IMPACT OF PANCHAYATI RAJ INSTITUTIONS ON SOCIO-ECONOMIC DEVELOPMENT OF RURAL HOUSEHOLDS IN HIMACHAL PRADESH

THESIS

By

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CERTIFICATE – I

This is to certify that the thesis entitled, **"Impact of Panchayati Raj Insititutions on Socio-Economic Development of Rural Households in Himachal Pradesh"** submitted in partial fulfillment of the requirements for the award of the degree of **Doctor of Philosophy (Agriculture)** in the discipline of **Agricultural Economics** of CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur is a bonafide research work carried out by **Ms. Mahima Gopal Ghabru (A-2016-40-002)** daughter of **Smt. Sujata Ghabru & Sh. Madan Gopal Ghabru** under my supervision and that no part of this thesis has been submitted for any other degree or diploma.

The assistance and help received during the course of this investigation have been fully acknowledged.

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CERTIFICATE – II

This is to certify that the thesis entitled **"Impact of Panchayati Raj Institutions on Socio-Economic Development of Rural Households in Himachal Pradesh"** submitted by **Ms. Mahima Gopal Ghabru (A-2016-40-002)** daughter of **Sh. Madan Gopal Ghabru** to CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur in partial fulfillment of the requirements for the degree of **Doctor of Philosophy (Agriculture)** in the discipline of **Agricultural Economics** has been approved by the Advisory Committee after an oral examination of the student in collaboration with an External Examiner.

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LIST OF ABBREVIATIONS USED

Sr.No.	Abbreviation	Meaning
1.	()	Parentheses
2.	%	Per cent
3.	BDAC	Block Development Advisory Committees
4.	BPL	Below Poverty Line
5.	CHC	Community Health Centre
6.	Cr.P.C	Code of Criminal Procedure
7.	CPR	Common PropertyResources
8.	etc.	Et cetera (and other things)
9.	et al.	Et alii (and others)
10.	Fig.	Figure
11.	FPS	Fair Price Shop
12.	GP	Gram Panchayat
13.	Ha	Hectare
14.	i.e.	Id est (that is to say)
15.	ITI	Industrial Training Institute
16.	Km	Kilometer
17.	MPTC	Mandal Parishad Territorial Constituency
18.	MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
19.	NHPC	National Hydroelectric Power Corporation
20.	No.	Number
21.	NRLM	National Rural Livelihood Mission
22.	PHC	Primary Health Centre
23.	PESA	Panchayats (Extension to Scheduled Areas)
24.	PMAY	Pradhan Mantri Awas Yojna
25.	PRA	Participatory Rural Appriasal
26.	PRI	Panchayati Raj Institutions
27.	Rs.	Rupees
28.	SC	Scheduled Caste
29.	ST	Scheduled Tribe
30.	Sr.	Serial
31.	Sq.mtrs.	Square meters
32.	viz.	Videlicet (namely)
33.	w.e.f	With effect from
34.	ZPTC	Zila Parishad Territorial Constituency

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ABSTRACT

Panchayati Raj Institutions inter-alia have initiated the process of socio-economic development of rural areas by ensuring participatory management of masses and implementation of various social upliftment and poverty alleviation schemes. They are expected to bring radical transformation in rural areas through holistic agricultural and institutional development. In a state like Himachal Pradesh where majority of the population lives in rural areas this study becomes more relevant as PRIs embrace every aspect of rural life and are considered as harbingers of democracy and guardians of the village community. Therefore, present study was conducted to examine and analyze the role and impact of Panchayati Raj Institutions on the rural households in the four districts *viz.*, Solan and Una (developed districts), Chamba and Sirmaur (under-developed districts) of Himachal Pradesh using both primary and secondary data. Multistage random sampling technique was employed and a total sample of 8 blocks, 40 panchayats/villages and 200 sample respondents was selected. The findings of the study put forth that in all the selected panchayats meetings of Gram Sabha were scheduled four times annually but the quorum was not met more than two times in most of the selected panchayats. The study employed Principal Component Analysis (PCA) to devise the development index for various selected panchayats. Fifteen per cent (6 no.) of panchayats primarily of Una and Solan districts were very highly developed and 22.50 per cent (9 no.) panchayats were highly developed while all the less developed panchayats were from Chamba and Sirmaur district showing that these panchayats still lag behind in developmental indicators. It was observed that around 29.50 per cent respondents from developed districts and 26.50per cent respondents from under-developed districts respectively were ready to pay for conservation of natural resources while 20.50 and 23.50 per cent respondents from developed and under-developed districts were unwilling to pay for resource conservation as they felt it would not be utilized effectively. In under-developed districts as the bid value increased the willingness to pay decreased. The study also put forth the different source of income for panchayats in which maximum share was of external sources *i.e.* Funds under Centre Sponsored Schemes like MGNREGA, PMAY, NRLM, etc. and funds from Finance Commission, across majority panchayats. Panchayats generated lot of income from various internal sources in which maximum share was contributed by liquor cess followed by house/land tax across all sample panchayats. Panchayats were effectively utilizing funds available with them by community asset creation, land development, sanitation, water supply, electrification, and welfare etc. Respondents in the study area felt that various activities were adequately being done by panchayats but there was scope for improvement by ensuring more transparency in their working, by timely execution of works and ensuring that works to be done in the panchayat area are taken up with the consent of all people. Therefore it is felt that by ensuring capacity building of panchayat representatives, recruitment of technical and support staff and by creating awareness among masses about the importance of gram sabhas and their participation in them could lead to holistic and effective socio-economic development in rural areas.

_____ _____

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1. INTRODUCTION

***"When the panchayat raj is established, public opinion will do what violence can never do"*-Mahatma Gandhi**

1.1 Background

The Panchayati Raj Institutions (PRIs) have been the oldest system of local self- government in the South-Asian political system in countries like India, Pakistan, Bangladesh and Nepal. PRIs have been imperative to Indian democracy since ancient times. These institutions are the custodian of village ecosystem. Panchayati Raj in a way targets at making democracyreal by bringing the teeming millions into the functioning of government. The word *raj* means "rule" and *panchayat* means "assembly" (*ayat*) of five (*panch*). Traditionally panchayats normally consisted of five wise and respected elders chosen and accepted by the local community to meddle their social conflictsbut presently over the years the number has not remained consecrate. PRIs are vested with powers to cater to the entire social and economic requirements of the village community.

Panchayati Raj Institutions have a crucial role in rural development. According to Ministry of Rural Development (Govt. of India) "Rural Development signifies both the economic betterment of people as well as greater social transformation". Initially, main thrust for development was laid on agriculture, industry, communication, education, health and allied sectors but later on it was realized that accelerated development can be achieved only if governmental efforts are adequately supplemented by direct and indirect involvement of people at the grass root level. Gandhiji had aptly remarked that the Indian Independence must begin at the bottom and every village ought to be a republic or panchayat having powers. Gandhiji's dream of "Gram Swaraj" was transformed into reality with the introduction of the three-tier Panchayati Raj system to ensure people's participation in rural reconstruction. In order to safeguard the needs and aspirations of the local people, Article 40 of the Indian Constitution clearly envisaged the role of State to organize village panchayats and to delegate such powers and authority to them as may

be necessary to enable them to function as units of self-government. They have always been considered a system of local governance through which the state government carries out specific activities and implementation of development projects to achieve the targeted results in rural development.

In India, Panchayati Raj now functions as a system of governance in which gram panchayats are the basic units of local administration. The system has three levels: Gram Panchayat (village level), Mandal Parishad or Block Samiti or Panchayat Samiti (block level) and Zila Parishad (district level). It was vividly formalized in 1992 by the 73rd Amendment to the Indian constitution. Currently, the Panchayati Raj system exists in all states except Nagaland, Meghalaya and Mizoram and in all Union Territories except Delhi. Today there are approximately 2,53,163 Gram Panchayats at the village level, 6614 intermediate Panchayats at the block level and 630 Zila Panchayats at the district level (www.pria.org). There are more than 31 lakhs elected representatives at all three tiers. This is the largest representative base in a democracy anywhere in the world, developed or underdeveloped (Paul and Nayak, 2007). Panchayats are allocated funds from three sources mainly *viz.,* local body grants as recommended by the Central Finance Commission, funds for implementing centrally sponsored schemes and funds disbursed by the state governments on the recommendations of the State Finance Commission.

The foundation of the three-tier Panchayati Raj structure is the Gram Sabha which comprises of all the natives registered in the electoral rolls belonging to the panchayat area at the village level. The panchayats consist of villages or groups of villages which are further bifurcated into smaller units called ‘wards’. In each ward a representative is elected directly through election who is referred to as ‘panch’ or ward member. The head of the panchayat called ‘pradhan’ is also elected directly and the term of this elected body of representatives is five years. Each gram panchayat has standing committees *viz.,* works committee (responsible for execution of all developmental works), budget committee (responsible for preparation of budget manual) and vigilance committee (responsible for supervision of all panchayat works). At the block level is the Panchayat Samiti (also called taluk panchayat or block panchayat) which acts as an intermediary between gram panchayat and Zila

Parishad. Panchayat Samiti generally comprises of elected representatives of gram panchayat (*Pradhans and Up-Pradhans*) along with members of Legislative Assembly (MLAs), Members of Parliament (MPs), associate members (members from a cooperative society *etc*.) and memebers of Zila Parishad who are a part of that particular block. The final tier in this structure is the Zila parishad or district panchayat which is again an elected body. The MLA and MP are also part of the district panchayat. The government appoints the Chief Executive Officer to carry out the administration of the district panchayat along with the Chief Accounts Officer, the Chief Planning Officer and one or more Deputy Secretaries who work under Chief Executive Officer.

The three tier structure for PRIs has been established to increase the democratic participation of masses, better representation of local needs and ensuring an efficient use of local resources along with greater accountability and transparency. The system is also expected to ensure better representation for members from each caste, class and gender by providing reservation for Scheduled Caste (SC) and Scheduled Tribes (ST) at all levels in proportion to their population and while one-third of total number of seats are reserved for women. Panchayats are vested with the responsibility of preparing plans for economic development and social justice as per the subjects given in the law (www.pria.org).

1.2 History of Panchayati Raj

1.2.1 PRIs in pre-British era

India has the longest tradition of rural local government which burgeoned from the dawn of Vedic civilization to the advent of British rule. The village was the basic unit of local administration during Vedic times. The head of the village was known as the *Gramini i.e.* the people's representative. In the great epics of Ramayana and Mahabharta references have been made to *Ghosh, Gram* and *Gramini.* The Gramini was bestowed with powers like tax collection, record keeping, dispute settlement and negotiating between the state and local populace (Mukherjee, 1968). During the period of 600 B.C to 600 A.D, historical evidence states about extensive rural local government during the Maurayan and Gupta Empire. Kautilya, in his acclaimed Arthasastra, gave an elaborate classification of villages for the purpose of

revenue, economy and defense, and mentioned about *Gramika* or village headman. During the period of 1206 to 1526 under the Sultanate of Delhi, local governance was looked after in the villages by *Mugadam* or *Mukhiya*. The government dealt with the peasants through the *Mukhiya*(Qureshi, 1941)

1.2.2PRIs during British rule

During the outset of British rule in India, panchayats were responsible for villages and their requirements. But the new governing authority in the country affected the fabric of local governance negatively, inducing a setback to the aspect of administration by making it colonial in nature. Under the British rule oppression and exploitation became the precedent creating a wide gap between the rulers and the ruled. The beginning of this was when East India Company was bestowed with the office of Diwan in 1765 in Bengal by the Mughal emperor as an act of atonement for his defeat at Buxar. The Company took decisions of abolishing the village land record office and replacing it with company official called *Patwari* and replacing the village police by a magistrate office. The primary function of these decisions was collection of taxes by decree. These two decisions completely disempowered the village populace and damaged the panchayat system. The uprising of 1857 brought the British government under severe monetary crunch and hence they had to resort to decentralization in terms of transferring responsibility for public works to local bodies with thrust primarily on municipal administration.

In 1880, the Royal Commission on Decentralisation gave the needed impetus to the development of local institutions. Although, the benchmark decision on local self-government was taken by Lord Rippon's government on May 18, 1882 who laid emphasis on administrative efficiency and political education aiming at re-establishing these bodies. In 1907, the Royal Commission on Decentralization headed by C.E.H.Hobhouse recommended that in order to cater to the needs of local people, it is essential to associate the masses with the tasks of local administration and hence village panchayats must be constituted for local administration.The Montague-Chelmsford reforms (1919) brought the case of local self-government under the Indian ministers of the provinces giving them a democratic nature. This led to the establishment of panchayats in eight provinces by 1925 and by 1926 six native states

had passed panchayat laws. The local government was made responsible for the governance and the people by providing provincial autonomy under the Government of India Act, 1935. In the meanwhile Indian National Congress was also ardently working towards organizing local governing institutions in the villages. However, before they could achieve anything substantial in this direction, the British declared India as a Party to the Second World War without consulting the popular ministries. This resulted in the resignation of the Congress Ministries. These developments gave a severe blow to the movement for revival of panchayats (Anonymous, 2019).

1.2.3 PRIs in independent India

India became an independent country in 1947 and impetus was on framing an effective constitution for the country. The constitution framers allotted local self-government to the state list of functions and the directive principle, namely, Article 40 expecting that the state would take steps to form village panchayats and endow them with authority to function as units of self-government. The government understood that real economic progress could not be made until the rural masses were integrated into the system, but, instead of introducing the Panchayati Raj they thought of experimenting with the "Community Development Project" to create a sense of participation among rural community. Therefore, on 2nd October, 1952 the Community Development Programme was launched followed by National Extension Service in 1953. These programmes failed in their mission as they had no agency at the village level (Ananth, 2014).

In January 1957, a team for the study of Community Development Projects and National Extension Service, headed by Balwant Rai Mehta, was appointed. The Committee observed that the least successful aspect of the Community Development and National Extension Service work were its attempts to evoke popular initiative as they had no agency at the grass root level to influence the rural masses. The Committee suggested that community development could only happen when people understood their problems, realized their responsibilities and exercised the necessary powers through their elected representatives to solve them and maintain a close vigilance on local administration. It was with this objective that the Committee recommended formation of statutory local governing bodies and devolution of

effective powers to them with the following recommendations (i) there should be a three-tier structure of local self- government from the village to the district with the village at the bottom and the district at the top with its intermediary link of institutions all related to one another; (ii) there should be genuine transfer of power and responsibility to these institutions of local government; (iii) adequate resources should be transferred to these bodies to enable them to discharge those responsibilities; (iv) all programmes of social and economic development formulated through the network of planning should be channeled through these institutions; (v) the whole system of Panchayati Raj should facilitate further devolution and dispersal of power, responsibilities and resources in the future (Anonymous, 2019). It paved the way for a new era of Panchayati Raj institutions which was inaugurated by Pandit Jawaharlal Nehru on 2nd October, 1959 at a national rally at Nagaur, Rajasthan. Pandit Jawaharlal Nehru described the new beginning as an act of faith in republican democracy and was an important event as the establishment of the parliamentary system itself for the people of India and by the people of India.

After the formation of these institutions, the next big question to be addressed was of financial decentralization and in what proportion should grants be given to PRIs. In order to address this issue the Santhanam Committee was appointed in 1963. The committee recommended that panchayats should be given powers to levy special taxes *i.e.* land revenue, house tax, etc. and the funds should be sent to PRIs in a consolidated form from state governments. The major recommendation of the Committee was to set up a Panchayat Raj Finance Corporation that would deal with financial resources of PRIs at all levels and cater to their financial requirements by providing financial assistance through loans etc.

In the beginning of the new era of grass root institutions, democracy and development seemed to walk hand in hand but within a few years Panchayati Raj Institutions began to sag and stagnate. In order to look into the weaknesses of PRIs and strengthening them, the then Janta Party Government set up a committee under the chairmanship of Ashok Mehta in December, 1977. The committee suggested that the three tier system of PRIs should be replaced by two tier system with Zila Parishad and Mandal Panchayat as its components. They were of the opinion that district

should be made the first point of decentralization. They advised that political parties should participate in village elections and reservation for Scheduled Caste (SC) and Scheduled Tribes (ST) must be made on the basis of their population. The Committee gave special importance to *Nyaya Panchayats* and felt that they should be kept as separate entity from development panchayats. This was the committee that recommended that constitutional status must be conferred to PRIs (Mehta, 1978).

Further in 1985, a Committee on Administrative Arrangements for Rural Development and Poverty Alleviation Programmes, namely, G.V.K.Rao Committee was set up to look at various aspects of PRIs. The committee felt that rural development and poverty alleviation could only occur if local initiative was encouraged and detailed strategy worked out by rural masses. Hence it was essential to activate PRIs and provide them with all the required support. PRIs at district level and below should be assigned the work of planning, implementation and monitoring of rural development programmes (Rao, 1985).

In the subsequent year *i.e.* 1986, L.M.Singhvi Committee studied the PRIs and recommended that local self-government should be constitutionally recognised, protected and preserved by the inclusion of new chapter in the Constitution; elections to Panchayati Raj bodies should be held promptly at the end of the specified term. A constitutional provision should be made to ensure regular, free and fair elections for Panchayati Raj bodies and the task should be entrusted to the Election Commission of India operating through State Commissions or similar apparatus. The Committee was of the considered view that ways and means should be found to ensure the availability of adequate financial resources for Panchayati Raj institutions to function effectively (Singhvi, 1986). However, the suggestion of giving panchayats constitutional status was opposed by the Sarkaria Commission, but the idea however, gained momentum in the late 1980s especially because of the endorsement by the late Prime Minister Rajiv Gandhi, who introduced the 64th Constitutional Amendment Bill in 1989. The 64th Amendment Bill was prepared and introduced in the lower house of Parliament. But it got defeated in the Rajya Sabha as non-convincing. In 1991 the Seventy Second Amendment Bill was put forth which was passed by the Parliament in the year 1992 as 73rd Amendment of Article 243 in the year 1992 making this year as the most

significant year in the history of panchayati raj. The 73rd and 74th Amendment was implemented on 24th April 1993. The 74th Amendment was related to the urban local bodies. (Anonymous, 2019)

1.2.4 73rd Constitutional Ammendment and after

The 73rd Constitutional Amendment was the most significant amendment for PRIs and the idea that produced the 73rd Amendment was not a response to pressure from the grassroot representatives, but to an increasing recognition that the institutional initiatives of the preceding decade had not delivered, the extent of rural poverty was still too large and thus the existing structure of government needed to be reformed. It was a political drive to see PRIs as a solution to the governmental crises that India was experiencing. Hence, the year 1992 marked a new era in the federal democratic set up of the country when the 73rd and 74th Ammendments were passed. The Constitutional (73rd Amendment) Act, was passed in 1992 by the Narasimha Rao government, which came into force on April 24, 1993 and the Constitution (74th Amendment) Act, 1992 on June 1, 1993. Through these amendments local self-governance was introduced in rural and urban India. These amendments added two new parts to the Constitution, namely, 73rd Amendment added Part IX titled "The Panchayats" and 74th Amendment added Part IXA titled "The Municipalities". The 73rd Constitutional Amendment Act, 1992 conferred Constitutional status on the Panchayati Raj Institutions (PRIs). It envisaged the establishment of a democratic decentralized development process through people's participation in decision-making, implementation and delivery. In order to achieve this objective, the Constitution provides for devolution of powers and responsibilities upon panchayats at appropriate levels covering 29 Subjects *viz.*, agriculture, land improvement, animal husbandry, fisheries, watershed development, small scale industries etc. listed in the Eleventh Schedule of the Constitution.

