed management. There is need to train people in watershed development programme, which will enhance knowledge, attitude, skills and relationship of the people involved in
watershed development. The rural people’s participation is key to the success of water conservation programme since they are directly and indirectly dependent on natural resources.

Watershed development projects have been taken up in massive scale by the development agencies of Union and the State Governments. Watershed Development programmes has been operating since 1983-84 till date in India. About Rs.1,000 crores are being annually spent on these programmes by Government of India in addition to externally funded watersheds (Kurukshtetra September, 2000, Watershed Development in Dry land Farming Regions by B. Hemalatha and Y.U.R. Reddy).

Central Research Institute for Dry land Agriculture, Hydrabad and Central soil and Water Conservation Research and Training Institute, Dehradun had 47 model watersheds during 1983-84 to 1989-90 in India, which were consider Research Projects.

As many as 10,000 watershed projects have been launched under the new guidelines under Drought Prone Areas Programme (DPAP) in the country and are at various stages of implementation (EPW-November 4) Andhra Pradesh with 24
percent, Madhya Pradesh 17 percent, Uttar Pradesh 10 percent, Gujarat 8.6 percent, Tamil Nadu 7 percent and others of these projects are being implemented.

3.3.1 Positive aspect of Watershed Development Project

About 5 to 6 years of implementation is a enough time to justify an evaluation of a nationwide project before new guidelines have been recommended. But presently, No effort has been taken for evaluation, in depth studies at the national level. However certain NGO's and individual scholars from certain institution have taken up some studies in regard to these projects. Besides this information of various departments is available at State and Centre level, which have been found useful and authentic. Over all impression in these information about programme has been positive and significant when compared to period before the implementation of new guidelines. There has been improvement in the access to drinking water, crop yield risen, increase in cultivation area, rise in employment. Availability of fodder has also given boost to milk production. So it has been observed that ensured participation of people in watershed development programme leads to a substantial improvement in the livelihood of the people.
DILASA, a NGO’s selected 6 Drought Prone Area Programme Watersheds in different parts of Western India to study the impact, most of these projects were launched in 1996. After the completion of 80 to 95 percent of works under the programme, a detailed survey of 15 farmers in each watershed was conducted by following “before” and “after” method. In most of the cases it was found that rise in crop yield was 60 percent crop area increased, increase in employment. Also showing improvement in Dairy and other economic activities. Significant reduction in migration of labour, enrolment of children increased, especially girls. Participation of women in decision making, however need was felt for construction of roads.

3.3.2 Impact of Watershed Development

Development Support Centre (DSC) headed by Anil C Shah also carried study on impact of watershed development in May, June-2000 when Gujrat experienced severe drought. He selected 8 drought affected districts. He compareds village in each district with benefit of watershed development programme being implemented for last 4-5 years with utilization of 70 percent of total budget allocated under the programme with adjoining
village without the benefit of watershed development programme. The findings show that the incidence of drought was much less serve in watershed villages as compared to adjoining non watershed or "Control" villages. The single most important factor accounting for the positive impact of watershed development under the Government sponsored programme in different parts of the country is community participation and decentralization of programme administration made possible under the new guidelines.

**3.3.3 Now Watershed Management**

Watershed management is important instrument for tackling the scourges of poverty and backwardness in rural India. Especially in drought prone area or where deforestation, soil erosion has become threat to sustainable development. The watershed approach has conventionally aimed at treating degraded lauds with the help of low cost, locally available technologies through participatory approach to secure close involvement of the people living in that area.

**3.3.4 Need for Watershed Development in Himachal Pradesh**

It has been observed that mountain region of Himalayas has undergone a rapid phase of transition from highly productive
environment to an unproductive barren land due to increasing population and human activity particularly agriculture. In many places human activity has increased considerably, resulting in ever increasing demand for new agricultural forest land and forest products. Consequently the forested watershed mountain slopes are being cleared extensively for cultivation, grazing domestic animals, fodder fuel, and timber. Many consider the increasing number of livestock and relatively poor management practices to be a major threat to the sustainability of hill environments. It has been felt that specialized production systems are required to bring about sustainability in both agriculture as well as the livelihoods of the people. The present study focuses on development strategy especially related to communication-flow of information to people - success and failure if any during carrying out communication related activities- so that success role could be made instrumental in other rural programmes and failure loopholes could be eradicated.