Articles 243, 243A to 243-O were added as parts of newly inserted Part IX of the Constitution. These articles primarily define the constitution, composition and various powers provided to the panchayats and are enumerated below:

- Article 243A- defines that Gram Sabha may exercise such powers and perform such functions at the village level as the Legislature of a State may, by law, provide.
- Article 243B- deals with formation of panchayats
- Article 243C- composition of Panchayats
- Article 243D-reservation of seats in PRIs
- Article 243E- duration of panchayats
- Article 243F- deals with disqualifications for membership
- Article 243G- powers, authority and responsibilities of panchayat
- Article 243H- powers to impose taxes and funds of panchayats
- Article 243I- constitution of Finance Commission to review the financial position
- Article 243J- audit of accounts of panchayats
- Article 243K- deals with elections to the panchayats
- Article 243L- application to Union Territories
- Article 243M- this article contains clauses that would not apply to certain areas *viz.*, Nagaland, Meghalaya, Mizoram etc.
- Article 243N- continuance of existing laws and panchayats
- Article 243O- this article bars the interference of Court in electoral matters

The Amendment introduced across the board three-tier system of the PRIs at village panchayat, block and district levels. The electorates at Gram Panchayat level were named as the Gram Sabha which elects the representatives to Gram Panchayat by way of direct election. Further, Article 243D provides for reservation of seats at all levels for Scheduled Castes (SCs), Scheduled Tribes (STs) and women.

The Constitution now provides that every PRI will continue for a period of five years. The States have also been empowered to allow the PRIs in their respective legislative Acts to levy and collect several tolls and taxes. With this the PRIs at all the tiers are able to generate financial resources at local-level and make expenditure in the desired field as per locally-felt needs. The State laws may lay down the procedure to be followed, as well as the limits of such taxes/levies. The State governments may

also assign to the panchayats various taxes and duties collected by it. The State governments are required to appoint a State Finance Commission to review the financial position of the PRIs and make recommendations with regard to the distribution of net proceeds of taxes between the States and the PRIs, assignment of certain taxes exclusively to the PRIs and the grants-in-aid.

Under the historic 73rd Constitutional Amendment Act of 1992, the Panchayati Raj Institutions (PRIs) have been given more powers for two specific purposes *i.e.* planning for economic development and social justice and implementing various micro level plans so as to implement their own programmes of agricultural and rural development. Panchayati Raj Institutions have been involved in the programme implementation since they constitute the core of decentralized development planning and implementation. As per the 11th Schedule of the 73rd Amendment, the PRIs are supposed to play a major role in the overall development of agriculture, land improvement, watershed development, development of allied sectors, strengthening of rural infrastructure and community services.

Article 243M of the 73rd Constitutional Amendment mandated that Panchayati Raj structure shall not be applicable to certain Scheduled Areas. Scheduled Areas are areas identified by the Fifth Schedule of the Constitution of India mainly found in ten states of the countrywhich have predominant population of tribal communities. However, there was a provision that these laws may be made applicable if Parliament permitted it by law. So based on the recommendations of Dilip Singh Bhuria Committee, Parliament passed the Panchayats (Extension to Scheduled Areas) PESA act on 24 December,1996 to extend the provisions of Part IX of the Constitution related to Panchayati Raj to scheduled areas with certain exceptions and modifications. It was felt that there was civil unrest in tribal areas of certain states and these issues that plagued the tribal communities could not be resolved until comprehensive legislation was passed ensuring a large level of self governance to village communities with special provisions to ensure access to protect traditional culture, religious practices, and customary modes of dispute resolution, ensuring ownership over minor forest produce etc. and to ensure that the village community shall have the central place in delivery of schemes, projects, and programs. PESA was

seen as a panacea for many of these vulnerabilities and sought to introduce a new paradigm of development where the tribal communities in such Scheduled Areas were to decide by themselves the pace and priorities of their development.

Further in 2000, the 83rd Amendment Act was passed which exempted the state of Arunachal Pradesh from the application of article 243D relating to the reservation of seats in Panchayats for the Scheduled Castes as the tribal society in Arunachal Pradesh is casteless where social equality among men and women has prevailed over ages. Hence the 83rd Amendment provided a legal and constitutional basis for Panchayat Raj Institutions in Arunachal Pradesh in accordance with the socio-political ethos of the State.

1.3 Evolution of PRIs in Himachal Pradesh

Himachal Pradesh came into existence as a Chief Commissioner's Province of the Indian Union on April 15, 1948 as a result of merger of 30 erstwhile princely states of Punjab and Shimla Hills. On January 25, 1971, Himachal Pradesh attained complete statehood. At present, there are 12 districts in Himachal Pradesh with an area of 55,673 square kilometers. According to 2011 Census, the total population of the state is 6,864,602 with a density of 109 persons, out of which about 90.2 per cent of the population lives in rural areas. Himachal Pradesh being almost wholly mountainous and the majority of population living in the rural areas, it was necessary to adopt a scheme which could cater to the needs of the hill people. So, a beginning was made in 1949, to introduce PRIs in Himachal Pradesh. The state therefore, adopted Punjab Village Panchayat Act of 1939. As a consequence in the year 1949, 132 panchayats were established. There were only four districts in Himachal Pradesh in 1949. The number of Panchayats in each district was: Mahasu (45), Mandi (33), Chamba (54), Sirmaur (54).

Gram Panchayats (GPs) in Himachal Pradesh were established in the year 1952 for the first time in a regular fashion under the Himachal Pradesh Panchayati Raj Act 1952. In 1953 some six hundred GPs and equal number of Nayaya Panchayats were formed later on. At the same time, at the block level, Block Development Advisory Committees (BDAC) were established. With a view to bringing the working of panchayats in accordance with local conditions and growing aspirations of the

people for democratization at the village level, the Himachal Pradesh Panchayati Raj Act (Act No. 6 of 1953) was passed in 1952 by Himachal Pradesh Vidhan Sabha, and it came into operation in the year 1954, when Panchayats were established in the State. Under this Act, gram panchayats were established in the whole state, one in each Patwari circle. Initially, 466 village panchayats were constituted in 1954, their number increased to 497 due to the re-organisation of panchayat circles in Chamba district and Chini Tehsil of Mahasu district, and further to 638 in 1962. The special feature of this Act was that a three-tier Panchayati Raj system was introduced in the state. There were 26 Tehsil Panchayats and 3 Zila Panchayats. The Tehsil and Zila Panchayats were established through indirect elections. The Act was mainly drafted on the basis of Uttar Pradesh Panchayati Raj Act, 1948, although Panchayat legislations of other states were also reviewed and taken into consideration.

The state took effective steps towards the re-introduction of PRIs in 1968. During this year, statutory position was given to the Panchayati Raj Institutions. The Himachal Pradesh Panchayati Raj Act, 1968, was introduced *w.e.f.* 15thNovember 1970 and provided for a three-tier system of PR, *i.e.* Gram Panchayat at village level, Panchayat Samiti at the block level and Zila Parishad at the district level. Besides this the *Nyaya Panchayats* were also in existence in this State for discharging judicial functions. During the year 1977 the *Nyaya Panchayats* were abolished and the judicial functions were transferred to the Gram Panchayats(Annual Administrative Report, 2016-17).Despite all the attempts to strengthen these institutions they were plagued by several weaknesses like lack of adequate funds, withholding of panchayat elections, absence of constitutional status to PRIs, suppression of panchayats in the state etc. making them poorly equipped to perform civic functions. But the 73rd Amendment Act changed the scenario and with a view to bring the laws of PRIs in conformity with this Act at the state level, the Himachal Pradesh Panchayati Raj Act, 1994 was enacted on 23rdJanuary 1994 and came into force *w.e.f.* 23rdApril 1994. All the provisions of 73rd Amendment Act were incorporated in the state. The new law provided for Gram Sabhas, Gram Panchayat, Panchayat Samiti and Zila Parishad at village, block and district level, respectively.

Further in 1997 to bring the provisions of the Himachal Pradesh Panchayati Raj Act, 1994 in tune with the provision of the Panchayats (Extension to the Scheduled Areas) Act, 1996 Himachal Pradesh Panchayati Raj (Second Amendment) Act 1997 was enacted and Chapter VI-A was added in the original Himachal Pradesh Panchayati Raj, Act 1994. According to the Himachal Pradesh Panchayati Raj (Second Amendment) Act, 1997 the provisions of chapter VI-A would apply to PRIs in the scheduled areas of the state. This Act extended the role of Gram Sabha and defined that Gram Sabha would be responsible for the identification of beneficiaries under poverty alleviation and other programmes. During the year 2005-2006 Government created 206 new Gram Sabha circles, thereby raising the number to 3243. No new Gram Sabha was constituted during the year 2010. Hence there were 3243 Gram Sabhas, 77 Panchayat Samitis and 12 Zila Parishads in the State. In the year 2015, due to inclusion of 17 Gram Panchayats in the Municipalities the numbers of Gram Panchayats became 3226 and due to creation of new Panchayat Samiti namely Shri Naina Devi, District Bilaspur the number of Panchayat Samitis are 78 in this State (Paul and Nayak,2007). At present, there are 12 Zila Parishads, 81 panchayat samitis and 3615 panchayats in the state (hppanchayat.nic.in).

1.4 Rationale of this study

Himachal Pradesh has marched ahead of other states after Kerala and has set a model for decentralized planning with people's participation. PRIs inter-alia have initiated the process of participatory management of natural resources, watershed development and even implementation of MGNREGA and other social upliftment, poverty alleviation schemes. Panchayati Raj System is expected to bring radical transformation in rural areas through holistic agricultural and institutional development. These institutions form the third tier of the government and are vested with adequate powers to transform the rural development scenario. A study of these grass-root institutions is not only important from an academic point of view but also holds importance from socio-economic point of view. Moreover, in a state like Himachal Pradesh where majority of the population lives in rural areas this study becomes more relevant as PRIs embrace every aspect of rural life and are considered as harbingers of democracy and guardians of the village community. So far, no in-

depth study has been carried out in the state to examine the role and impact of Panchayati Raj Institutions (PRIs) in the development of rural people. Therefore, present study has been planned to examine the performance and role of PRIs in preparing micro-plans, assess their financial and execution status and the eventual impact on rural livelihoods. The study has also identified pertinent bottlenecks in the functioning of PRIs that may help in framing future reforms.

1.5 Objectives of the study

Taking into account the above background, the present study was conducted to examine and analyze the role and impact of Panchayati Raj Institutions on the rural households in the four districts *viz.*, Solan and Una (developed districts), Chamba and Sirmaur (under-developed districts) of Himachal Pradesh. The study attempts to understand the demographic features, socio-economic parameters and infrastructural facilities in rural areas, impact of PRIs on resource conservation, income and employment. More specifically, the objectives of the study were three-fold:

1. To study the dynamics of demography, socio-economic parameters and infrastructural facilities in rural area,

2. to study availability and utilization of natural resources and the role of Panchayats in conservation and maintenance of resources,

3. to evaluate the process of preparation of micro plans, implementation of development schemes, delivery mechanism of agricultural inputs and impact on income and employment opportunities.

1.6 Limitation of study

The present study was based on both primary and secondary data. Since the study was conducted by interviewing 40 panchayat officials and 200 respondents, due to lack of time and means there might be slight sampling error in the results. The information was collected only once so there might be marginal variation in the results.

1.7 Organisation of the study

This study has been systematically planned and presented in five chapters. The importance of the study and introduction regarding the Panchayati Raj Institutions has been given in detail in Chapter 1. Chapter 2 comprises of comprehensive review of work done in India, abroad and state as a whole which is relevant to the present topic of investigation. Chapter 3 presents the procedure adopted in the selection of sample, data collection, tabulation and statistical analysis to accomplish the objectives. The results of the study and discussion have been given in Chapter 4. The final chapter comprises of summary and conclusions, major findings of the study suggesting ways for more inclusive and efficient functioning of PRIs. Literature cited has been given at the end of the thesis.

2. REVIEW OF LITERATURE

Scientific thinking is the systematic accumulation of facts proven through factual observations. The scientific research is based upon systematic thinking developed on the past accumulated knowledge and experience. A critical insight into the studies already conducted relating to the topic of research investigation, therefore, becomes imperative for conceptual clarity, methodological improvement and for pursuing chronological changes and the information gaps thereof. In this background, the present chapter is devoted to critically review the past studies on the Panchayati Raj Institutions. The relevant studies have been reviewed under the following broad sections:

2.1 Role of PRIs in socio-economic status and rural infrastructure

2.2 Participation of PRIs in natural resource management

2.3 Impact and role of PRIs in income and employment generation

2.1 Role of PRIs in socio-economic status and rural infrastructure

Chaudhuri (1964) stated that Panchayati Raj Institutions (PRIs) were organs of self-government at their respective levels. Mobilising popular enthusiasm and harnessing local manpower and other resources for development were thus their very raison d'etre. To bring about the direct and willing participation of the villagers in development, the planning process had to start from the village. The study found that Panchayati Raj institutions were expected to give the lead in this matter, but they had failed to do so far. The so-called village production plans were just paper plans prepared by the Village Level Workers in consultation with a few village members and the sarpanch of the panchayat. Panchayat samitis and village panchayats were prompt in taking up and executing programmes for which the Government provided loans, grants or subsidies so as to avail themselves of this assistance. But programmes which had to be carried out with local resources and initiatives lagged behind causing concern.

Maheshwari (1971) articulated the structure, personnel, finance and functioning of rural as well as urban local governments and concluded that inadequate

financial resources, low pay scales, incompetent personnel, excessive interference by the state government were the major causes of ineffectiveness of local governments. Therefore, there was a dire need to reform the system.

Bhatnager (1974) dealt with a case study of panchayati raj in the district of Kangra in Himachal Pradesh. He covered the period before the re-organisation of Punjab in November, 1966, before Kangra was merged with Himachal Pradesh. In the first place, the study discussed the elected leadership of the three-tier institutional complex of panchayati raj, social background of the new leaders, their attitudes and their roles in understanding the developmental problems. The process of decision making and the nature and role of emerging rural bureaucracy of these institutions was also examined. He pointed out that the villagers had not developed a sense of involvement with panchayati raj institutions and also that they did not actively participate in the deliberations of the gram sabha.

Majumdar and Singh (1996) focussed on the evolution of panchayat politics in three phases *viz.*, rise and fall of village autonomy in pre-independence India, reintroduction of village autonomy in post independence India and remodeling of panchayati raj to face modern challenges. They remarked that it produced new outlook of panchayat policies and its impact on the development of rural community in India.

Biju (1998) through his book “Dynamics of New Panchayati Raj System (Reflections and Retrospection)” evaluates the historical growth of panchayati raj institutions in India with focus on position of panchayati raj in Kerala, bureaucracy and financial organisation of panchayati raj system in terms of revenue and expenditure. Lastly, it analyses the role of people and their participation in the panchayati raj institutions.

Jha (2002) evaluated the fiscal success of efforts towards reforming and strengthening rural government in India by measuring the extent of fiscal-decentralization that had taken place. The analysis was based on budget data of rural governments in seven Indian states, namely Andhra Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh, for the decade of the

1990s and presented recommendations to make fiscal decentralization more effective. The study focused on the fiscal characteristics of rural governments, the size of budget and sources of income of these governments. The study also puts forth various fiscal problems and limitations faced by panchayats and how these were being tackled in states. The study revealed that financial requirements of PRIs were far more than resources at their disposal. Also it put forth that for PRIs to be more effective an elaborate and effective delivery system was required.

Ghosh and Maji (2004) said that the creation of Panchayati Raj system in 1959 was an innovative and a revolutionary step. On April 24, 1993, the 73rd Amendment came into force and PRIs got constitutional status. Along with it, they discussed the problems of Panchayati Raj system in West Bengal. Panchayats got huge amount of 'advance' account year after year without producing the certificate of utilization of money. Government spent crores of rupees for rural development but rural poverty and unemployment could not reduce.

Nair (2004) studied the mobilization of resources by panchayats by taking case studies of six selected panchayats in Kerala. The information was gathered primarily at three levels *i.e.* panchayats, units engaged in non-agricultural activities and households. The results of this study revealed that panchayats located close to urban areas enjoyed better amenities in terms of health, education, communication compared to other panchayats selected for the study. This had an impact on the working of these panchayats and also on their capability for mobilizing resources internally. Among the different components of revenue, tax revenue constituted the highest share, which varied from 52 to 80 per cent among the selected panchayats.

Alagh (2005) analysed the Panchayati Raj and planning in India based on the functioning of new decentralized system through three case studies concerning rural roads planning and their implementation. The study undertakes three case studies *viz.,* Ahmadabad district of Gujarat, development of roads network in a watershed development project in India's first major co-operative sugar factory area in western India and the Marathwada study of local planning in Aurangabad district, which had yet not taken off. The study was based on secondary data sources, and three case studies were developed by field visits followed by data collection by

the author and selected field collaborators. The article pointed out that it was a challenge of making this new phase of commitment through existing political leadership, bureaucracy and the people themselves. Therefore, strong leadership and political will should be the necessary conditions for facing the challenge and for the local self-government to become effective instruments of social and economic development of rural areas.

Billava and Kulkarni (2005) conducted an empirical study on status and role of Gram Panchayats in water supply and sanitation in rural area of Karnataka. The primary data were collected from 235 households spread across 4 Gram Panchayats in Dharwad district in Karnataka. The results revealed that in the selected Gram Panchayats only few households were satisfied with the quantity and quality of water supplied. The households satisfied with the quantity and quality of water were 73 per cent and 51 per cent, respectively. As far as sanitation was concerned, only 23 per cent of households had individual toilets and their utilization was also very low. There was wide disparity in the status of water supply and sanitation between developed and less developed Gram Panchayats. This was mainly because of better education and awareness of the households in developed Gram Panchayats.

Gupta (2006) studied local self-government in Punjab and reported that the village panchayat was expected to be involved in all the development functions at the grassroot level, but they did not have their own staff. Revenue from a village properly handled by panchayats was adequate but not enough to meet the administrative expenditure of the village panchayats.

Aiyar (2007) discussed the different dimensions of PRIs like effective devolution of functions, finances, functionaries, district planning, training for capacity building and IT enabled e-governance undertaken in a series of seven round tables of panchayati raj ministers of all states. In conclusion of these round tables total 150 recommendations had been highlighted to strengthen panchayats and national roadmap for the country. Establishment of ward sabha, mahila sabha, village knowledge centres, rural business hubs and panchayat yuva shakti abhiyan for transparency, participative social audit and promotion of e-governance was considered essential for smooth functioning of panchayati raj.

Menon (2007) highlighted that the experience of different states showed that though the PRIs have had so many positive features, yet the elite control over the system had not permitted them to work as per the objectives enshrined in Indian Constitution. The need was felt to evolve a comprehensive concept of PRI system. A critical review of the 73rd Amendment and the assessment of the ways in which different States have followed or resisted the stipulations of the Amendment revealed that the grass root democracy in India still suffers from three limitations- federal constraints, a resistant bureaucracy and local elite capture.

Smitha (2007) analysed the socio-economic determinants of women at the grass-roots in Andhra Pradesh using both primary and secondary data. The study was conducted in Yadamuri Mandal Parishad, Pichattoor Mandal Parishad and Madanapalli Mandal Parishad of Chittoor district in Andhra Pradesh. A survey was conducted covering 16 elected women Zilla Parishad Territorial Constituency (ZPTC) members, 12 elected women members at Mandal Panchayat (MP) level and 9 Mandal Parishad Territorial Constituency (MPTC) members, three from each of the selected MPs and finally at Gram Panchayat (GP) level, 9 sarpanchs, three from each of the selected MPs and 27 ward members, three from each of the three selected GPs. This study established the fact that many myths associated with the entry of women into leadership positions that would be hindered by socio-economic profile in terms of their age; occupation, family income, land-holdings and education were disproved. In fact, the field data collected clearly substantiated that women would definitely fit into patriarchal oriented framework. The results put forth that nearly, 97 per cent of women were first generation entrants to politics and reservation for them across social categories has contributed to this wider representation. Their profile also reflected a wider representation across social groups and includes more than 35 per cent at MP from families living below poverty line (BPL). Despite all odds imposed against them, the post 73rd Constitutional Amendment has shown emerging women leaders who have acquired new identity, recognition, assertion and confidence.

Ban and Rao (2008) assessed the impact of women's reservation in panchayats in South India by taking a sample of 523 villages in four states of South India. Data were collected at the village, president and household level. At the village a

questionnaire was administered using Participatory Rapid Appraisal (PRA) techniques. Ordinary Least Square (OLS) technique was used for analysis. The results of the analysis showed that female leaders performed no differently than male leaders and were no more likely to make decisions that favor women's concerns. The study also indicated that institutional factors matter much more for women than for men - women performed better than men in situations where they had more political experience, lived in villages less dominated by upper castes. This suggested that caste structures might be correlated with structures of patriarchy making the job of women particularly difficult when they were confronted with entrenched hierarchies.

Rashid and Sen (2010) assessed the people participation in PRIs and awareness of rural development programmes in four villages of Atri block in Gaya district of Bihar, which is among the least developed and most backward districts of India. The study is based on primary data wherein 180 households were surveyed. Out of the sampled households in the four villages, 17 per cent regularly participated in the Gram Sabha meetings, 35 per cent seldom participated and a whopping 48 per cent never participated in the Gram Sabha meetings. Effective rural development and rural reconstruction might require active participation of people at local level. Among the respondents, 80 per cent of the literate and 48 per cent of the illiterate were aware of one or other programs while 59 per cent of literate and 45 per cent of illiterate persons participated in the panchayat meetings. The study revealed that there was a strong correlation between educational level, levels of awareness and peoples' participation.

Rao and Raghunandan (2011) reviewed the role of panchayats in economic development and found that when panchayats were involved in integrated and sustainable development of the villages, ability to create systems to collect revenues for augmenting the standards of public services and creation of viable system of essential service like water supply, etc., proved to be effective catalysts in development. The analysis of the performance of panchayats in different states and regions in India showed that panchayats have been relatively more successful in contributing to development in places where the literacy rate and education standards were higher. Spread of education and health to the disadvantaged sections including

the landless, small and marginal farmers enhanced their productivity and incomes. Better education to the disadvantaged sections made the local governance as well as development inclusive.

Roy (2011) reported the progress made in respect of e-governance in the Panchayats of West Bengal. It was found that continuous efforts had brought marked changes in the functioning of Panchayats of West Bengal by adopting various Information and Communication Technologies (ICT) softwares. Those include computerisation of accounts of all the three tiers of Panchayats as well as making those available in the public domain through website of the department; delivery of certain services like issuing birth & death certificates, trade licenses by the Gram Panchayats; management of property tax by the gram panchayats; management of National Social Assistance Programme; GIS based decision support system, etc.

Vedpathak (2011) studied the role of rural local bodies in socio-economic development of Raigad district. The study was primarily based on secondary data spanning a period of twenty years *i.e.* from 1991-92 to 2010-11. The universe of study comprised of a random sample of 50 per cent of Panchayat Samities (7) and one Village Panchayat (7) from the selected Panchayat Samities wherein due care of selection of both the developed and under-developed village panchayats was taken. The collected secondary data was tabulated and processed by employing suitable statistical tools such as mean, ratio analysis, Compound Growth Rate (CGR) etc. The results revealed that the overall fiscal operations of the Raigad Zilla Parishad were not conducive for the speeding up of socio-economic development of the area. Raigad Zilla Parishad had collected total revenue considerably, but not significantly, during the study period, which also showed a considerable growth rate of 13% per annum. Its total revenue was (61%) dominated by capital receipts than the revenue receipts (39%) which indicated the urge of the Zilla Parishad to achieve long term development of the area as determined by composition of capital reciepts. The study of spending activities of the Raigad Zilla Parishad indicated that it had prominently spent on social development (65%) than the economic development (35%). This clearly showed its commitment towards social development and thereby social welfare of the society as a whole. In social expenditure, priority was given to social

welfare activities (22%), public health (18%), administration (12%) and education (3%), respectively whereas in economic development activities importance was given to building and communication facilities (20%), agriculture and animal husbandry (6%) and irrigation (7%) respectively.

Dennys and Marjana (2012) assessed justice and conflict transformation through Jirga (Panchayats) in Peshawar and Islamabad by collecting primary data from 113 respondents. The results showed that Jirgas had been insufficient in providing justice and meeting the demands of local population. Jirgas were found to be not perfect and respondents highlighted concerns regarding the inclusivity of institutions which had steadily corrupted over the years. There was a need for Jirgas to ensure that individual human rights were not contravened by the processes of Jirga and they should be more representative of the population.

Gill and Rama (2012) studied the impact of PRIs on rural development in Punjab. The study was conducted in 3 Gram Panchayats which were selected randomly from Gurdaspur, Nawan Shahr and Muktsar districts, respectively. The study put forth the view that Gram Panchayats have provided training, employment and facilities to the weaker sections (including women and scheduled caste) along with implementing various welfare schemes for them.

John (2012) conducted a study on effectiveness of PRIs in health care system in Kerala by purposively selecting six districts *i.e.* Alappuzha, Kottayam, Malappuram, Pathanamthitta, Thiruvanthapuram and Thrissur of Kerala. Primary data were collected for the period from 2005-2012 from rural public health institutions and PRIs. The results of field survey clearly indicated that the system of dual controls and responsibilities yielded good results when elected representatives of PRIs and medical officers were in good terms and maintained positive and cordial relations. There was a substantial improvement in respect of attendance of health officials, availability of medicines, quality of services and quality of infrastructure due to the intervention of PRIs.

Kadam (2012) studied the role of gram panchayat in rural development by undertaking a study of 261 beneficiaries in a village of Mudhol taluka, Bagalkot

district, Karnataka. The relevant data for the study was collected through primary and secondary sources for five years from 2001-02 to 2005-06. It was found that majority of the respondents were quite happy with the progress of the poverty alleviation schemes as it had helped them to improve their economic conditions atleast marginally and to some extent their employment opportunities.

Rajasekhar and Manjula (2012) highlighted that community lighting is a public good, the provision of which is necessary for improving the quality of life and promoting orderly social life. Article 243G of the 73rdConstitutional Amendment transfers the function of rural electrification to Panchayati Raj Institutions (PRIs), wherein Gram Panchayats (GPs) are held responsible for the installation of electric transmission poles, and operation and maintenance of streetlights. In the context of limited fiscal decentralisation in Karnataka and growing dependence of GPs on grants from higher levels of government, they analysed the question of whether GPs can afford the provision of streetlight services. With the help of data collected from 5212 GPs in Karnataka, they concluded that GPs were not able to afford the expenditure on operation and maintenance of streetlight services. Regression analysis on factors influencing the affordability of GPs in the provision of streetlight services showed that grants to GPs and the number of streetlights installed per 100 households were the main determining factors.

Sadhu and Sharma (2012) evaluated the factors influencing participation of women in Panchayati Raj institution by purposively selecting a sample of 41 elected women representatives from two blocks of Karauli district of Rajasthan. The results of the study showed that the reservation for women could be an important impetus to women empowerment in India at village level but it was not a guarantee for participation of the elected women. The goal of women empowerment cannot be accomplished only by giving reservation, the other social and demographic factors also influenced the elected women representative to participate and work actively in local self governance.

Malik and Singh (2013) assessed the impact of Panchayati Raj in Jammu & Kashmir by conducting a study in five districts of the state to know about the various aspects of this system and record its impacts on various social and economic

parameters of the people of Jammu and Kashmir. The results revealed that most of people knew about Panchayati Raj, although most of the areas were not covered until recent year of study. In Jammu & Kashmir majority of the people thought that social conditions affect the influence of the Panchayat. Various factors like corruption, lack of political will, and illiteracy etc., also affected the functions of the system. People aspired more from the system like reduction of poverty, empowerment of women and social justice.

Nandal (2013) conducted a study on the participation of women in PRIs by selecting a sample of 50 women respondents from village Anwali of district Sonipat in Haryana. Stratified sampling technique was adopted for selecting the sample from different wards of the village. Interview schedule was used to collect primary data from the respondents. Analysis revealed that the awareness and constitutional knowledge of women was not satisfactory. Their participation in affairs of *panchayat* elections was not up to the mark. Some of the women respondents even did not know the functioning of Gram Panchayat. In Gram Panchayat election their husband and family decided as to whom they have to cast vote, women did not have their own choice. A number of reasons like illiteracy, poverty, traditional family values and pattern of society, male dominance society, etc. were responsible for their less participation in Panchayati Raj Institutions.

Prasad and Gautam (2013) evaluated the role of PRIs in development of primary education and stated that panchayati raj institutions can play a vital role in development of primary education and sustaining development of rural area. Panchayati raj institutions are the main system of village development through which primary education, health service, agriculture, road transportation, etc. The Pachanyati raj institutions play an important role in implementing the Sarva Shiksha Abhiyan (SSA) successfully.

Raj and Shanmugam (2013) studied the role of PRIs in improving rural health by conducting a study in Mysore district in Karnataka based on secondary data collected for a period of five years (2007-12). PRIs had been playing the role of only middle agencies in implementing the health services in rural areas. They were only transferring funds released by the central government and state governments to health

institutions. The study concluded that the PRIs were not having financial powers to take care of the public health independently. There was lack of resource mobilization, inadequate infrastructural facilities and insufficient funds.

Chakraborty (2014) studied gram panchayat Bagnan-I in Howrah District of West Bengal to assess the impediments of own resources mobilization of the local self government by examining the functions and finance of gram panchayat and identifying the factors of the structure and growth of receipts and expenditures of gram panchayat. The results revealed that the sources of revenue of sample gram panchayat had been broadly classified into two heads: own receipts and external (development + establishment) receipts. Own source mainly comprised earning from a variety of sources like tax (*i.e.*, land tax, building tax) and non tax, a considerable share of which was earned from various types of economic activities taken by panchayat themselves. The annual growth rates for establishment receipts and real establishment receipts, development and real development receipts, own receipts and real own receipts were significant.

After the 73rd Constitutional Amendment in 1992, the states were expected to decentralise their authority to the institutions of self-government at the local level. The purpose was to take democracy to the grass-root level so that the people should manage their own affairs at that level (Dutta, 2014). The spirit is mainly that only the people themselves know what is best for them and what needs to be done. The idea was not only to entrust the people with the power of decision-making but also to give them the authority and capacity of governing themselves.

Kumara and Farooquee (2014) evaluated the role of elected representatives of PRIs in enhancing rural health services in Tumkur district of Karnataka by randomly selecting 90 elected representatives of PRIs *i.e.* 30 each from zilla panchayats, taluka panchayats and gram panchayats. The results put forth that majority of the elected representatives of Panchayat Raj Institutions were having low knowledge and awareness about the rural health services and as a result their poor involvement was observed in providing rural health services to the community.

Pal (2014) evaluated the local self government by constructing the devolution index for all states of the country based on certain dimensions and indicators. The dimensions are framework, functions, finances, functionaries, capacity building and accountability. The study revealed that the national average was merely 38.52, which shows that of total expected devolution only 38.52 has been achieved in the country. Putting all states together excluding NE states and UTs, Maharashtra tops the list by scoring 64.04 and Jharkhand at the lowest of the list by scoring 27.25. In case of NE States Tripura is on the top by scoring 39.72 value and Arunachal Pradesh at the lowest by scoring 23.67 value.

Pal *et al.* (2014) undertook a study in the backward villages of Cooch Behar-II block of Cooch Behar district, West Bengal, to assess the performance of the Gram Panchayats in respect of different development activities undertaken by them. Four backward villages of the district were selected purposively and from each village 100 respondents were selected for primary data survey. The overall development scenarios were grasped from the sectoral development aspects like infrastructure, health and sanitation, education and empowerment, employment, social welfare and fair-play politics by constructing the composite development score. The study revealed that the development status of the studied villages was on the lower side in all the development aspects undertaken. All the villages attained a low to lower-moderate status of development.

Singhal (2015) put forth a study on dynamics of PRIs along with their problems and prospects by undertaking a study in Ghaziabad district of Western Uttar Pradesh. Primary data from a sample of 505 respondents was collected for the study. The study indicated that 74.65 per cent of the respondents felt that gram sabha was playing an important role in rural development programmes in the village. 24.66 per cent of the respondets supported the construction and sanitation programmes. The study primarily concluded that Panchayati Raj system had been playing an important role for rural development in general and upliftment of SC/ST and downtrodden people in the society in particular.

Kumari and Alam (2016) conducted a study in Mathura district of Uttar Pradesh to know the role of Gram Panchayat in rural development. The study was

based on secondary data and it assessed the level of implementation of various rural development programmes in the district by the panchayats. The results indicated that all the programmes were being implemented at various levels in the district.

Madhavi (2016) discussed about the rationale of good governance in present era of globalization at grassroot level. She elaborated about rural India and 73rd Amendment act of 1992 and the need of transparency and accountability through good governance. It was reported that for the upliftment of village community there was a necessity of ensuring delivery of better service by using information technology and giving better quality of life at grass roots.

Honnappa (2017) carried out an empirical study on the role of Panchayat Raj on the rural development of seven districts of Karnataka state. It was found that there were some facilities given by gram panchayats, which had been inadequate like quality of roads and sanitation whereas services like education, drinking water and streetlight facilities were found to be adequate. A number of schools both primary and secondary were opened by panchayats in each and every sampled village. PRIs involvement with the employment guarantee schemes like MGNREGA helped villagers significantly by improving their economic condition.

Rao and Kumar (2017) conducted a study on Grama Jyothi programme to understand the decentralization and participatory planning by PRIs in Telangana. The results were based on State budget documents and a field survey in four villages from two districts - Warangal and Adilabad. The study found that in Telangana, the PRIs, especially Gram Panchayats, were suffering from many problems such as lack of devolution of all the constitutional subjects to PRIs; no direct control over many village level functionaries; major allocation of State budget on the PRIs subject were spent through parallel bodies; low level of per capita revenue and expenditure and limited taxation powers for Gram Panchayats (GP) etc. As a result, people's participation in Grama Jyothi programme was disappointing and it had not been successful even in famously institutionally developed village –Gangadevipally in the State.

Sonkhoginhaokip (2017) attempted to examine the relationship between decentralized governance and development with reference to equity and sustainability. Sixty households from each Gram Panchayat under study were randomly drawn for interviews. Eighty two per cent of the respondents expressed dissatisfaction with 'equity in benefit sharing', 72.5 per cent of the respondents expressed their dissatisfaction with 'equity in decision making'. In all the four Gram Panchayats studied, pradhans (panchayat presidents) were deeply involved and strongly represented in final decisions on key issues such as loan disbursal, repayments, and corrective action followed by influential members of the panchayats, and non-influential members whereas, common people were not represented at all except in Sawombung panchayat where they were represented partially at 30 per cent.

Swathi and Vezhaventhan (2018) studied the development of housing in rural areas with the implementation of Pradhan Mantri Awas Yojana (PMAY). Perusal of results showed that the construction of houses in rural areas of Tamil Nadu increased year by year. In 2015-16 government completed 27,596 houses, in 2016-17, 75,102 houses were completed and 4,45,500 houses in 2017-18.

2.2 Participation of PRIs in natural resource management

Natural resources (NRs) constitute an important component of community assets in India and form the basis of overall economic development. They underpin the livelihoods of millions of poor people particularly those living in the under privileged areas, with few alternative economic opportunities.

According to Jodha (1986) Common Property Resources (CPR) are the resources accessible to the whole community of a village and to which no individual has exclusive property rights. In the dry regions of India, they include village pastures, common forests, waste lands, common threshing grounds, waste dumping places, watershed drainages, village ponds, tanks, rivers / rivulets and river beds, etc."

Deshpande and Reddy (1990) studied the Pani (water) Panchayats in Purandar taluka of Pune district where every rural household had an equal share in irrigation and water resources. The water rights were tradable, so that even the landless labourers could gain from the irrigation resources generated. Grass root democracy

could be, thus, used to integrate environmental regeneration and rural development to alleviate poverty.

Rasmussen and Meinzen-Dick (1995) identified factors which condition local organizations for resource management. It draws upon a review of two major bodies of literature: empirical analyses of forestry, fisheries, grazing and irrigation management and game theory literature. The empirical literature on resource management highlighted the physical and technical characteristics of the resource, the characteristics of the group of users, and the attributes of institutional arrangements as key factors affecting the management capacity of local organizations. The evidence on voluntary organization indicated that collective management was often a viable alternative to nationalization or privatization of natural resources. Although local organizations will not be able to solve every collective action problem, in many situations they could be at least as effective as other management agencies.

Babu and Dent (1996) evaluated the common property resource management in Haryana state by selecting villages from all the five districts of south and south-western Haryana that fall under the semi-arid Aravalli Hills ecosystem. Village selection was carried out on the basis of the success of the level in each of the common property resources (CPR) management level in each of the village. In order to explore the level of peoples' participation and other factors responsible for differing success in the villages, a survey of households was conducted by interviewing the villagers through a structured questionnaire. The results of the study revealed that large farmers were less dependent on common lands for their fodder requirements than small farmers and landless. Compared to the high income strata and medium income strata those who live under poverty line were more dependent (84.7%) on common lands for their fuel requirement.

Annamalai (2000) in his paper mobilisation of resources by gram panchayats through common property resources in Haryana, depicted the necessary provisions of control over common property resources by panchayats particularly Sandhir panchayat in Haryana. The author examined the local management of local resources through local bodies *i.e.* panchayats and community based organisations like water user groups, and found that they seemed to be the sound and sustainable alternative

than privatisation and centralisation of use and management of common property resources.

Sakthivadivel et al. (2004) undertook a study under International Water Management Institute (IWMI)-Tata Programme of 41 irrigation tanks from 22 districts of eight Indian states to identify the characteristics of high performing local-managed tank institutions. Both primary and secondary data were obtained from field visits and official village records respectively. Out of the 41 tanks studied, 17 were assessed to be performing well overall. In high performing tanks, such as Parambu tank in Pudukkottai district of Tamil Nadu, Kasargatte Hosa Anakere in Bangalore rural district of Karnataka, it was made manadatory for all able bodied persons to participate in cleaning the feeder channels. In these high performing tank areas, local institutions adopt many ways to augment water supplies.

Anonymous (2007) in their working report on natural resource management made a detailed analysis of status and management scenario of natural resources, programme interventions and policy options and actions, and financial outlays to be adopted in the XI Plan for natural resources management towards the stipulated agricultural growth. Degradation and erosion of natural resources, namely, land, water, forest, biodiversity (plant, animal and microbial genetic resources), livestock and fisheries along with air and sunlight were one of the root causes of the agrarian crisis in the country. The report highlights that soil health enhancement holds the key to raising small farm productivity. It also highlights that it is essential to revitalize the soil system through organic residues and materials. Likewise integrated management of water for maximising productivity per drop of water has been emphasized.