The State has great variations in terms of altitude, rainfall temperature as well as social and cultural habits and practices of farming.
The people mostly lives in low and mid hills and sparsely in highlands. This hill state has come up as a model for other hill states due to tireless efforts of farmers, who have strengthened their economy with ample initiatives and infrastructure support from the government. Agriculture being a main occupation of people, more efforts are needed to maintain mountainous natural resources for sustainable development.

3.3.5 Himachal Scenario

Agriculture is the main occupation of people in Himachal Pradesh. Shortfall of rain, acute drought, scarcity of water growing population, pressure on land has created imbalance between the population and cultivable land for survival of human being. In many places human activity has exceeded its carrying capacity of land, leading to ever increasing demand for new agricultural forest land and forest products. Consequently the forested watershed mountain slopes are being cleared extensively for cultivation, grazing domestic animal fodder, fuel and timber. Traditional agriculture in mountain areas primarily relies upon locally available natural resources and their management in order to meet food, fodder, fiber and fuel needs. It involves all land based activities, terracing, animal husbandry and forestry.
with their interlinkage. There is loud cry for conservation of natural resources like soil fertility, soil erosion, water and forest especially in Himalayan region.

But over last 60 years, farming practices which once was supported by moderate grow hives population have now increased in manifold. This has resulted in uneconomic fragmentation of land holding, environmental degradation. Increase in live stock population has given rise to excessive deforestation and over grazing. The poor management practices in hill agriculture has become major threat for sustainability of hill environments. Therefore, specialized production system, better management practices can bring about sustainability in both agriculture as well as in livelihoods of people.

Himachal Pradesh has a total geographical area of 55,673 Sq. Kms. out of which 11,322,146,45,890,1,782, 2530 and 18,614 Sq. Kms. Is under agriculture, forest, wastelands, water bodies, grasslands and snow cover, respectively according to the latest remote sensing estimate.

In Himachal Pradesh several biomass systems such as food crops vegetable crops, oil seeds, pulses, herbs, flower, fodder,
forage trees and fruit crops are currently being grown in 82 percent of rain fed lands and 18 percent of irrigated lands.

3.3.6 KANDI WATERSHED DEVELOPMENT PROJECT

The Shiwaliks, which lie in the foot hills of Himalayan range, have been identified as one of most degraded rainfed agro-ecosystems of the Country and cover five states of Northern India i.e. Himachal Uttranchal, Harayana, Punjab and Jammu & Kashmir. In Himachal Pradesh low foothills of Sirmaur, Solan, Bilaspur, Una, Hamirpur, Kangra and Chamba districts falls under the "Kandi Tract" known as Catchment area of rivers Markanda, Ghaggar, Sirsa, Swan and Chakki where rains and flash flood brings sorrow to the people nearly 11.70 lakh hectare area falls under this Kandi. Tract, which is 21 percent of total geographical area of the State. 68 percent land falling under this zone out of 11.70 lac hectare needs immediate attention. Agriculture in this region is rainfed. Out of total area 2.17 lakh hectare area under agriculture, only 0.37 lakh hectare is under irrigation. The area is also heavily populated as compared to other areas of the State i.e. 210 person/km square against the average population of 93 person/km. Square of the State.
In order to check the degradation the Integrated Watershed Development Project (Hills) phase-I popularly known as Kandi Project was envisaged to treat the ecologically fragile areas of lower Shiwaliks in the catchments of Markanda, Ghaggar, Sirsa, Swan and Chakki rivers.

The project became operational in 9th June, 1990 with total provision of 9.49 million (rupees 36.76 crores) including 20 percent state share. The project was completed successfully in March, 1999 with an total expenditure of about rupees 60 crore.

The department of forest farming and Conservation is the nodal agency in Himachal Pradesh which is executing the project with the assistance of Agriculture, Horticulture, Animal Husbandry and Soil Conservation.