Shah et al. (2010) conducted a nine months field survey at Bhitara Panchayat villages *i.e.* Bhitara Mota, Bhitara Nana and Udhma. Organization of series of meetings were held at various levels with local stakeholders and data were collected on natural resources like existing natural resources and their distribution, grassland status with salinity classes, participatory restoration methods and socio-economic status of each family. Based on participatory exercise (or participatory rural appraisal) with various groups, the conclusion was drawn to recommend site specific strategies for conservation and sustainable utilization of natural resources. Overall

findings revealed that Jat muslims were the most dominant community in selected Panchayat villages with livestock rearing activities as the main occupation. In addition, local inhabitants were using charcoal as main source of energy to fulfill their daily requirement as well as also adopted Prosopis-based charcoal making as business to earn surplus money for their livelihood. Natural habitats had been lost through invasion of *Prosopis juliflora* (locally called Ganda Bavar) and had resulted in significant loss of wetland area, degradation of remaining natural resources and a consequent decrease in the diversity of native land use type and species. People admitted that they did not have adequate knowledge of government developmental schemes and programmes so they were not able to avail the full benefits of such programmes leading to dependence on natural resources.

Ekka and Pandit (2012) conducted a study in Gosaba islands of Sunderban mangroves by contingent valuation approach to know the willingness to pay of people for restoration of natural ecosystem. The study was based on primary data where stratified random sampling method was employed by dividing the whole population into homogenous sub-groups on the basis of their occupational status. Ten villages were covered during the survey and 432 households were interviewed. The results revealed that 63.18 per cent of respondents were literate and 36.82 per cent were found to be illiterate. Farmers were asked to give an opinion regarding the importance of mangroves and 92.59 per cent strongly agreed that mangroves provided several benefits. Around 64.71 per cent of the respondents agreed to pay for conservation and restoration of mangroves at different bid levels. Thirty-five per cent of the respondents did not agree to pay at specified bid level. The maximum bid value which the respondents were willing to pay was Rs. 10 (40.07 per cent) followed by Rs.20 (20.27 per cent) and Rs.30 (18.86 per cent). As the bid value increased the willingness to pay decreased.

Giliba et al. (2012) examined the role and effectiveness of local institutions in the management of forest biodiversity in New Dabaga-Ulongambi Forest Reserve, Tanzania. Data were obtained through questionnaires, interviews, focus group discussions, participatory rural appraisal and field observations. The study revealed that the most remarkable local institutions connected to forest biodiversity

management include: village natural resource management committee (92%), tree nursery group (79.4%), beekeeping groups (61.1%), fish farming (43.3%) and livestock rearing group (33.9%). Main activities carried out by local institutions which directly contributed to the sustainability of forest reserve included forest patrols, fire extinguish, planting of trees along forest boundaries and participation in income generation activities.

Mahanta and Das (2012) pointed out the linkage between common property resource degradation and migration in the state of Assam. This study has revealed that deterioration of common property resources increased the incidence of poverty level because poor people were dependent on forest resources. Earnings of rural people were mostly the combination of income from private property and common property resources. Reduction in common property resources reduced the earnings of rural people leading them to migrate to nearby urban areas in search of livelihood. Thus, there was a link between common property resource degradation, poverty and migration. With the help of thirty variables at two points of time, 1991 and 2001, thirteen indicators were constructed to represent demographic, natural resource and livestock related indicators. Factor analysis was employed to find the linkages between common property resource degradation and migration. The study revealed that decreasing common property resources caused the rural people to migrate to urban areas in search of livelihood.

Subramanya and Sarker (2012) evaluated the role of PRIs in the protection of environment. The research article highlights the relevant policies and practices facilitated by the PRIs under the 73rd Amendment for protecting the environment. Practices relating to environmental education, awareness and training, arranging manpower and training them, mobilizing awareness, forming eco-clubs in schools, identifying NGOs are some of the activities for protecting environment. They found that a minimum utilization of these practices may help villages reach the heights of success in several aspects of cleanliness and environment protection.

Kamri (2013) conducted an open-ended valuation survey involving local and international visitors to estimate the environmental economics of Gunung Gading National Park. This was to elicit the willingness to pay for its conservation. Using a

random survey, the average willingness to pay was RM (Malaysian Ringitt) 16.14 for international visitors per visit and RM 7.38 per local visitor per visit for improvement in environmental conservation. The willingness to pay was strongly influenced by gender, education and income. The study demonstrated that contingent valuation method could be a useful tool to guide decision makers regarding policy purposes and natural resources management of protected area in developing countries.

Shahidullah et al. (2015) analysed the institutional interplay in medicinal plants management in Bangladesh. The study intended to delineate the interactional patterns and dynamics between existing formal and informal organizations towards exploring prospects of new medicinal plants governance institutions. Employing case study and participatory approaches to empirical field investigation, two intervention cases of the Livelihood and Agro-Forestry (LEAF) and Sustainable Environmental Management Program (SEMP) were assessed in two different socio-ecological settings of the country. Involving 45 respondents in each site, Focus Group Discussions were carried out, and a total of 26 key informants were interviewed. The findings revealed that undefined roles and responsibilities, inadequate coordination, and weak linkages among the cross- scale institutions resulted in ineffective management and relatively poor performance.

Topal (2015) studied sustainable management of common property resources in Bheta Gad-Garur Ganga (BGGG) watershed of Uttrakhand based on primary and secondary data. Six villages were randomly selected from lowest to the highest elevation for the in-depth empirical investigation. The study revealed that the management of CPRs in the mountain villages of the region was significantly influenced by the various socio-economic, bio-physical and external factors. As a result, some of the village communities had developed their own rules and regulation for managing and harvesting their CPRs in sustainable way to meet their day-to-day demands, whereas in other villages, status of CPRs was worst.

Barola et al. (2016) undertook a case study on Van Panchayat (VP) of Kashiyalekh in Kumaun Himalaya covering local areas of Sunkiya, Buribanna, Chakhuta and Gazaar villages. During the study period, several rounds of interviews were conducted involving Sarpanch, VP members, Self Help Groups, Van Suraksha

Samiti and community people. Wood cutting, grazing of cattle, mining were strictly restricted in van panchayat. Van panchayats permitted to collect only dry fallen wood and otherwise levied fine of Rs.50/- and Rs.500/- in case of cutting green leaves and wood, respectively. During the study villagers reported that condition of forests was not good earlier, but after following Van Panchayat's rules and managed to protect the forests from depletion, land degradation etc. through participatory approach among the community people.

Mogende and Kolawole (2016) evaluated the dynamics of local governance in natural resource conservation in the Okavango Delta, Botswana. The study brought out that various traditional institutions regulated access to and utilization of resources by granting permission to use them. Traditional institutions promoted sustainable utilization of natural resources in the delta. In this arrangement, rural communities retained control over natural resources in their area.

Pangging *et al*. (2016) studied the natural resource management in Eastern Himalaya in fringe villages of Shergaon forest division of Arunachal Pradesh. The data were collected from 97 informants through questionnaire. The NRM practices of Sherdukpen tribe consisted of traditional maize cultivation, management of individual forest, community forest, etc. About 90 per cent of the tribe were involved in farming practices. These natural resource management practices meet all the needs of the community *viz.*, social, cultural and economic needs

2.3 Impact and role of PRIs in income and employment generation

Shrestha (1984) empirically estimated the aspects of planning and administrative capabilities of panchayat in Dadhikot village of Bhaktapur district, Nepal. The study was based on a field survey involving the application of questionnaires and interviews with 110 village households, and secondary sources. The study focused upon socio-economic characteristics of the village such as demographic composition, land use, agriculture, forestry etc. The study concluded that the majority of villagers had benefited from development activities conducted in the Panchayat. This was indicated by a rise in income per household as well as improved employment opportunities.

Bhardwaj (1985) evaluated the impact of Integrated Rural Development Programme (IRDP) in Hamirpur and Kangra districts of Himachal Pradesh by categorizing the respondents as beneficiary and non-beneficiary households. Primary data were collected for the study. The study revealed that higher level of income, employment and expenditure were recorded under beneficiary situation in both the districts indicating that IRDP had produced a positive impact on the economic status of its beneficiaries and brought about rural development.

Kalivaradhan et al. (1995) conducted a study in Pondicherry region and revealed that five per cent of the IRDP beneficiaries possessed low level of awareness, 30 per cent had medium level of awareness 48.00 per cent of beneficiaries were aware of credit facilities for purchase of milch animals, while 44 per cent were aware of distribution of bullock scheme.

Mujumdar (2007) in his study entitled "Rural Non-farm employment in India focused on the performance of 'Sampoorna Gramin Rozgar Yojana' (SGRY) in India. He concluded that 70 per cent of the workers seemed satisfied with the wage rate paid including 5 kg food grains per man-day per worker. A large percentage of the targeted beneficiaries did not get the prescribed wages and also the allocated food grains. SGRY would have been a step in the right direction for productive upliftment of the rural people if it was implemented through inclusive development path.

Paul and Nayak (2007) did an exploratory study on the role of gram panchayat in agriculture and dairy development in Hooghly district of West Bengal. Eight gram panchayats were selected randomly for the study covering 160 respondents in which eighty were panchayat members and eighty were farmers. Self rating and beneficiary rating techniques were used to assess the role and performance while Garrett ranking was deployed to prioritize the constraints. The findings of the study revealed that 73 per cent of panchayat members had medium level of job responsibility in agriculture whereas 75 per cent had the same in dairy farming. With respect to role expectation in agriculture, arrangement of minor irrigation facilities along with supply of production inputs possessed higher orders of merit. In dairy farming artificial insemination (A.I) health care services in routine manner, supplying mineral mixture etc. were of higher emphasis. With respect to role performance, using self rating technique 70 per cent

and 71.25 per cent of the gram panchayat members were in the category of average performer in agriculture and dairy farming, respectively. Performance of 78.75 per cent and 80 per cent of them was of medium level in agriculture and dairy farming, respectively as reported by farmers. Lack of proper maintenance of resource inventory, non-availability of committed cash and kind, lack of technical expertise among the members were the major constraints.

Rajiakodi (2007) undertook a study to examine the relationship between panchayati raj and rural employment generation programmes. Out of the 29 village panchayats in Chellampatti block, Madurai District, Tamil Nadu, seven village panchayats were selected for study and 200 sample households were selected. They were distributed among four poverty alleviation programmes at the rate of 50 sample households per scheme. The income and employment impact were studied on these four group of households. The results revealed that the employment generated under the different schemes was sufficiently high and had lifted the households above the poverty line.

Mahapatra et al. (2008) observed that twenty out of 27 states reported an average of less than 50 employment days per households. Only Rajasthan was able to generate more than 50 average persons days of employment against the guarantee of 100 days during 2006 07. States such as Andhra Pradesh (25.37 person days), Uttar Pradesh (22.23 person days), Bihar (18.46 person days), Chhattisgarh (38.65 person days), Orissa (32.27 person days) and Madhya Pradesh (39.9 person days) were far behind from the target of providing 100 days of employment at the half way mark of the current fiscal year.

Harish (2010) studied the number of days the beneficiaries were employed in different works under NREGA. The maximum number of days the households were employed was in road construction *i.e.* 8.75 days which contributed 29 per cent of the total number of days employed (32.01). On the contrary, the least number of days employed was towards digging works accounting for 6.74 per cent of the total number of days employed. Other works in which workers were employed were construction of check dams (5.5 days), desilting of existing tanks (4.33days), construction of drainages (4.11 days), planting (2.48 days), land development works like construction

of bunds, , mulching etc., (2.44 days) and construction of farm ponds (2.17 days). Only ten per cent of the households completed 100 days of work which is guaranteed by the Act.

Shah and Mohanty (2010) observed that NREGA was successful in terms of asset creation, watershed development, prevention of drought and reduction in large scale migration in Maharashtra. However the major problem was that man days generated and the number of households provided 100 days of employment were quite low.

Ahuja et al. (2011) conducted a study in the state of Haryana and investigated the impact of implementation of MGNREGA in two districts — one agriculturally-advanced (Karnal) and the other agriculturally-backward (Mewat). A significant difference was found in the extent of employment under MGNREGA works in agriculturally-advanced Karnal (13.7%) and agriculturally-backward Mewat (24.6%) districts. The study revealed that despite being a source of employment, MGNREGA was not effective in checking migration from the developed region because of higher market wage rates at destination urban areas. The study concluded that farmers owning large size of landholdings and more number of animals were not much interested in participating in MGNREGA works.

Bhagat and Borah (2011) studied the impact of MGNREGA on agricultural employment pattern in West Garo Hills of Meghalaya and found that implementation of MGNREGA had resulted in large-scale diversion of agricultural labour to the non-farm sector. The study revealed a negative growth rate of hired labour and total labour engaged in agriculture since the start of MGNREGA and a positive CAGR regarding supply-demand gap of hired agricultural labour (5.4% for male and 2.93% for female agricultural labourers). Thus, the farmers were facing severe problems in terms of the availability of agricultural labour and this might lead to a negative impact on agricultural production and food security in future.

Harish et al. (2011) assessed the impacts and implications of MGNREGA on labour supply and income generation for agriculture in Chikmagalur district of Karnataka during the year 2009-10. Results put forth that the number of days worked

in a year with the implementation of MGNREGA programme had significantly increased to 201 days, reflecting 16 per cent increase. Regression analysis had revealed that gender, education and family size of the workers were the significant factors influencing the worker's employment under the program.

Kantharaju (2011) studied the impact of MGNREGA towards employment generation and assets creation among randomly selected 120 beneficiaries from 4 Taluks in Tumkur District of Karnataka State. The findings of the study revealed that, agriculture was the main occupation of majority of the beneficiaries and they had knowledge about the objectives of MGNREGA on providing 100 days of wage employment. About 23.33 per cent of the beneficiaries got employment of 71-80 man days in a year, the major individual farm works were horticultural planting (33.33 %), 21.35 per cent of the beneficiaries participated in desiltation of tanks and cleaning of community ponds in case of community assets creation.

Mankar et al. (2011) conducted a study on awareness and performance of the roles in agricultural development by panchayat members in Ratnagiri district of Maharashtra. Total 315 panchayat members were selected from 45 village panchayats and interviewed. It was observed that half of the respondents were aware of the roles pertaining to animal husbandry, whereas, equal percentage (17.77 %) of the respondents were aware about activities under forest and ensuring conservation of manurial resources, preparing compost and sale of manure.

Kadam (2012) studied the role of gram panchayat Uttur in rural development in general of Mudhol taluka in Bagalkot district of Karnataka. The study was based on the analysis of primary and secondary data, and information was collected over 2001-02 to 2005-06. Research tools such as interview and participant observation were used. The programmes implemented in Uttur gram panchayat were SJGSY, JRY, and EAS housing schemes like Ashraya, Neraly Bhagya, Indira Awas Yojana, Ambedkar Yojana, and Bhagya Jyoti. The author concluded that after the implementation of rural development programmes most of the people had become employed in agriculture and animal husbandry, sheep rearing, handicrafts, small business and other activities. The implementation of rural programmes like

SJGSY, housing schemes and power schemes had created gainful activities for poor people.

Das (2013) reported that MGNREGA had significant positive impact on seasonal rural-urban migration by providing rural workers with employment during the lean season, MGNREGA income provided a significant value addition to meet the higher order needs critical for their survival or growth and development of their family.

Kumar and Joshi (2013) examined the changes in household food consumption and nutritional security of poor rural households and assessed the impact of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) on the dietary pattern and nutritional status of these households using the data from 66th round of National Sample Survey (NSS) pertaining to the year 2009. The study revealed that MGNREGA had benefitted 22.5 per cent of the rural households by providing, on an average, wage employment for about 43 days. It had increased the income of rural households and had been successful in reducing the poverty level by 4 per cent. The MGNREGA had ensured almost equal employment benefits to all the categories of farm sizes, household-types and income-groups. The state-wise study also puts forth the view that though all the states have been benefitted, wide variations do exist as the economically weaker states of the country had been benefitted maximum and had implemented the MGNREGA more vigorously. The study showed that the raise in income could lead to increase in food consumption — both of cereals and non-cereals by all the categories of households.

Narang (2014) evaluated rural livelihood security through MGNREGA by conducting a field study in Mewat, a backward district of Haryana. A concurrent mixed method research design had been used and perspectives from different stakeholders were taken into account. The study was carried out in five villages, selected from each of the five blocks of Mewat district by selecting 30 households *i.e.* 15 beneficiary and 15 non-beneficiary ones from each village. Perusal of the results revealed that around 69.3 per cent of beneficiary households reported satisfaction from MGNREGA and majority opined that the scheme should be continued in future. Even amongst non-beneficiaries, 84 per cent favoured continuation of the scheme and

almost 65 per cent wanted to seek work under it. Though the sampled households practiced diverse livelihood activities, MGNREGA's annual contribution to household income through wages was found to be around 10 per cent in the beneficiary households. MGNREGA had been instrumental in supplementing employment and livelihood opportunities within the village.

Ramya (2014) studied the role of PRIs in rural development by undertaking a study in Hiya gram panchayat under Nyapin block of Kurung Kumey district of Arunachal Pradesh. The relevant data was collected through primary and secondary sources by selecting 180 beneficaries of various development schemes to assess the impact of these schemes. The perusal of results stated that poverty alleviation programmes were effective in changing the structure of tribal community by providing them income and employment. Beneficiaries expressed that rural development programmes, especially, MGNREGA implemented through Panchayats generated adequate employment in the area. These programmes also provided good social and economic positions for rural people.

Kumar et al. (2015) studied the income and employment generation through MGNREGA scheme by conducting the study in Mahendragarh district of Haryana during the period 2006-07 to 2011-12. All the five blocks were taken from the selected district and from each block two villages were randomly selected totaling ten villages. Ten MGNREGA job card holders were randomly selected from each selected village. Results showed that majority of job card holders did not get employment in almost all the selected blocks. In the year 2011-12, 63 per cent of workers did not get work for even a single day. The average employment per respondent decreased from about 23 days in 2006-07 to about 14 days in 2011-12. This indicated that participation of workers was very low in the study area. The root cause of low participation was lack of information about MGNREGA and job cards were not handed over to them. The contribution of MGNREGA income was about 9 per cent to the total family income of the working respondents.

Kundu (2015) analysed the effectiveness of Mahatma Gandhi National Rural Employment Guarantee Programme in checking the migration among rural households in the south 24 Parganas district of West Bengal. Perusal of result showed

that the households who got more man-days of employment through MGNREGA were less prone to migrate to the nearby urban areas for better paid job. Actually, a large section of the sample households (near about 78 per cent) stated that availability of job in their own locality through MGNREGA discouraged them to go even to the nearby urban areas for searching employment. The study concluded that expansion of this employment programme could reduce the intensity of rural to urban migration by providing work for the needy rural people closer to home at decent working conditions.

Mibang and Modi (2019) conducted an analytical study on the role of PRIs in rural development of Arunachal Pradesh. The data for the study had been drawn from both primary and secondary sources. The primary data was collected through field survey by visiting the selected districts viz., east Siang, lower Subansiri and west Kameng. The study had a sample size of 600 covering three panchayat blocks in each of the three districts (200 in each district). The results showed that 26.7 per cent of the total respondents felt that PRIs were functioning in their district independently and working in right direction. Ninety five per cent of the respondents considered PRIs as beneficial and effective while 4 per cent expressed dissatisfaction with their performance. In context to developmental schemes 30.7 per cent felt that schemes were being successfully implemented in their locality while 50 per cent opined that schemes were not implemented successfully and 19.3 per cent did not answer in this regard.

The review of various studies put forth the strong belief that local governance system has played a praiseworthy role in uplifiting the masses and has been effective in providing better income and employment benefits to the people. Although certain studies put forth that panchayats closer to urban areas enjoy better facilities than once located away. This study aims to understand this difference by undertaking the study in developed and under-developed districts of Himachal Pradesh. Natural resource conservation is the need of the hour and a sustainble alternative to privatisation and centralisation of use and management of resources is local governance through panchayats or community bodies. Therefore, the study aims to understand the impact of panchayats on local resource conservation and how people participation can ensure

better results. All studies show that MGNREGA has been effective in providing employment to rural masses and has been effective in maintaining a decent standard of living for the people. This study aims to explore the impact of various development schemes implemented through panchayats in generating income and employment as well as better development. Thus the backdrop of the present study is to evaluate the overall developmental impact these rural bodies can have on socio-economic development of rural households.

3. MATERIALS AND METHODS

An appropriate selection of scientific methodology is a must to carry out any scientific research as reliability, precision, validity and feasibility depend upon the methodology used for the investigation of a phenomenon. The selection and application of appropriate methodology has more relevance in socio-economic studies based on sample surveys. Firstly, selection of a representative sample and then finding possible results is hugely dependent on methodology adopted. Therefore, this chapter comprises of materials and methods that have been utilised primarily for selection of study area, sampling design, data collection, mathematical and statistical techniques to achieve the objectives of this study. The techniques used to analyse different objectives have been given below in detail:

3.1 Selection of the study area

3.2 Sampling plan

3.3 Data Collection

3.4 Analytical framework

3.1 Selection of the study area

The state of Himachal Pradesh has 12 districts, out of which four districts *i.e.* two developed (Solan and Una) and two under developed (Chamba and Sirmaur) were selected. The selection of developed and under-developed districts was done on the basis of a paper "Development Disparities in Himachal Pradesh" by Virender Kumar (2007) which categorised districts of Himachal Pradesh according to their level of development. The study areas for the research work have been shown in Fig.3.1.

3.2 Sampling plan

Multistage random sampling technique was employed in selection of sample households. Four districts in the state were selected. In the 1^{st} stage from each district two blocks were selected randomly. In 2^{nd} stage a list of panchayats was taken from the block offices and five panchayats were selected from each block randomly. In 3^{rd} stage of sampling one representative village from each panchayat was selected and five households from the village were selected randomly.In this way the total sample comprised of 8 blocks, 40 each panchayats and villages and 200 sample respondents. The selected sample panchayats are given in Table 3.1.

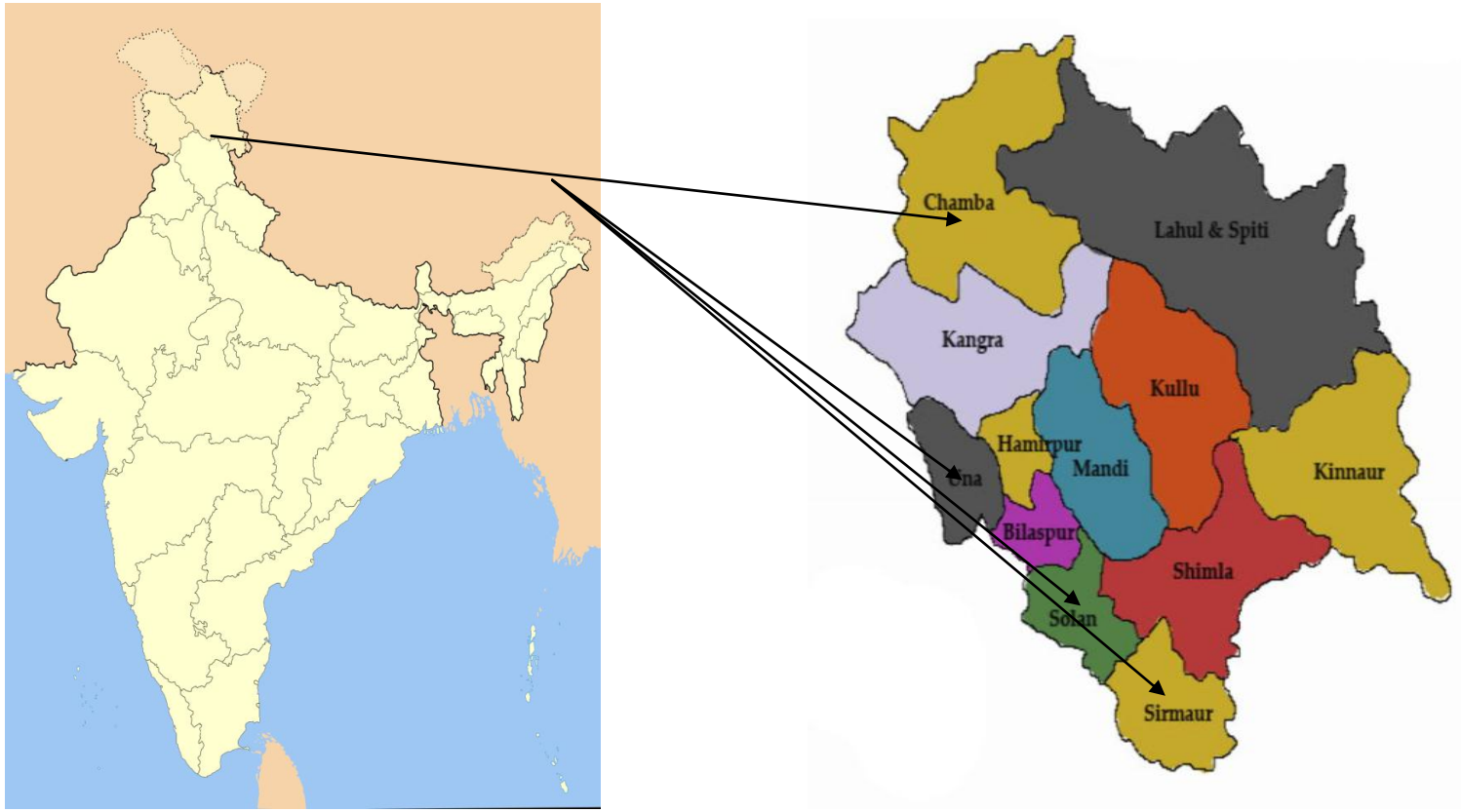

Figure 3.1: Map showing the study area

Table 3.1 Distribution of sample blocks and villages selected from sudy districts

Sr.No.	District	Block	Sample Panchayats	Sample Households
1a	**Solan**	Solan	Barog	5
			Chewa	5
			Jaunaji	5
			Saproon	5
			Seri	5
1b	**Solan**	Dharampur	Dharampur	5
			Hurang	5
			Jabli	5
			Kotbeja	5
			Rauri	5
2a	**Una**	Amb	Amb	5
			Jawar	5
			Kuthiyari	5
			Mubarikpur	5
			Nehri	5
b	**Una**	Haroli	Badhera	5
			Dharampur	5
			Haroli	5
			Kangar	5
			Sansowal	5
3a	**Chamba**	Bhattiyat	Garnota	5
			Ghatasni	5
			Gola	5
			Hatli	5
			Thulel	5
3b	**Chamba**	Mehla	Gagla	5
			Karian	5
			Kuther	5
			Mehla	5
			Rajera	5
4a	**Sirmaur**	Shillai	Balikoti	5
			Gawali	5
			Maanal	5
			Paav Maanal	5
			Shillai	5
4b	**Sirmaur**	Sangrah	Baunal Kakog	5
			Charana	5
			Deuri Khrahan	5
			Sangna	5
			Sangrah	5
	Total repondents	**8 blocks**	**40 panchayats**	**200**

3.3 Data collection

Data collection and analysis work was done under two phases:

3.3.1 Primary data

In this phase extensive survey schedules were prepared for PRI representatives and farmer respondents to extract detailed information from them. The PRI survey schedule aimed at getting inclusive information from PRIs on various aspects like demographics of the area, infrastructural facilities in the panchayat, functioning of panchayats, sources of income for panchayats, various schemes implemented by panchayats, natural resources in the panchayat area, development plans prepared by panchayats and new initiatives adopted by panchayats. The household respondent survey schedule aimed at extracting information regarding detailed identification of farmers, land inventory, socio-economic features, inventory of farm buildings, inventory of livestock, inventory of farm machinery and implements, willingness to pay for conservation of natural resources, provision of income and employment through panchayati raj, satisfaction with the functioning of panchayati raj institutions in their area etc. These survey schedules were pre-tested in nearby areas to examine their relevance and then accordingly the schedules were modified for main survey. The survey schedules prepared for this study have been given in Appendix III & IV.

3.3.2 Secondary data

The secondary data were collected through the following sources:

a) District Census Handbook (Solan), (Chamba), (Sirmaur)and (Una), Directorate of Census Operations Himachal Pradesh, 2011
b) Statistical Year book of Himachal Pradesh 2017-18, 2018-19,2019-20 (Department of Economics & Statistics, Himachal Pradesh, Shimla)
c) Official websites of Panchayati Raj Department

3.4 Analytical framework

In order to achieve the objectives of the present study tabular analysis and suitable statistical and mathematical tools were employed. The complete analytical approach used in the given study has been elaborated in the following sub-sections.

3.4.1 Tabular analysis

This is the simplest and most intelligible tool to analyse the existing socio-economic level of an area. It was employed to study the demographic features, family structure, land use pattern, livestock production etc. The results were interpreted by working out averages, percentages and indices. The computed parameters are as follows:

1. Sex-ratio (females per 1000males)= $\frac{\text{Total population of females}}{\text{Total population of males}}$ x 100
2. Literacy rate (%)
   $=\frac{\text{Total number of literate persons}}{\text{Total population (excluding non-school going below 5 years of age}}$x100
3. Cropping intensity (%)=$\frac{\text{Total cropped area}}{\text{Net cultivated area}}$ x100
4. Per cent change (%) = $\frac{\text{New value}-\text{Old value}}{\text{Old value}}$ x100

3.4.2 Statistical analysis

3.4.2.1 Compound Growth Rate (CGR): The compound growth rates were computed to examine the growth/trend in number of job cards issued, employment provided and person days generated under MGNREGA in different panchayats using exponential function as follows:

$Y= ab^t$

The log linear form

Log Y=log a +t log b

Where;

Y = Dependent variable

a = Constant term

b = Regression coefficient

t = Time variable in years (1,2,..n)

Compound growth rate (r) was estimated as:

r = (b-1)x100

3.4.2.2 **Principal Component Analysis**: In order to study the performance of panchayats in different villages a composite index of performance was formulated based upon various sub-indicators as follows:

i) Road connectivity (km.)
ii) Drinking water facility (No.)
iii) Educational institutions (No.)
iv) Cooperative societies (No.)
v) Number of banks per 1000 households
vi) Number of health institutions per 1000 households
vii) Number of marketing societies
viii) Number of mandis available
ix) Women literacy (%)
x) Number of Self help groups
xi) Sex ratio
xii) Number of veterinary clinics

Based upon the status of development in various sub indicators the composite index of development was calculated by taking a weighted average of all the sub-indicators using the principal component method:

$P_i = \sum_{j=1}^{n} a_{ij}\, x_j$

CI = $\sum_{i=1}^{m} w_i\, P_i$

where;

P_i = Principal components (i=1,2……m)

a_{ij} = Loadings of jth variable on ith principal component (j=1,2…n)

x_j = Measure of jth component variable based on contribution to component variability

w_i = Weight assigned to ith principal component

CI = Composite index

3.4.2.3 Willingness to pay model (Logit Model)

To assess the conservation and maintenance of resources and participation of villagers in conserving the natural resources willingness to pay (WTP) model was used. WTP indicates the strength of one's preference for environmental quality by

conserving natural resources. The willingness to pay was the dependent variable and the explanatory variables included were age, satisfaction with PRIs and bid value.

The analysis was centered on the probability of person's willingness to pay for the future. The proportion of cases where the respondents were willing to pay was given value 1 and those who do not want to pay were assigned 0 value. Step-wise logistic regression was used to determine which independent variables were predictor of people's willingness to pay for conservation of natural resources.Mathematically, logistic regression is based on probabilities, odds and the logarithms of odds. By applying the concept of odds to work out logistic regression of classification as willingness to pay was defined as:

$$Odds_{wtp} = \frac{P(WTP)}{1-P(WTP)}$$

where,

WTP= f(age, household income, gender, education, perception)

The probability of having one outcome or other based on non-linear model resulting from the best linear combination of explanatory variables was found using logistic model. The specific form of model is:

$$P_i = E(Y_i = 1|X_{ki}) = \frac{1}{1+e^{-z_i}} = \frac{e^{z_i}}{1+e^{z_i}}$$

where, $z_i = \beta_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \ldots.. + \beta_k X_k + u$

The fitted form of the model was:

$$\text{Logit}\,[L_i] = \text{Ln}\left[\frac{P_i}{1-P_i}\right] = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \cdots + \beta_k X_k + u$$

where,

P_i = Probability of i^{th} case of dependent variable

Z_i = Unobserved response for i^{th} respondent

X_k = Explanatory variables

β_o = Intercept

β_k = Regression coefficient associated with k^{th} variable

u = Random term

3.4.2.4 Garrett's Ranking Analysis

To understand the problems of respondents regarding functioning of panchayats Garrett's ranking technique was employed. The respondents were asked to rank their problems. These problems were transformed into units of scores by using the following formula:

Per cent position= $100\frac{(Rij-0.50)}{Nj}$

where,

R_{ij} = Rank given for the i^{th}factor by the j^{th} respondent

N_j= Number of factor ranked by the j^{th} respondent

This percent position was converted into scores by referring to the table given by Garrett and Woodsworth (1926). Next for each factor the scores of the individual respondents were added together and divided by total number of respondents for whom scores were added. The mean scores for all the factors were arranged in descending order and the most pressing problems were identified through the ranks assigned.

4. RESULTS AND DISCUSSION

The results of the study comprise the actual domain of this investigation. The results reveal the synthesized findings derived by analysing data collected from the quoted primary and secondary sources. This chapter has been developed on the basis of results obtained from the analysis of data collected in the study area. The results have been described systematically and logically under the following sub-heads:

4.1 Description of the study area

4.2 Extent of development of PRIs

4.3 Socio-economic profile of sample households

4.4 Willingness to conserve natural resources

4.5 Functioning of PRIs

4.1 Description of the study area

4.1.1 General description of study districts

At the outset, knowledge about study area leads to a better investigation by considering different aspects of socio-economic spectrum. Himachal Pradesh is a state in the northern part of India, situated in the Western Himalayas. It is bordered by Jammu and Kashmir on the North, Punjab on the West, Haryana and Uttrakhand on the South-west and South-east, respectively. Himachal Pradesh covers an area of 55,673 sq.km with 12 districts which are further divided into 69 subdivisons, 78 blocks, 169 tehsils and 3615gram panchayats (Anonymous, 2019). The state has a total population of 89.96 per cent residing in rural areas as per 2011 census where dependency on agriculture/horticulture is eminent. The primary sector mainly agriculture contributes about 13.62 percent to the GSDP along with providing employment to 62.85 per cent of the total workforce in the state. (Economic Survey 2020-21)

The study was carried out in four districts of the state, *viz.,* two developed districts (Solan and Una) and two less developed districts (Chamba and Sirmaur).

Solan district forms the western part of Himachal Pradesh lying between 30^0 45' 11"to 31^0 21' 10" North latitudes and 76^0 36' to 77^0 15' 20" East longitudes. The district is bound by Mandi and Bilaspur districts in the north, Punjab state in the west, Haryana State and Sirmaur district in the south and Shimla district in the east. The total area of the district is 1936 sq. km forming 3.5 per cent of the total geographical area of the state. Solan district is divided into four sub-micro regions on the basis of physiography, climate and soils, natural vegetation and geology, *viz.,* Satluj Basin, Solan Lesser Himalaya, Nalagarh Shiwalik and Solan Forests. The terrain of the district on the whole is mountainous except three valleys of Kunihar in Arki, Saproon in Solan and Doon in Nalagarh tehsil. The elevation of Solan district ranges from 284 metres to 2069 metres above the mean sea level. The district is having certain areas of very low altitude, which are mostly located in western and southern parts and areas of high altitude in central region extending upto north-eastern corner of the district. The district forms the catchment area of three important rivers of Satluj, Yamuna and Ghagghar (District Census Handbook,2011). District Solan comprises of seven tehsils,five developmental blocks (Solan, Dharampur, Kandaghat, Kunihar and Nalagarh) and 211 Gram Panchayats.

Una district lies in the south-western part of Himachal Pradesh. It is bounded by Kangra district in the north and north-east, Hamirpur district in the east, Bilaspur in the south-east and Punjab State in the west and south. The district is stretched between 31°17′52″ to 31°52′0″ North latitudes and 75°58′21″ to 76°28′25″ East longitudes. It covers a total area of 1550 sq.kms. and ranks 10^{th} in the State in order of area. The terrain of district is mostly hilly and falls in the Himalayan foot- hill zone popularly known as Siwalik foot hills. The elevation of thisvaries between 332 metres and 1162 metres above the mean sea level. On the basis of physiography, climate and soils, natural vegetation and geology, this district is divided into three sub-micro regions which are Una Siwalik, Soan valley and Satluj basin. The district comprises of four tehsils, five developmental blocks (Una, Amb, Bangana, Gagret and Haroli) and 235 Gram Panchayats (District Census Handbook, 2011).

The less developed districts undertaken for this study were Sirmaur and Chamba. Sirmaur district lies in the outer Himalayan ranges commonly called as

Shivalik range between 30^0 27′ 30″ to 31^0 02′ 20″ North latitude and 77^0 01′ 12″ to 77^0 49′ 40″ East longitude. The geographical area of the district is 2825 sq.km which is almost 5.07 per cent of the total geographical area of the state. It is bound by Shimla district in the north, Solan district in the north-west, state of Haryana in the west and south while Uttrakhand and Uttar Pradesh in the east. The district is further sub-divided into four sub-micro regions of Upper Sirmaur Forest Region, Cis-Giri Region, Sirmaur Shiwalik and Kiardun valley. The terrain of this district physiographically is predominantly mountainous with deep valleys lying between Shiwalik ranges of varying elevations between 358 metres and 3544 metres above the mean sea level. The district is drained by a number of rivers, rivulets and streams. Of these, river Giri is the biggest river in the district, which is a tributary of river Yamuna. Administratively, the district is divided into 6 tehsils, 6 development blocks (Nahan, Paonta, Sangrah, Shillai,Rajgarh and Pachhad) and 228 Gram Panchayats.