The project extends over five river watersheds (Markanda in Sirmaur district, Ghaggar and Sirsa in Solan district, Swan in Una and Chakki in Kangra and Chamba) with total area of about 3013 Sq. kma.

A study identified 106 sub-watersheds that require rehabilitation. Out of these, following 27 most critical sub-
watersheds covering an area of 75,300 hectare were taken up for treatment with assistance of the World Bank.

The topmost priority was given to stop the process of eco-degradation and increasing production on sustainable basis besides preserving agriculture and forest ecosystems of this region. A joint strategy with integrated efforts was adopted by planners, policy makers, research institution, NGOs and people.

Basically in the first phase works of demonstrative nature were carried out to create visual impact centers. Selecting at least one watershed for the purpose initially.

During mid term review of the project major thrust to participatory approach was given to involve local people at village level by constituting village Development Committees. The main objective of the project were identified as under:

To slow and reverse the degradation of natural environment through the use of appropriate soil and moisture technology.

- To conserve soil and water.
• To increase and improve the production and income from corps, horticulture, fodder, fiber, fuel wood and livestock through the process of soil and water conservation.

• To reduce flooding and devastation caused by degradation of the soil.

The headquarter of Project is at Solan with four fields units headed by Assistant Project Directors at Nahan, Nalagarh, Una and Nurpur.

3.3.7 watershed management with people participation

The ever increasing demand of water for domestic, agriculture, industrial, power, ecological, irrigation purposes making it imperative to improve planning for management and conservation of water resources. The people living in rural areas have become aware of water scarcity and paying attention towards various measures being undertaken by the Government agencies for water conservation with special emphasis on rain water harvesting. Thus Integrated Watershed Management Programme (IWMP) have been formulated and made applicable from April, 2008 throughout Himachal with a objective to undertake activities such as soil moisture conservation, water harvesting, afforestation, pasture development to develop the degraded land and to enhance the productivity and income of the community in project area. It will manage the resources like
land, water and biomass to strengthening the economy of rural areas in the State in sustainable manner.

Himachal Pradesh government prepared a perspective plan for 31, 12,472 hectare land of rain fed area to be treated at a cost of Rs. 4668 crore. A State level Nodal Agency (SLNA) was also constituted for better implementation of watershed development projects. Under the IWMP out of total geographical area of the State, irrigated, snow covered, dense forest areas, land put to non agriculture use and already treated land under provisions on going projects like Integrated Watershed Development Project (IWDP), Desert Development Programme (DDP), Drought Prone Area Programme (DPAP) have been excluded after September, 2009 and the remaining areas both forest and non forest lands have been considered in the Perspective and Strategic Plan. The proposed area will be covered under IWMP in next 10-15 years.

Presently, 36 projects costing to Rs. 305.75 crore under IWMP in 203832 hectare of land in rain fed area are being identified for treatment in Himachal Pradesh. At present 3 projects in Bilaspur (Sadar, Jhanduta, Ghumarwin) 3 in Chamba (all in Mehla block), 2 in Hamirpur (Bamson, Bijnhi), 5 in Kangra
(all in Dehra), 3 in Kinnaur (Pooh, Nichar, Kalpa) Kullu (Naggar), Lahaul- Spiti Kaza and Keylong, 4 in Mandi (Seraj, Karsog, Dharampur, Sundernagar block, 7 in Shimla (6 in Theog and one in Shimla block), Two in Sirmaur (Nahan and Poanta Sahib block) 3 in Solan (all in Nalagarh block) and one in Una block are likely to be executed. The Block Development Officer will be Project implementing Agency (PIA) which will execute the activities through panchayats by forming user groups in the identified villages. The watershed development team Members (WDTM) of 3-4 official of various concerned departmentally will provide necessary technical know during execution.