Chamba district lies in the northern part of Himachal Pradesh between $32^0$10′ and $33^0$13′ North latitudes and $75^0$48′ and $76^0$53′ East longitudes. The district is bound on the north and west by Jammu and Kashmir, on the south-west by Punjab, Kangra district on the south and south-east while Lahul & Spiti district encloses it from east. Chamba district comprises of 7 tehsils and 3 sub-tehsils and has 7 development blocks (Chamba, Mehla, Bharmaur, Pangi, Bhattiyat, Tisa and Salooni). The total area of the district is 6522 sq. km and ranks second after Lahaul & Spiti in terms of geographical area occupying 11.70 per cent area of the state. As the entire district is mountainous having an altitude ranging from 559 metres to 6162 metres above the mean sea level, the habitation is found only upto 3000 metres. Ravi and Chenab are the main rivers which form their own valleys in the district. On the basis of physiography, climate, soils, vegetation and geology, this district is divided into 5 sub-micro regions,namely, Greater Himalayas, Chandra valley, Pir Panjal, Ravi basin and Dhauladhar. The Ravi is the main river of the district and drains the whole of Chamba valley between Dhauladhar and Holi ranges.

4.1.2 Demographic profile of study area

Table 4.1 shows the demographic features of districts Solan, Una, Chamba and Sirmaur vis-à-vis Himachal Pradesh as per census 2011. Solan and Una districts constitute 8.5 and 7.6 per cent of the total population of Himachal Pradesh with a population of 5,80,320 and 5,21,173, respectively. The concentration of population in Solan being more to other districts can be attributed to the fact that Solan district has better employment opportunities owing to the more factories in the area along with better socio-economic and infrastructural facilities. Chamba district has a total population of 5,19,080 and Sirmaur is home to a population of 5,29,855 persons which is about 7.6 and 7.7 per cent of the total population of Himachal Pradesh, respectively. Majority of the population resides in rural areas in districts Chamba (7.82%), Sirmaur (7.65%) and Una (7.71%) but Solan district has comparatively more population residing in urban areas. Himachal Pradesh has a population density of 123 person per sq.km., developed districts Solan and Una showed a higher population density of about 300 and 338 inhabitants per sq. km. while less developed districts of Sirmaur and Chamba have lesser population density of 188 and 80 persons per sq.km. Solan has3.75 times the population density of Chamba while Una has 4.23 times the population density of Chamba while the population density of Solan is 1.60 times of Sirmaur and for Una it is 1.80 times. The developed districts are densely populated as people from less developed districts often migrate to the urban areas in developed districts in search of jobs or better education. Chamba accounts for the highest tribal population with 26.10 per cent while the scheduled caste population is 1,11,690 in Chamba, 1,60,745 in Sirmaur, 1,64,536 in Solan and 1,15,491 in Una accounting for 21.52 percent, 30.34 per cent, 28.35 per cent and 22.16 per cent of the scheduled caste population of the state, respectively. Developed districts Solan and Una reveal a higher literacy rate of 83.70 per cent and 86.50 per cent, respectively compared to 82.80 per cent literacy rate of the state whereas low developed districts of Chamba and Sirmaur have comparatively lower literacy rates *viz.*,72.20 and 78.80 per cent. Clearly the perusal of this table puts forth that developed districts have better infrastructural facilities, more employment opportunities and hence there is a tremendous need to bring about developmental changes *viz.*, better education, health and infrastructural facilities backed up by adequate staff and regular monitoring of

these facilities in the rural under-developed areas that could lead to holistic development of the state. Dutt et al.(2020) found similar results that Solan had a value of 25.88 in economic development followed by Bilaspur and Una which could be attributed to faster industrial development. They found that there is a positive relation between infrastructure and economic development.

Table 4.1 Demographic characteristics of study districts vis-à-vis Himachal Pradesh

Sr. No.	Particulars	Unit	Himachal Pradesh	Under-developed districts		Developed districts	
				Chamba	Sirmaur	Solan	Una
1.	Area	sq.km	55673	6522 (11.71)	2825 (5.07)	1936 (3.48)	1540 (2.77)
2.	Tehsils	number	169	10	10	9	5
3.	Development Blocks	number	78	7	6	5	5
4.	Total households	number	1483280	102460 (6.91)	98208 (6.62)	122425 (8.25)	110332 (7.44)
5.	Total villages	number	20690	1591 (7.69)	976 (4.72)	2544 (12.30)	848 (4.10)
6.	Gram panchayats	number	3226	283 (8.77)	228 (7.07)	211 (6.54)	235 (7.28)
7.	Population	number	6864602	519080 (7.56)	529855 (7.72)	580320 (8.45)	521173 (7.59)
8.	Rural Population	number	6176050	482972 (7.82)	472690 (7.65)	478173 (7.74)	476260 (7.71)
9.	Urban Population	number	688552	36108 (5.24)	57165 (8.30)	102147 (14.84)	44913 (6.52)
10.	SC population	number	1729252 (25.19)	111690 (21.52)	160745 (30.34)	164536 (28.35)	115491 (22.16)
11.	ST population	number	392126 (5.71)	135500 (26.10)	11262 (2.13)	25645 (4.42)	8601 (1.65)
12.	Density	Per sq.km	123	80	188	300	338
13.	Sex-ratio	Females per 1000 males	972	986	918	880	976
14.	Literacy rate (overall)	Per cent	82.80	72.20	78.80	83.70	86.5
	Male	Per cent	89.50	82.60	85.60	89.60	91.90
	Female	Per cent	75.90	61.70	71.40	77.0	81.10

Source: Statistical Outline of Himachal Pradesh, 2019-20

Note: Figures in parentheses are percentages of the state totals and of respectivecategory totals in the state and district

4.1.3 Land utilization and size of holding

Land is the most important asset for agricultural production. Land use pattern for all the four districts and Himachal Pradesh has been displayed in Table 4.2.

Table 4.2 Land utilization pattern of study districts vis-à-vis Himachal Pradesh

Sr.No.	Particulars	Himachal Pradesh		Chamba		Sirmaur		Solan		Una	
		Area		Area		Area		Area		Area	
		('000 ha)	(%)	('000 ha)	(%)	('000 ha)	(%)	('000 ha)	(%)	('000 ha)	(%)
1.	Total geographical area	4575.57	100	692.42	100	224.76	100	180.92	100	154.88	100
2.	Forests	1126.12	24.61	272.01	39.28	48.68	21.66	20.27	11.20	16.55	10.69
3.	Barren and unculturable land	777.48	16.99	4.74	0.68	8.52	3.79	11.86	6.56	24.14	15.59
4.	Land put to non-agricultural uses	349.80	7.65	15.40	2.22	10.55	4.69	12.62	6.98	27.49	17.75
5.	Culturable wasteland	121.67	2.66	6.89	0.99	11.17	4.97	14.07	7.78	22.64	14.62
6.	Area under pasture/grazing	1510.43	33.01	348.86	50.38	59.58	26.51	77.89	43.05	13.53	8.74
7.	Land under miscellaneous tree crops etc.	63.67	1.39	0.225	0.03	35.79	15.92	0.62	0.34	6.65	4.29
8.	Fallow land	54.15	1.67	2.05	0.30	4.22	1.88	3.49	1.93	2.65	1.71
9.	Net sown area	549.96	12.02	41.53	6.00	40.70	18.11	37.00	20.45	39.02	25.19
10.	Total cropped area	931.86	-	66.83	-	75.32	-	60.74	-	75.19	-
11.	Cropping intensity (%)		169		161		185		164		193

Source: Statistical abstract 2019-20

Perusal of this table 4.2 reveals that Chamba and Sirmaur districts have 692.42 thousand ha and 224.76 thousand ha area, respectively while Solan has a geographical area of 180.92 thousand ha and Una occupies 154.88 ha area. Out of total geographical area, net sown area in Solan and Una accounted for 20.45 per cent and 25.19 per cent as against 12.02 per cent at the state level while in Chamba net sown area is accounted for only 6 per cent and in Sirmaur 18.11 per cent of total geographical area. Despite having the largest geographical area, Chamba, has lowest net sown area primarily due to the fact that most of its geographical area being formed by snow-clad mountain ranges, passes, river gorges and inhospitable terrains as well

as majority of the area in the district is covered by forest area and pastures. The cropping intensity of Sirmaur (185%) and Una (193%) is much higher compared to the state (169%). In Chamba and Solan districts, cropping intensity is 161 per cent and 164 per cent, respectively. The better cropping intensity in Una and Sirmaur can be attributed to the fact that these districts are comparatively in plain regions with better irrigation facilities and are predominantly foodgrain and vegetable producing areas.

Table 4.3 Distribution of size of holdings in study districts vis-a-vis Himachal Pradesh

Sr.No.	Particulars	Himachal Pradesh		Chamba		Sirmaur		Solan		Una	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
1.	Marginal (less than 1 ha)	670425	69.79	51978	73.59	24983	49.26	24900	46.58	40610	64.76
2.	Small (1-2 ha)	174596	18.17	13876	19.65	10666	21.03	14528	27.18	11409	18.19
3.	Semi-medium (2-4 ha)	84868	8.83	4378	6.20	8583	16.92	9995	18.70	6951	11.08
4.	Medium (4-10 ha)	27606	2.87	390	0.55	5419	10.68	3741	7.00	3197	5.10
5.	Large (10 ha and above)	3270	0.34	8	0.01	1070	2.11	292	0.55	543	0.87
6.	Total	960765	100.0	70630	100.0	50721	100.0	53456	100.0	62710	100.0
7.	Average Size of holding (ha)	0.99	--	0.77	--	1.96	--	1.62	--	1.28	--

Source: Statistical Abstract of Himachal Pradesh, 2019-20

Chamba and Sirmaur district have 73.59 per cent and 49.26 per cent marginal holdings while Solan and Una districts have 46.58 per cent 64.76 marginal holdings in comparison to 69.97 per cent marginal holdings at state level. The small holdings account for 19.65 per cent in Chamba, 21.03 per cent in Sirmaur, 27.18 per cent in Solan and 18.19 in Una as compared to 18.17 per cent in Himachal Pradesh (Table 4.3). This clearly shows that there is predominance of small and marginal holdings in all the selected districts due to fragmentation and division of land holdings among family members. The average size of holding is larger in Sirmaur (1.96 ha), Solan (1.62 ha) and Una (1.28 ha) in comparison to the holding size at state level (0.99 ha).

4.1.4 Main features of selected panchayats

In district Una two blocks namely, Amb and Haroli were selected for the study. In Amb block, Amb Panchayat was selected which had six revenue villages and a population of 7800 with 1980 families. The panchayat consists of 13 ward members. The population comprises of 4054 males and 3746 females. The panchayat has primary, middle and senior secondary schools, a private ITI, one primary health centre and a community health centre, five fair price shops, a veterinary clinic, a credit cooperative society, six bank branches and a post office. The next selected panchayat was Mubarikpur at a distance of 5.6 km from block headquarters. The panchayat has 2 revenue villages and is headed by 7 ward members. Mubarikpur has 534 households having a population of 2169, amongst which 1346 are males and 823 females. The panchayat has a primary and middle school, a primary health centre, a veterinary clinic, two fair price shops, three bank branches and a post office. Nehri panchayat has 13 revenue villages and a population of 3608. The panchayat has adequate infrastructural facilities with school, fair price shops, veterinary clinic, post office, bank branches and cooperative society. Kuthiyari panchayat having one revenue village with a population of 1728 and 419 households was the third selected panchayat in Amb block. The panchayat is located at a distance of 9.3 km from block headquarters. The panchayat has a primary and middle school, a fair price shop, a health sub-centre and a sub post-office. Jawar panchayat has 527 households with a population of 2360. The panchayat has 4 primary schools and one senior secondary school, two fair price shops, a post office and a bank branch.

Gram Panchayat Haroli has a population of 3173 persons (1705 males and 1468 females) with 600 households. Haroli panchayat has three revenue villages. The panchayat has 9 ward members. The panchayat has good infrastructural facilities with 6 schools (primary, secondary as well as senior secondary), a government college, a fair price shop, a civil hospital, three primary health centres, three bank branches and an employment exchange office. Sansowal was the other selected panchayat in Haroli block at a distance of 2.5 km from block headquarters. The panchayat has 486 households with a population of 2550. The population

Table 4.4 Demographic and institutional characteristics of selected panchayats of Una district

Sr. No.	Particulars	Amb block					Haroli block				
		Amb	**Mubarikpur**	**Nehri**	**Kuthiyari**	**Jawar**	**Haroli**	**Sansowal**	**Badhera**	**Dharampur**	**Kangar**
1.	Area (sq.km)	8.13	3.78	7.48	4.00	13.63	9.68	4.29	19.61	4.82	3.66
2.	Revenue Villages (No.)	6	2	13	1	7	3	2	1	1	1
3.	No.of wards	13	7	9	5	7	9	7	9	7	7
4.	Total no. of household	1980	534	786	419	527	600	486	873	433	622
5.	Population	7800	2169	3608	1728	2360	3173	2550	3721	1874	2913
6.	Sex-ratio	949	979	977	998	995	976	998	1024	1009	972
7.	Literacy rate (%)	81.70	73.40	80.40	77.50	77.80	76.10	74.00	75.30	72.10	76.90
8.	Number of schools	4	1	6	2	5	11	3	3	3	3
9.	Number of PHC	2	1	1	1	1	3	2	3	1	2
10.	Number of Fair Price Shops	5	2	2	1	2	1	1	1	1	1
11.	Number of Cooperative societies	1	0	1	1	2	1	1	1	1	0
12.	Number of post offices	1	1	1	1	1	1	1	1	1	1
13.	Number of bank branches	8	3	5	0	1	3	0	1	0	0
14.	Number of veterinary clinics	1	1	1	1	1	1	1	1	1	1

comprises of 1475 males and 1075 females. The panchayat has 2 revenue villages and has 7 ward members. The panchayat has two primary schools and a middle school, two primary health centres, a fair price shop, a post office and a fertilizer depot. Badhera panchayat having a population of 3721 with 873 households is located at a distance of 8.3 km from the block headquarters. The panchayat has adequate educational and infrastructural facilities. Dharampur panchayat has a population of 1874 and 433 households. The population consists of 918 males and 956 females. The panchayat is located at a distance of 2.7 km from the block headquarters at Haroli. The panchayat has one revenue village. The panchayat has 3 schools (primary, middle and a senior secondary), a primary health centre, a fair price shop, a veterinary clinic, a post office and a cooperative society. Gram Panchayat Kangar is at a distance of 3.4 km from block headquarters at Haroli. According to Census 2011, the panchayat has 622 households with a population of 2913 persons, comprising of 1757 males and 1156females. Other than the panchayat office, there are 2 primary schools, 1 middle school, a senior secondary school, a veterinary clinic, a dispensary, a cooperative society and a post office in the panchayat (Table 4.4).

Table 4.5 shows the land utilization pattern for the selected panchayats in Una district. In Amb block, 12.2 ha area is under forest in Amb panchayat, 75 ha in Jawar panchayat while in Haroli block 40 ha area is covered by forest in Sansowal panchayat and 373.7 ha in Badhera panchayat. The net sown area in Amb panchayat is 382 ha (47.02%), 133 ha (35.17%) in Mubarikpur panchayat, 239 ha (31.95%) in Nehri panchayat, 158 ha (39.5%) in Kuthiyari panchayat and 138 ha (10.12%) in Jawar panchayat. In Haroli block net sown area is 170 ha (17.56%) in Haroli panchayat, 205 ha (47.79%) in Sansowal panchayat, 575.2 ha (29.33%) in Badhera panchayat, 153 ha (31.74%) in Dharampur panchayat, 160 ha (43.72%) in Kangar panchayat.

Table 4.5 Land utilization pattern of selected panchayats of Una district

(ha)

Sr. No.	Particulars	Amb					Haroli				
		Amb	Mubarikpur	Nehri	Kuthiyari	Jawar	Haroli	Sansowal	Badhera	Dharampur	Kangar
1.	Forests	12.20 (1.50)	0	0	0	75.00 (5.51)	0	40.00 (9.32)	373.70 (19.06)	0	0
2.	Barren and unculturable land	104.00 (12.80)	162.00 (42.83)	267.00 (35.70)	26.00 (6.50)	90.00 (6.60)	180.00 (18.60)	59.00 (13.75)	0	166.00 (34.43)	34.00 (9.29)
3.	Land put to non-agricultural uses	69.60 (8.56)	30.70 (8.12)	113.00 (15.11)	125.00 (31.25)	82.00 (6.02)	178.00 (18.39)	6.00 (1.40)	0	0	2.00 (0.54)
4.	Culturable wasteland	124.00 (15.26)	47.80 (12.64)	4.00 (0.53)	12.00 (3.00)	120.00 (8.80)	200.00 (20.66)	0	100.00 (5.09)	0	36.00 (9.83)
5.	Area under pasture/grazing	75.70 (9.32)	2.00 (0.53)	44.00 (5.88)	37.00 (9.25)	76.20 (5.59)	165.00 (17.05)	93.00 (21.68)	0	0	18.00 (4.92)
6.	Land under miscellaneous tree crops etc.	4.30 (0.53)	2.70 (0.71)	18.00 (2.41)	10.00 (2.5)	17.00 (1.25)	0	26.00 (6.06)	11.10 (0.57)	163.00 (33.82)	2.00 (0.55)
7.	Fallow land	34.00 (4.18)	0	16.00 (2.14)	19.00 (4.75)	9.00 (0.66)	70.00 (7.23)	0	0	0	114.00 (31.15)
8.	Net sown area	382.00 (47.02)	133.00 (35.17)	239.00 (31.95)	158.00 (39.50)	138.00 (10.12)	170.00 (17.56)	205.00 (47.79)	575.20 (29.33)	153.00 (31.74)	160.00 (43.72)

*Figures in parentheses represent percentage of total area
*Source: District Census Handbooks

In Solan district, two blocks namely, Solan and Dharampur were selected. Five panchayats selected in Solan block were Saproon, Chewa, Barog, Jaunaji and Seri. Saproon panchayat has four revenue villages and 11 wards. The panchayat is located at a distance of 3.7 km from block headquarters at Solan. The panchayat has all infrastructural facilities like veterinary clinic, fair price shop, schools, post office, bank branches and primary health centre in its area. Chewa panchayat comprising of thirteen revenue villages has a population of 2279 with 546 households. The panchayat has a homeopathic medical college and three primary, two middle and one senior secondary school. Chewa panchayat has a fair price shop, a cooperative society, a post office and three bank branches. Barog panchayat located at a distance of 8 km from block headquarters has a population of 2417 with 11 revenue villages. The panchayat has five primary schools, one senior secondary school, three private B.ED colleges, a private university, two fair price shops, two veterinary clinics, a post

office and three bank branches. Jaunaji panchayat is located at a distance of 8 km from block headquarters. The panchayat has a population of 2075 with 510 households. The panchayat has a cooperative society, two primary health centres, schools, a veterinary clinic, a fair price shop and a bank branch. Seri panchayat with 9 revenue villages and a population of 1626 has all the required infrastructural facilities in its area.

In Dharampur block the panchayats selected were Dharampur, Hurang, Jabli, Rauri and Kotbeja. Dharampur panchayat with 4 revenue villages has 11 ward members and 1550 households with a population of 5520. This panchayat office has recruited sanitation staff, electricians and peons on their own. The panchayat has all religious communities living harmoniously in their area. The panchayat has adequate infrastructural facilities like schools, a government college, community health centre, two private nursing homes, three fair price shops, seven bank branches, post office and an agricultural credit society. Hurang panchayat has five ward members with a population of 1812 persons and eleven revenue villages. The panchayat has three schools, an ayurvedic dispensary, a fair price shop, a veterinary clinic and a post office. Jabli panchayat is located at a distance of 9.5 km from block headquarters and has a population of 5234 with 845 households and 23 revenue villages. The panchayat has seven primary schools, one senior secondary school, three primary health centres, two fair price shops, a sub-post office, two bank branches, a cooperative society and a veterinary dispensary. The next selected panchayat was Rauri at a distance of 4.2 km from block headquarters. The panchayat has a population of 3023 with 23 revenue villages. The panchayat has five schools, a veterinary clinic, a fair price shop and a post office. Kotbeja panchayats comprises of 9 wards and 530 households and has all basic infrastructural facilities within the panchayat area(Table 4.6).