State government is contemplating plan to converge other schemes with IWMP like MANREGA and 5 GSY etc. the funds of other ongoing schemes are also to be converged to ensure better result for social-economic upliftment. The programme will change the present traditional base of cultivations into cash crops, rearing milch cattle of high yield varieties. Two pronged strategy will be adopted for cultivated and non cultivated area treatment. In cultivated area supplement irrigation to rain fed land will be provided through rain water harvesting whereas is non cultivated area emphasis will be given on afforestation.
fodder plantation of improved variety. Moreover check dam, water tanks, ponds will also be constructed to provide the irrigation based on rain water harvesting. It will also help in increasing ground water table, contain moisture and stop soil erosion oftenly seen in water scarce areas.

The government India revised the guidelines for implementation of watershed in April 2008 before that the three programmes of watershed were under execution i.e. Integrated Wastelands Development Programme (IWDP), Drought Prone Area Programme (DPAP), and Desert Development Programme(DDP). The old projects will be executed as per old guidelines in the State. About 538677 hectare lands have been treated under these projects so far by spending Rs. 368.96 crore upto 2009-10.

The Drought Prone area Programme (DPAP) is being implemented in district Bilaspur, Una and Solan (Kunihar and Dharampur Blocks). Total 412 Micro Watershed Projects costing to Rs. 116.50 crore were sanctioned in phased manner out of which 71 Micro Watershed Projects costing to Rs. 14.20 crore have been completed and 3141 Micro Watershed projects costing to Rs. 102.30 crore are ongoing.
The Integrated Wastelands Development Programme (IWDP) is being implemented in districts Chamba, Hamirpur, Kangra, Kinnaur (Except Pooh Division), Kullu, Mandi, Shimla, Sirmour and Solan (Except Kunihar and Dharampur blocks). The 67 projects costing to Rs. 254.12 crore were sanctioned in phased manner out of which 15 projects costing to Rs. 67.16 crore have been completed. The Desert Development Programme (DDP) is being implemented in district Lahaul & Spiti and Pooh division of district Kinnaur. Total 552 Micro Watershed Projects costing to Rs. 159.20 crore were sanctioned in phased manner out of which 80 Micro Watershed Projects costing to Rs. 20 crore have been completed and 472 Micro Watershed Projects costing to Rs. 139.20 crore are ongoing.

DISTRICT SOLAN

Solan District came into existence is 1st September, 1972 after carving Solan and Arki tehsils from old Mahasu district and Kandaghat and Nalagarh from their Shimla District. It comprises of four subdivision, five tehsils and two Sub tehsils besides five-community development block. Total area of the district is 1,936 Sq. Kms. with 7 towns and 2,501 villages with total populations
3.82 lac. Solan district rank 9th in area and 5th in order of populations among the district of Himachal Pradesh.

The District is bounded by Shimla district in the North and by Ropar District of Punjab and Ambala district of Harayana in the south, by Sirmaur District in the east and by Bilaspur district in the west. Mandi District touches the boundary of Solan district in north-east. It is one of the foremost industrial district in the state. Some of the area is popular for vegetable and mushroom growing.

**Main Facts and Figures: Solan District**

<table>
<thead>
<tr>
<th>Area</th>
<th>1936 Sq. km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>5,00,557</td>
</tr>
<tr>
<td>Population Density</td>
<td>258.6 persons/per sq.km.</td>
</tr>
<tr>
<td>Male</td>
<td>2,70,291</td>
</tr>
<tr>
<td>Female</td>
<td>2,30,266</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>852 females per 1000 males</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>80.1% (Males 87.5%, females 73%)</td>
</tr>
<tr>
<td>No. of Tehsils</td>
<td>6</td>
</tr>
<tr>
<td>No. of Sub-Tehsils</td>
<td>2</td>
</tr>
<tr>
<td>No of Villages</td>
<td>2552</td>
</tr>
<tr>
<td>No of Panchayats</td>
<td>198</td>
</tr>
</tbody>
</table>

Census of Indian-2001
DISTRICT SIRMOUR

Sirmour district is one of the oldest districts with 3.79 lac populations ranks 6th in population and 8th in area. The districts comprises of 3 sub division, 6 tehsils and 4 sub tehsils besides five community development blocks with total area of 2,825 Sq.Kms. About 57,448 rural and 8,246 urban families live in the district. The literacy rate in the district is 51.62% second lowest in the State after Chamba district in which female literacy ranks 3rd lowest i.e. 38.45% after Chamba and Lahaul Spiti.

About the origin of the name,"Sirmour" there are quite a few surmises. One view being that the state derived its name as Sirmour because of the senior position it held amongst the princely hill states. Another version is that at the earliest times the capital of the state was at Sirmour and the state was so called after the name of the capital. But, how the word Sirmour originated is not known. Third version being that the state was founded by Raja Rasaloo of Jaisalmer whose one of the ancestor's name was Sirmour and who belonged to Rasaloo family.
Main Facts and Figures: Sirmaur District

<table>
<thead>
<tr>
<th>Area</th>
<th>Sq. km</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>4,58,593</td>
</tr>
<tr>
<td>Population Density</td>
<td>162 persons/per sq.km.</td>
</tr>
<tr>
<td>Male</td>
<td>2,41,299</td>
</tr>
<tr>
<td>Female</td>
<td>2,17,294</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>901 females per 1000 males</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>70.4% (Males 79.4%, females 60.4%)</td>
</tr>
<tr>
<td>No. of Tehsils</td>
<td>6</td>
</tr>
<tr>
<td>No. of Sub-Tehsils</td>
<td>4</td>
</tr>
<tr>
<td>No of Villages</td>
<td>968</td>
</tr>
<tr>
<td>No of Panchayats</td>
<td>228</td>
</tr>
</tbody>
</table>

Census of Indian-2001

UNA DISTRICT

Una district came into existence after division of old Kangra district in 1st September, 1972. It has 3.78 lac population with third highest population with 246 per Sq. Kms. as compared to 77 of the State. It ranks 7th in population and 10th in is area among the district. The district comprises of two sub divisions 3 tehsils and 2 sub tehsils besides four community
development blocks. The district has distinction of second highest literacy rate i.e. 70.91% among the twelve district in the State.

Una is a district of Himachal Pradesh which lies in its south western part. On the 1st September, 1972 the Himachal Pradesh Govt. reorganised the then Kangra district into three districts namely Una, Hamirpur and Kangra. The famous places of Una are 'Chintpurni' Goddess temple, Dera Baba Barbhag Singh, Dera Baba Rudru, Joggi Panga, Dharamshala Mahanta, Dhunsar Mahadev Temple Talmehra, Shivbari Temple Gagret and Mini Secretariat. Una district is well developed in the industrial sector due to close proximity to Punjab. Mehatpur, Gagret, Tahliwal & Amb are main industrial centres of Una. On 11th January 1991, Una has been provided with railway line by laying 14 Kms broad gauge track from Nangal(Punjab) to Una. Punjabi, Hindi, Pahari are common languages spoken. In winter, climate is cool, woolen clothes required. In summer, climate is hot, cotton clothes required. From July to September, it is rainy & humid.
Main Facts and Figures: Una District

<table>
<thead>
<tr>
<th>Area</th>
<th>1549 Sq. kms.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>4,47,967</td>
</tr>
<tr>
<td>Population Density</td>
<td>291 persons/per sq.kms.</td>
</tr>
<tr>
<td>Male</td>
<td>2,24,299</td>
</tr>
<tr>
<td>Female</td>
<td>2,23,668</td>
</tr>
<tr>
<td>Sex ratio</td>
<td>997 females per 1000 males</td>
</tr>
<tr>
<td>Literacy Rate</td>
<td>81.9% (Males 88.09%, females 73.85%)</td>
</tr>
<tr>
<td>No. of Tehsils</td>
<td>4</td>
</tr>
<tr>
<td>No. of Sub-Tehsils</td>
<td>1</td>
</tr>
<tr>
<td>No of Villages</td>
<td>866</td>
</tr>
<tr>
<td>No of Panchayats</td>
<td>235</td>
</tr>
</tbody>
</table>