Table 4.6 Demographic and institutional characteristics of selected panchayats of Solan district

Sr. No.	Particulars	Solan block					Dharampur block				
		Saproon	**Jaunaji**	**Barog**	**Chewa**	**Seri**	**Dharampur**	**Hurang**	**Jabli**	**Rauri**	**Kotbeja**
1.	Area (sq.km)	2.45	6.86	4.53	3.52	2.95	1.59	4.36	7.54	9.11	8.83
2.	Revenue Villages (No.)	4	19	11	13	9	4	11	23	23	27
3.	No. of wards	11	7	7	7	7	11	5	9	7	9
4.	Total no. of household	487	510	521	546	395	1550	454	875	684	530
5.	Population (No.)	3890	2075	2417	2279	1626	5520	1812	5234	3023	2367
6.	Sex-ratio	868	852	967	948	848	961	945	845	847	910
7.	Literacy rate (%)	82.80	73.60	76.50	74.00	78.00	82	75.20	72.94	73.93	74.66
8.	Number of schools	6	5	6	6	4	4	3	8	5	4
9.	Number of PHC	1	2	2	1	1	1	1	3	1	2
10.	Number of Fair Price Shops	1	0	2	1	1	3	1	2	1	2
11.	Number of Cooperative societies	0	1	0	1	0	1	0	1	0	0
12.	Number of post offices	1	2	1	1	0	1	1	1	1	1
13.	Number of bank branches	3	1	4	4	0	10	1	2	0	2
14.	Number of veterinary clinics	1	1	2	1	1	1	1	1	1	1

Perusal of Table 4.7 shows the land utilization pattern for the selected panchayats in Solan district. The area under forest is almost negligible in the selected panchayats with only Seri panchayat having 1 ha area under forest. In Dharampur block, 38.80 ha is under forest in Hurang panchayat, 1.70 ha in Jabli panchayat and 26.60 ha in Kotbeja panchayat. The net sown area in Saproon panchayat is 48.2 ha (19.71%), 153.70 ha (22.41%) in Jaunaji panchayat, 10.10 ha (2.23%) in Barog panchayat, 81.40 ha (23.12%) in Chewa panchayat and 75.80 ha (25.66%) in Seri panchayat. In Dharampur block net sown area is 39.40 ha (24.81%) in Dharampur panchayat, 93.90 ha (21.53%) in Hurang panchayat, 211 ha (28.00%) in Jabli panchayat, 167.50 ha (18.39 %) in Rauri panchayat and 184.30 ha (20.88%) in Kotbeja panchayat.

Table 4.7Land utilization pattern of selected panchayats of Solan district

(ha)

Sr. No.	**Particulars**	**Solan**					**Dharampur**				
		Saproon	**Jaunaji**	**Barog**	**Chewa**	**Seri**	**Dharampur**	**Hurang**	**Jabli**	**Rauri**	**Kotbeja**
1.	Forests	0	0	0	0	1.00 (0.34)	0	38.80 (8.89)	1.70 (0.23)	0	26.60 (3.01)
2.	Barren and unculturable land	72.00 (29.45)	197.90 (28.85)	166.20 (36.71)	78.80 (22.38)	79.80 (27.01)	15.20 (9.57)	106.60 (24.44)	263.50 (34.93)	262.10 (28.77)	176.70 (20.02)
3.	Land put to non-agricultural uses	68.00 (27.81)	89.50 (13.05)	67.50 (14.91)	65.90 (18.72)	92.90 (31.45)	68.00 (42.82)	77.80 (17.84)	119.50 (15.84)	109.30 (12.00)	84.90 (9.62)
4.	Culturable wasteland	21.30 (8.71)	26.00 (3.79)	22.60 (4.99)	12.40 (3.52)	26.70 (9.04)	2.00 (1.26)	19.20 (4.40)	57.40 (7.61)	71.00 (7.79)	15.30 (1.73)
5.	Area under pasture/grazing	31.50 (12.88)	158.20 (23.06)	82.70 (18.27)	79.80 (22.66)	17.40 (5.89)	21.60 (13.60)	92.80 (21.28)	97.30 (12.90)	314.60 (34.54)	271.00 (30.71)
6.	Land under miscellaneous tree crops etc.	0	0	0	30.30 (8.61)	0	12.50 (7.87)	6.60 (1.51)	2.10 (0.28)	6.90 (0.76)	13.60 (1.54)
7.	Fallow land	3.40 (1.39)	10.60 (1.55)	2.80 (0.62)	0.80 (0.23)	0	0	0	2.10 (0.28)	1.80 (0.20)	4.00 (0.45)
8.	Net sown area	48.20 (19.71)	153.70 (22.41)	10.10 (2.23)	81.40 (23.12)	75.80 (25.66)	39.40 (24.81)	93.90 (21.53)	211.00 (28.00)	167.50 (18.39)	184.30 (20.88)

*Figures in parentheses represent percentage of total area

*Source: District Census Handbooks

In district Chamba, two blocks namely, Bhattiyat and Mehla were selected. Five panchayats selected in Bhattiyat were Hatli, Gola, Thulel, Garnota and Ghatasni. Hatli panchayat with an area of 0.39 sq.km is located at a distance of 30 km from block headquarters at Bhattiyat. When one enters from Kangra district into Chamba,

Hatli is the first panchayat and hence its called gateway to Chamba from east side. The panchayat has 5 wards with a population of 1982 and has only one revenue village. The panchayat has no post office, cooperatives and bank branches but has a FPS, school and a PHC. The next selected panchayat was Gola comprising of 2 revenue villages with a population of 1396. The panchayat is located among dense forests and pine trees. The panchayat has 5 wards out of which only 4 are connected by motorable roads. The panchayat has two primary schools, one secondary and senior secondary school, an ayurvedic clinic and a FPS. Thulel was the next selected panchayat located on the right bank of Brahal Khadd. The panchayat has 7 wards and a population of 1668 people. The panchayat has two wards not connected by roads, has two primary schools and a senior secondary school, one PHC, a cooperative credit society and a fair price shop. Garnota panchayat with three revenue villages has an area of 5.6 sq. km and a population of 3176. The panchayat has three schools and a fair price shop.

In Mehla block, the panchayats chosen were Mehla, Rajera, Karian, Gagla and Kuther. Mehla panchayat has only one revenue village and the panchayat has five schools, a health sub-centre and a PDS shop. Rajera panchayat is located at a distance of 5 km. from Mehla and comprises of four revenue villages. The panchayat has three primary and two middle schools, a health sub-centre, FPS shop and a veterinary clinic. Karian panchayat is located at a distance of 7 km from block headquarters. The panchayat has an area of 6.5sq.km, and a population of 2951. The panchayat has 4 primary schools, 2 middle schools and two senior secondary schools (one under NHPC). The panchayat has a PHC and a hospital which is run by NHPC, two FPS shops and a seed-fertilizer shop. Gagla panchayat has two revenue villages and a population of 1779. The other selected panchayats were Gagla and Kuther which have an area of 4.7 sq.km. and 6.9 sq.km. respectively. The panchayats have fairly moderate infrastructural endowment (Table 4.8).

Table 4.8Demographic and institutional characteristics of selected panchayats of Chamba district

Sr. No.	Particulars	Bhattiyat block					Mehla block				
		Hatli	Gola	Thulel	Garnota	Ghatasani	Mehla	Rajera	Karian	Gagla	Kuther
1.	Area (sq.km)	0.39	6.08	6.84	5.57	2.22	1.40	9.73	6.50	4.77	6.99
2.	Revenue Villages (No.)	1	2	4	3	3	1	4	3	2	2
3.	No.of wards	5	5	5	7	5		7	9	5	6
4.	Total no. of household	460	339	379	708	286	428	658	735	383	407
5.	Population (No.)	1982	1396	1668	3176	1179	1805	2972	2951	1779	1954
6.	Sex-ratio	980	995	1012	1047	799	1131	981	949	1006	988
7.	Literacy rate (%)	74.40	71.20	69.50	68.60	66.30	74.60	57.30	73.80	60.20	47.80
8.	Number of schools	1	3	3	3	2	3	5	8 (	5	3
9.	Number of PHC	1	1	1	0	0	1	1	1	0	1
10.	Number of Fair Price Shops	1	1	1	1	1	1	1	2	2	1
11.	Number of Cooperative societies	0	0	1	0	0	1	0	0	0	0
12.	Number of post offices	0	0	0	0	0	1	0	0	0	1
13.	Number of bank branches	0	0	0	0	0	0	0	2	0	1
14.	Number of veterinary clinics	1	1	1	0	1	1	1	1	1	1

Among the less developed districts, area under forest is comparatively more than developed districts. In Bhattiyat block Hatli, Gola, Thulel and Ghatasni panchayats account for 12.80 per cent, 11.50 per cent, 24.30 per cent and 1.84 per cent area under forest, respectively, while in Mehla panchayat Rajera has 25.20 per cent area under forest. The net sown area under Hatli is 4 ha, Gola has 115.10 ha, 116.90 ha in Thulel, 228.80 ha in Garnota and 64.80 ha in Ghatasni while in Mehla the net sown area is 66 ha, 168.20 ha in Rajera, 145.70 ha in Karian, 78.10 ha in Gagla and 109 ha in Kuther panchayat (Table 4.9)

Table 4.9Land utilization pattern of selected panchayats of Chamba district

(ha)

Sr. No.	Particulars	Bhattiyat					Mehla				
		Hatli	Gola	Thulel	Garnota	Ghatasani	Mehla	Rajera	Karian	Gagla	Kuther
1.	Forests	5.00 (12.82)	70.10 (11.52)	166.80 (24.37)	0	4.10 (1.84)	0	245.20 (25.21)	0	0	0
2.	Barren and unculturable land	12.00 (30.77)	0	0	27.50 (4.94)	0	34.80 (24.89)	0	0	0	0
3.	Land put to non-agricultural uses	0	29.70 (4.88)	57.60 (8.42)	38.40 (6.90)	18.50 (8.32)	7.30 (5.22)	62.70 (6.45)	93.90 (14.46)	54.20 (11.37)	19.90 (2.85)
4.	Culturable wasteland	5.00 (12.82)	43.90 (7.22)	52.50 (7.67)	19.40 (3.48)	28.80 (12.96)	2.40 (1.72)	12.90 (1.33)	18.20 (2.80)	12.20 (2.56)	9.50 (1.36)
5.	Area under pasture/grazing	0	342.60 (56.33)	280.30 (40.96)	234.40 (42.11)	101.80 (45.79)	28.30 (20.24)	468.20 (48.13)	348.80 (53.70)	332.20 (69.67)	560.20 (80.19)
6.	Land under miscellaneous tree crops etc.	8.00 (20.51)	0	0	0	0	0	0	0	0	0
7.	Fallow land	5.00 (12.82)	0	3.90 (0.57)	0	0.60 (0.27)	0	0	29.50 (4.54)	0	0
8.	Net sown area	4.00 (10.26)	115.10 (18.92)	116.90 (17.08)	228.80 (41.01)	64.80 (29.15)	66.00 (47.21)	168.20 (17.29)	145.70 (22.43)	78.10 (16.38)	109 (15.60)

*Figures in parentheses represent percentage of total area
*Source: District Census Handbooks

In Sirmaur district, Sangrah and Shillai blocks were selected. In Shillai block, the first selected panchayat was Shillai. Shillai is located at a distance of 48 km from district headquarters at Nahan. It is situated at the border of Sirmaur and Uttrakhand. The panchayat has only one revenue village and a population of 5790. The area has progressed in recent years and now has one primary, secondary and

senior secondary school each. Along with the schools a degree college has also been started at Shillai. The panchayat has an ITI, a CHC, two FPS shops, a cooperative society, a bank branch and a post office. Balikoti was the next selected panchayat which has been selected under Sansad Adarsh Gram Yojana. The panchayat is located at a distance of 10 km from Shillai comprising of three revenue villages. The panchayat has eight schools, a post office, a veterinary clinic and a FPS shop. The other selected panchayats were Maanal, Pav Maanal and Gawali. The panchayats are fairly less endowed with infrastructural facilities.

In Sangrah block the selected panchayats were Sangrah, Sangna, Deuri Kharahan, Charana and Baunal Kakog. All the selected panchayats had moderate infrastructural and institutional facilities (Table 4.10).

Table 4.10 Demographic and institutional characteristics of selected panchayats of Sirmaur district

Sr. No.	Particulars	Shillai					Sangrah				
		Shillai	Balikoti	Maanal	Paav maanal	Gawali	Sangrah	Sangna	Deuri Kharahan	Charana	Baunal Kakog
1	Area (sq.km)	16.53	30.01	5.55	2.74	7.27	14.69	8.25	7.26	12.33	5.99
2	Revenue Villages (No.)	1	3	1	2	2	3	2	3	3	4
3	No.of wards	9	9	5	5	7	7	7	5	7	5
4	Total no. of household	495	621	323	259	412	629	401	290	437	280
5	Population (No.)	5790	3833	1851	1417	2192	2954	2213	1409	2212	1294
6	Sex-ratio	955	831	881	949	875	942	865	979	993	895
7	Literacy rate (%)	64.50	61.70	57.30	57.20	58.00	71.80	60.00	64.50	73.20	60.50
9	Number of schools	3	8	3	4	4	3	2	5	5	4
10	Number of PHC	1	0	0	1	1	1	1	1	1	0
11	Number of Fair Price Shops	2	1	0	1	1	1	1	1	1	1
12	Number of Cooperative societies	1	0	0	0	0	1	0	0	0	1
13	Number of post offices	1	1	0	1	1	1	1	1	1	0
14	Number of bank branches	3	0	0	0	0	2	1	2	1	0
15	Number of veterinary clinics	1	1	0	0	1	1	1	1	1	1

Table 4.11 shows the land utilization pattern for the selected panchayats in Sirmaur district. In Shillai block, 100 ha area is under forest in Shillai panchayat, 103 ha in Balikoti, 1 ha in Paav Maanal and 38 ha in Gawali panchayat while in Sangrah block 302.3 ha is covered by forest in Sangrah panchayat, 267 ha in Sangna panchayat, 356 ha in Deuri Kharahan, 248.8 ha in Charana and 112.6 in Baunal Kakog panchayat. The net sown area in Shillai panchayat is 300 ha (18.15 %), 371 ha (12.36 %) in Balikoti, 171 ha (30.81%) in Maanal panchayat, 65 ha in Paav Maanal (23.72 %) and 169 ha (23.25%) in Gawali panchayat. In Sangrah block net sown area is 234 ha (15.93%) in Sangrah panchayat, 145 ha (17.58%) in Sangna panchayat, 86 ha (11.85%)in Deuri Kharahan panchayat, 167.2 ha (13.56%) in Charana panchayat, 93.3 ha (15.57%) in Baunal Kakog panchayat.

Table 4.11 Land utilization pattern of selected panchayats of Sirmaur district

(ha)

Sr. No.	**Particulars**	**Shillai**					**Sangrah**				
		Shillai	**Balikoti**	**Maanal**	**Paav maanal**	**Gawali**	**Sangrah**	**Sangna**	**Deuri Kharahan**	**Charana**	**Baunal Kakog**
1.	Forests	100.00 (6.05)	103.00 (3.43)	0	1.00 (0.36)	38.00 (5.23)	302.30 (20.58)	267.00 (32.36)	356.00 (49.04)	248.80 (20.17)	112.60 (18.79)
2.	Barren and unculturable land	22.00 (1.33)	76.00 (2.53)	28.00 (5.05)	6.00 (2.19)	6.00 (0.83)	8.10 (0.55)	44.00 (5.33)	5.00 (0.69)	7.00 (0.57)	46.50 (7.76)
3.	Land put to non-agricultural uses	102.00 (6.17)	0	64.00 (11.53)	17.00 (6.20)	49.00 (6.74)	114.60 (7.80)	16.00 (1.94)	22.00 (3.03)	40.90 (3.32)	43.60 (7.28)
4.	Culturable wasteland	52.00 (3.15)	46.00 (1.53)	11.00 (1.98)	10.00 (3.65)	45.00 (6.19)	162.30 (11.05)	18.00 (2.18)	5.00 (0.69)	29.80 (2.42)	26.40 (4.41)
5.	Area under pasture/grazing	528.00 (31.94)	311.00 (10.36)	137.00 (24.68)	94.00 (34.31)	172.00 (23.66)	173.30 (11.80)	282.00 (34.18)	234.00 (32.23)	511.30 (41.54)	15.70 (2.62)
6.	Land under miscellaneous tree crops etc.	522.00 (31.58)	242.00 (8.06)	135.00 (24.32)	74.00 (27.00)	242.00 (33.29)	447.70 (30.48)	40.00 (4.85)	18.00 (2.48)	159.20 (12.91)	260.00 (43.39)
7.	Fallow land	0	1.00 (0.03)	9.00 (1.62)	0	6.00 (0.83)	8.80 (0.59)	7.00 (0.85)	0	10.00 (0.81)	0
8.	Net sown area	300.00 (18.15)	371.00 (12.36)	171.00 (30.81)	65.00 (23.72)	169.00 (23.25)	234.00 (15.93)	145.00 (17.58)	86.00 (11.85)	167.20 (13.56)	93.30 (15.57)

*Figures in parentheses represent percentage of total area
*Source: District Census Handbooks

Perusal of tables show that panchayats in developed districts have comparatively better infrastructural facilities along with better literacy rates. The less developed districts though show better ecological conditions in terms of forest cover.

The area allocated to pastures is also comparatively high in the selected panchayats of Sirmaur and Chamba districts. The percentage of area put to non-agricultural uses is lower in selected panchayats of under- developed districts of Chamba and Sirmaur implying that people in less developed districts still primarily depend on agriculture for means of livelihood and it still accounts for their mainstay in livelihood. The above findings clearly brings home the fact that development puts a stress on the ecology, therefore, development needs to be holistic keeping in view the ecological balance.

4.1.5Operational Mechanism of PRIs

The panchayats are the grassroot level bodies constituted to help the rural populace to be governed by them as well as for them. The Article 243A has given constitutional recognition to the Gram Sabha to exercise powers and perform functions at the village level as the legislature of a state may provide by law. The Gram Sabha ensures self-governance along with transparent and accountable functioning of the gram panchayat. It is a way of ensuring direct, participative democracy at the grassroot level by providing equal opportunity to all citizens of a village or group of villages to discuss and criticize, approve or reject proposals and also assess the performance of development activities undertaken by panchayats. For effective and efficient functioning of panchayats, there is requirement of attendance of minimum one-fourth members of Gram Sabha which is referred to as quorum. It was observed in all the selected panchayats that meetings of Gram Sabha were scheduled four times annually but the quorum was not met more than two times in most of the selected panchayats. Rashid and Sen (2010) in their sudy in Gaya district of Bihar also found similar results that only 17 to 35 per cent respondents participated in Gram Sabha meetings despite Gram Sabhas being held regularly in the panchayats as villagers felt their plans and demands were not considered.