Census of Indian-2001

In the second phase of study villages and people selected, sample survey was conducted taking two villages from each of three selected districts. The villages named: Gol Jamala and Amlidol in Solan district, Rampur Jatan and Katola in Sirmaur district and Bohl and Kakarana in Una district were identified for household survey. Some of the villages were very big and especially in Una. In other districts, village of about 25 to 50
households were selected from the watershed project area block, where the maximum penetration of project implementation was observed. The villages of heterogeneous nature about at least 20 to 30 households, away from road facility, having negligible health and education facilities were kept in mind in the selection criteria of the sampling villages. Such kind of criteria of selection of sample villages has also been adopted by earlier researchers in the country. Suresh Chandra Sharma (1987) and Kirk Johnson (2000) and Ranjit Singh Rana (2009), have also adopted the criteria of similar nature while selection of villages for their respective studies. Hartmann et al. (1989) have also indicated the reasons such as range of geographic, economic and cultural conditions. A brief profile of each of the six villages, under study is as under:

**Gol jamala (Nalagarh Block, Solan District)**

Village Gol Jamala, the native village of researcher, is about 4K.M. away from Nalagarh in Solan District. The village, even today is not connected with road facility. It has No dispensary and no school.,It lies in Sirsa river catchment area. One can easily visualize the scene of heterogeneous traditional village dominated by ‘Gujjars’ families. Traditions seem to be the
prime factor to run day-to-day life. There are about 60 households in the village and main occupation of the villagers is agriculture mainly growing wheat and maize besides cattle rearing. The people living in this village are mostly engaged in cattle rearing and farm cultivation. and few youth, who are qualified upto plus two level looking for jobs in nearby Baddi industrial belt as the agriculture output is not able to fetch enough money to livelihood. Most of the villagers are having television in their home today there are very few out dated radio set, hardly used in household by any members, although the revolution in mobile technology has given them the facility of FM communication with outer world. Today the habit of news reading and listening has picked up a little in the village. The farmers mostly have small holding, ranging from four bigha to 50 bigha means there by that small, marginal and few big farmers are living in the village. Most of the land has also been sold by farmers to the indurialist who have set up there big industries. Income enough to feed themselves which also range from 25,000 to lacs mostly earned through daily wage and other services. Milch cattle sometime provide cash to spend from their yield.

There was acute shortage of water for irrigation and cattle, chronic shortages of fuel wood and fodder, poor quality of
animals and high level of erosion before the watershed project implementation in the village.

**AMLI DOL (Nalagarh Block, Solan District)**

Amlidol is a small village which falls in mittian gram panchayat, located near the industrial hub popularly known as Baddi- Barotiwala-Nalagarh and is 8 kilometer away from Nalagarh town about 25 families resides in this village. People are economically poor. The village is not connected to the roads. Village is mix of Girath and Brahmin caste, conservative in nature under the grip of old tradition and ritual life moves on here. People have started sending their wards to school knowing the importance of education. This village also falls in catchment area of Sirsa River. People are not availing any facility of internet and cable connection in large number of the households. The condition of this village in respect of drinking water, water for irrigation and cattle, chronic shortages of fuel wood and fodder was similar to the gol jamala. They also had poor quality of cattle and land mostly damaged by soil erosion before the watershed project implementation in the village.
Rampur Jatan (Nahan Block, Sirmaur District)

Rampur Jatan is a big village of about 244 households, about near Kala Amb 18 Kms. Away district headquarter and falls in Nahan block. The village is of heterogeneous nature dominated by 'Jat'. The village is slightly away from road, school and health facility available in Kala Amb which is two kms. from the village. It also falls in industrial belt and most of the people are employed in nearby factories. They have also sold their land to setting up of industries in the area. Due to electricity facility, people are availing television and DTH facility also. People here also have small holdings. Many families send their cattles for grazing besides doing traditional cropping in the field. Most of the land is here irrigated thereby farmers cultivate paddy as well as kharib crops round the year. The main occupation is agriculture and people seem to be economically poor and socially backward. The literacy rate is reasonable, more than 60 percent people are literate here. About 90 percent people are availing the facility of television. Many still have the radio at home and newspaper also read by the people.
Katola (Nahan Block, Sirmaur District)

Katola was one of the most backward villages of the Nahan block, around 12 Kms. away from district headquarters, Nahan. It is situated on the Sainwala-Barampapri road near Meginand-wali-khad in Nahan block. This area was prone to severe soil erosion caused by nallah that was eroding the agriculture fields of the village. There were more than 190 families in Katola and surrounding hamlets. Before the project launch in the village people faced severe soil erosion, scarcity of water for irrigation and cattle, low agriculture productivity and shortage of fodder and fuelwood. Most of the population of the village are poor and culturally very hospitable. The people belong to schedule caste family lives here who have very small land holdings. The village falls in Salaní Katola Gram Panchayat. Most of the household have the facility of television very few old type radio sets without any newspaper the people here get the latest information from shopkeeper, small traders and person visiting there or going out to bazaar nearby. There is acute shortage of fodder and grass in the village. Particularly the poor are solely dependent on animal husbandry and daily wages. Arable land is mostly damaged by frequent soil erosion. The 80 percent of
households are having the facility of television, many families have radio and news paper is also read here by the people

**Bohl (Bangana Block, Una District)**

It is a very big village of about 340 households with more than 70 percent literacy. Education upto postgraduation level is available in the village and hospital facility is also there. It is 25 kms. from District headquarter, Una and falls in Bangana Block. It has road connectivity upto village level besides having the facility of health and school. About 30 percent people are in the habit of reading news paper besides availing the facility of television as well as many with radio listening here.

It is a beautiful experience to interact with the people of Bohl village due to road connectivity. Most of the part in the village is hilly with tough terrains and farmers mostly cultivate wheat and maize dependent on rainwater. Most of the people here have joined Army and other services for better living agriculture is not a attractive profession to be adopted by younger generation unless they donot perform well in studies.
Kakarana (Bangana Block, Una District)

Kakarana is a very big village about 15 kms. from district headquarter Una of Bangana block. It has the facility of school, road and health in the village. People of all caste rajput, Brahmin and schedule caste lives here. Due to hilly terrains it has high erosion intensity, rain fed nature of cropping and acute shortages of fodder are its major problems before the watershed project implementation. At the time of scheme launch there were many who used to read newspaper and listen to radio sets most of the people have purchased television. There was craze for color television but they were costly and people hardly had power to purchase. The people here also serving in government and Army. It also has very high literacy rate almost over 70 percent are literate. They have agriculture as main occupation in the village growing wheat and maize round the year.

Efforts were made to cover the different type of households for the sampling villages and to interview the heads of household for the purpose of our study. In the end, 300 samples were collected through field visit in formal discussions for interview and questionnaire from six villages two each from one district.
(Solan, Sirmaur, Una) were selected for convenience and statistical and logistical purposes.

Table 3.1

**Gender wise Distribution of Sample**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>District</th>
<th>Place</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Solan</td>
<td>Gol Jamala</td>
<td>41</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amlidol</td>
<td>37</td>
<td>13</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>Sirmaur</td>
<td>Rampur Jatan</td>
<td>33</td>
<td>17</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Katola</td>
<td>36</td>
<td>14</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>Una</td>
<td>Bohl</td>
<td>42</td>
<td>8</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kakarana</td>
<td>38</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>227</td>
<td>73</td>
<td>300</td>
</tr>
</tbody>
</table>

3.4 Collection of data

The field work was conducted by researcher himself by visiting each village and holding interviews with the heads of household one by one. Each interview was explained the purpose of research and assured that all information provided by him/her is to be kept confidential, to be used for research purpose only. It may be mentioned that researcher himself is...
working in public relations department of government of Himachal Pradesh and is associated with media publicity in the state and hence had a logistic support along with confidence of heads of household in him. The responses were recorded in the questionnaire-cum-interview schedule at the time of interview.

3.5 Statistical Treatment of Data

The item wise percentage analysis was carried out to explain socio-economic background of heads of household and use of communication tools especially Television, Radio, Newspaper, song and dramas and government machinery etc. In case of data on perceptions with regard to certain social issues, participation in socio-economic and political affairs and social interaction, responses were sought from them to obtain a sum score. This score was converted to have an index value to explain level of phenomenon ranging from low to high. The results obtained through statistical tools, are accordingly interpreted. At the end, conclusion and finding have been drawn and on the basis of conclusion, measures have been suggested.