The meetings of Gram Sabha are generally headed by the Panchayat Pradhan and the agenda is mainly to identify the beneficiaries under various government schemes and decide on the development works to be undertaken. The office bearers of each panchayat meet once or twice every month to review the progress of various developmental works undertaken in their respective panchayats. For effective implementation, the panchayats have formed working, budget and vigilance

committees that are headed by a ward member or the members of the village. Though after interacting with office bearers, it was revealed that meetings of Gram Sabha were not held regularly as attendance was quite low and people did not participate effectively, especially, in developed districts (Fig.4.1 &4.2). Each panchayat has formed an *Up-GramSabha* which meets twice annuallyfor each *ward* of the Gram Sabha and all members of Gram Sabha who were residents of that *ward*were members of *Up-Gram Sabha*. The responsibility of convening the meetings of Up-Gram Sabha is vested with the member of gram panchayat representing that ward. In order to maintain transparency and accountability in the functioning of panchayats, information regarding list of beneficiaries and list of schemes along with sanctioned amount thereto was displayed on the notice boards of the Panchayats (Figure 4.3).

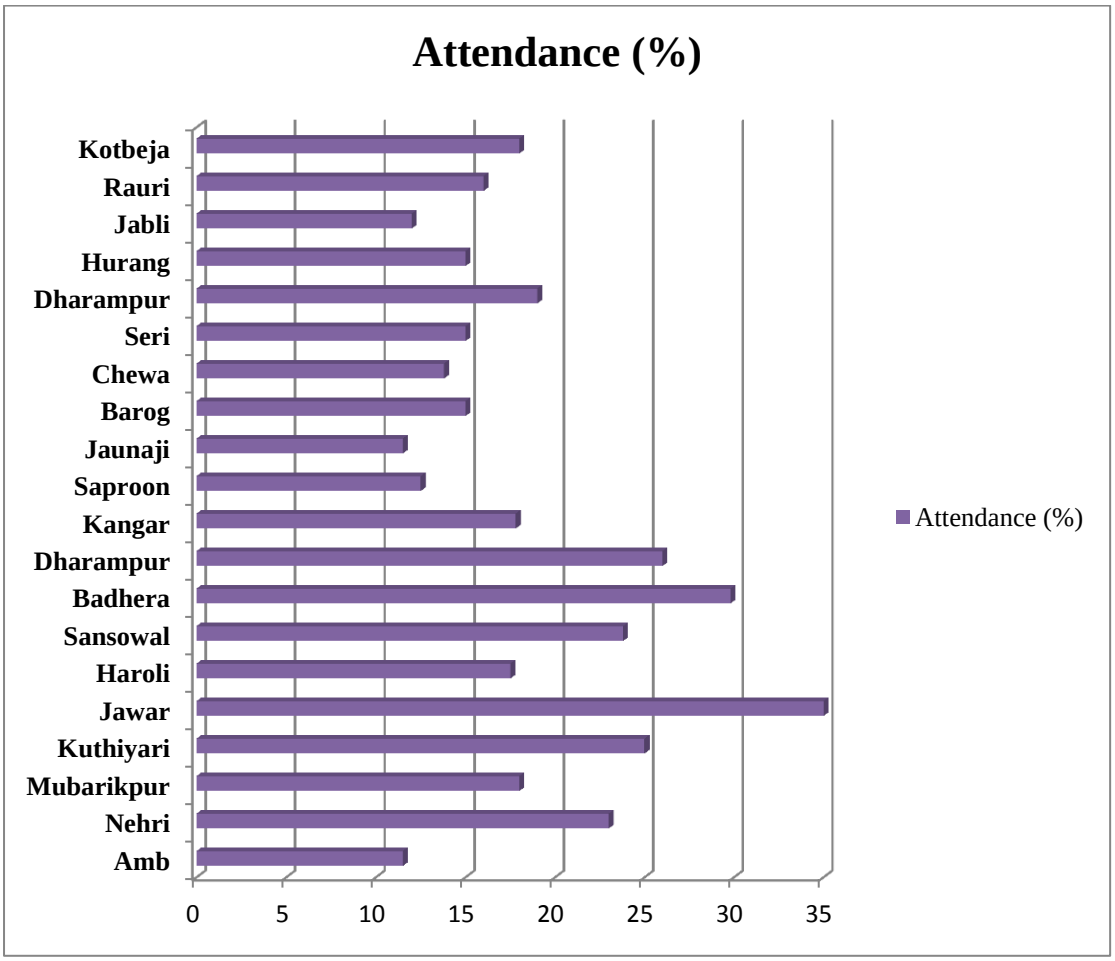

Figure 4.1: Attendance of members of Gram Sabha in selected panchayats of Solan and Una district

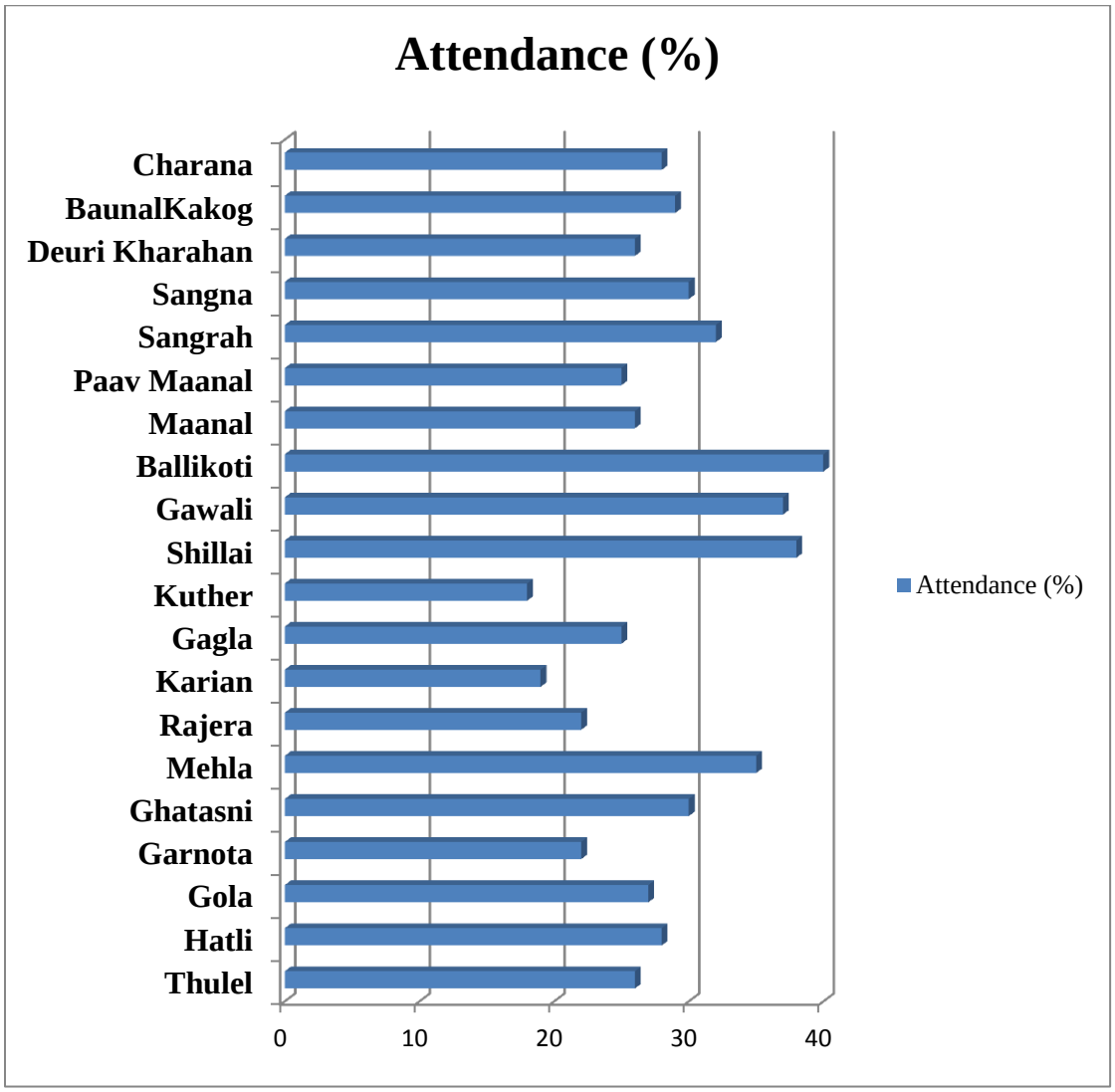

Figure 4.2: Attendance of members in Gram Sabha in selected panchayats of Chamba and Sirmaur districts

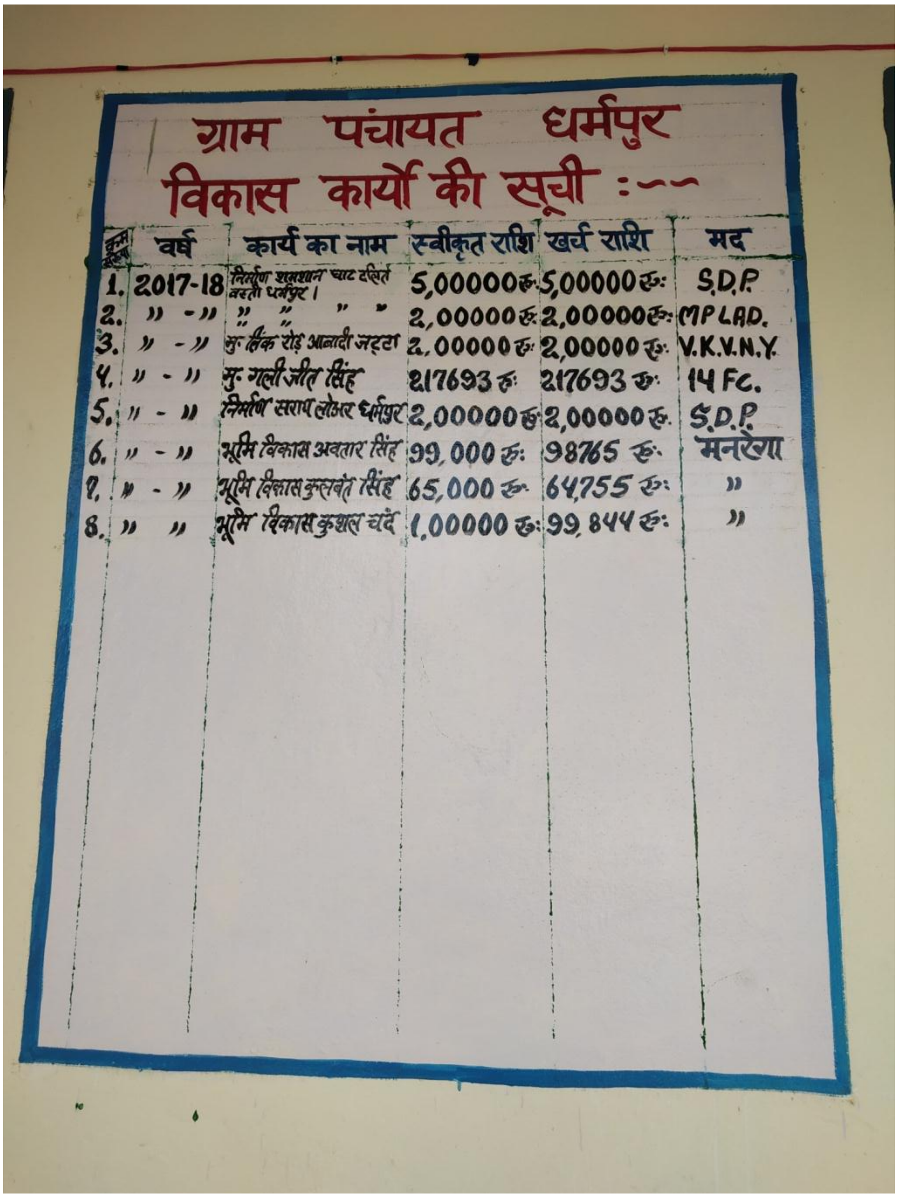

Fig 4.3: Distribution of beneficiaries under various schemes of panchayat Dharampur in Haroli block

Himachal Pradesh isone among the few states in India which is providing monthly honorarium to all the elected representatives of Panchayati Raj Institutions. The honorarium being provided to elected representatives of PRIs is given below:

Table 4.12Honorarium provided to elected representatives of PRIs (as on 31st March 2021)

Sr.No.	Particular of elected representatives	Rates of honorarium
1.	Pradhan of GP	4000/-
2.	Up-Pradhan of GP	2500/-
3.	Member of GP	Rs. 240/- per meeting subject to maximum of two meeting in a month.

The gram panchayats have been vested with various powers under the Constitution to adequately regulate and maintain governance at grassroot level. They have been empowered to hear and decide cases relating to minor offences, the Vaccination Act, 1880, the Cattle Trespass Act, 1871, the Himachal Pradesh Juveniles (Prevention of smoking Act), 1952 and the Public Gambling Act, 1867 as well as decide upon applications for maintenance under section 125 of the Cr. P.C.The Gram Panchayats are responsible for safeguarding public property such as sign boards, mile stones on public roads, paths, irrigation and water supply schemes, public taps, public wells, hand pumps, community centers, mahila mandal bhawans, school buildings, health institution buildings etc.They are authorized to levy taxes, fees, fines and cess.

The panchayats were devolved powers, functions and responsibilities relating to 15 departments namely Agriculture, Animal Husbandry, Ayurveda, Education, Food & Supplies, Forest, Health & Family Welfare, Horticulture, Industries, Irrigation & Public Health, Public Works, Revenue, Rural Development and Social Justice & Empowerment on 31st July, 1996 covering 29 subjects as mentioned in the 11th Schedule of the Constitution in order to make them viable institutions of self-

governance. Along with these powers, PRIs are bestowed with executive powers, *viz.*, preparation of micro-plans,deciding about location of institutions of public utility, selection of beneficiaries under various schemes by gram sabha, Pradhan or Up-Pradhan of gram panchayats have been empowered to issue fishing licence to the anglers for sport fishing and cess on liquor bottles sold in the rural areas. The ownership of primary school buildings has been transferred to the Gram Panchayats and the maintenance/repair and control of primary school buildings is now the responsibility of Gram Panchayats. The panchayats are vested with powers to issue permits for the personal bonafide use for extraction of sand, stone, bajri and slates, etc.

Under sub-section (1) of section 118 of the Himachal Pradesh Panchayati Raj Act, 1994 anaudit agency is formulated in the State Panchayati Raj Department to conduct audit of accounts of Panchayats. With a view to have proper financial control on income and expenditure of Panchayats, Deputy Controller (Audit) and District Audit Officer at the Headquarters and one District Audit Officer in each district has been appointed. The District Audit Officers have been placed under the control of District Panchayat Officers. Panchayat Auditors have been posted in each district in proportion to the number of Gram Panchayats *i.e.* one Auditor against 35 Panchayats. The Audit of Gram Panchayats are conducted every year. Apart from this audit, a social audit as well as audit by CAG is also conducted.

4.2 Extent of development of PRIs

The overall socio-economic development of rural populace is the main aim of PRIs which includes creation of amenities and facilities in the panchayat area to improve the living standard of rural inhabitants. The principal component analysis (PCA) was employed to devise the development index for various selected panchayats. For selected panchayats, component factor loadings for different development variables have been presented in Table 4.13. The variables that played significant role in extent of development in various panchayats were availability of road connectivity, drinking water facility, educational facilities, existing cooperative

societies, bank branches (per 1000 households), health institutions (per 1000 households), marketing infrastructure, extent of women literacy, sex ratio, veterinary clinics and formation of self-help groups.

Table 4.13 Principal component factor loadings on different development indicators

Sr.No.	Variables	P1	P2	P3	P4
1.	Villages linked to roads (km.)	0.45	-0.26	-0.28	0.34
2.	Households having drinking water facility (No.)	0.75	0.14	-0.12	0.01
3.	Educational institutes (No.)	0.39	-0.56	-0.08	0.43
4.	Cooperative societies (No.)	0.28	0.43	-0.62	0.26
5.	Banks per 1000 households (No.)	0.53	-0.57	0.19	0.19
6.	Health institutions per 1000 households (No.)	0.08	0.35	0.63	-0.05
7.	Marketing societies (No.)	0.58	-0.13	-0.09	-0.56
8.	Mandis available (No.)	0.76	0.33	0.21	-0.28
9.	Women literacy (%)	0.82	-0.04	-0.04	-0.18
10.	Self Help Groups (No.)	0.11	0.16	0.67	0.52
11.	Sex ratio	0.20	0.74	-0.20	0.35
12.	Veterinary clinics (No.)	0.86	0.08	0.18	0.07

The eigen values corresponding to all four principal components and variability associated with each component for different panchayats have been presented in Table 4.14. It was observed that the first eigen value (3.66) captured maximum variability (30.54%), second eigen value (1.74) explained second highest variability (14.49%) followed by third eigen value (1.49) and fourth eigen value

(1.23). It was found that the cumulative variability of 67.64 per cent was explained by four principal components together. Thus, the maximum variability was captured by first four eigen values and corresponding four components were selected for further analysis to compute the development index for various selected panchayats.

Table 4.14 Eigen values and percentage of variation for panchayats

Particulars	P1	P2	P3	P4
Eigen value	3.66	1.74	1.49	1.23
Variability (%)	30.54	14.49	12.41	10.21
Cumulative (%)	30.54	45.03	57.43	67.64

The development index for various panchayats was computed and the results have been presented in Table 4.15. The perusal of this table reveals that 15 per cent (6 no.) of panchayats primarily of Una and Solan districts were very highly developed fairing well in all the development indicators. Around 22.50 per cent (9 no.) panchayats were highly developed which were namely, Badhera, Kangar, Sansowal, Dharmapur, Barog of Una district; Chewa of Solan district and Hatli, Kariyan of Chamba district. The development of Kariyan panchayat can also be attributed to the presence of NHPC in the area.

Among the moderately developed panchayats were Kuthiyari and Jawar of Una; Seri, Jaunaji, Hurang, Jabli, Kotbeja of Solan, Thulel, Gola, Ghatasni, Garnota, Rajera, Gagla, Kuther of Chamba, Shillai, Sangrah, Baunal Kakog and Charana of Sirmaur district accounting for 45 per cent (18 no.). The less developed panchayats were all from Chamba and Sirmaur district both being less developed districts thus showing that these panchayats still lag behind in developmental indicators. The less developed districts accounted for 17.50 percent (7 no.). The results put forth that primarily panchayats were moderately developed thus showing that panchayats in selected districts are on the path of development and are improving with time.

Table 4.15Distribution of panchayats according to development index for selected panchayats

Number:40

Sr.No.	Development category	Una	Solan	Chamba	Sirmaur	Total number of panchayats
1.	Very highly developed (>75%)	• Ambi • Haroli • Mubarikpur • Nehri	• Dharampur • Saproon	--	--	6 (15.00)
2.	Highly developed (50-75%)	• Badhera • Dharampur • Kangar • Sansowal	• Barog • Chewa	• Hatli • Kariyan		9 (22.50)
3.	Moderately developed (25-50%)	• Jawar • Kuthiyari	• Hurang • Jabli • Jaunaji • Kotbeja • Seri	• Gagla • Garnota • Ghatasni\ • Gola • Rajera • Kuther • Thulel	• Baunal Kakog • Charana • Sangrah • Shillai	18 (45.00)
4.	Less Developed (<25%)		• Rauri		• Balikoti • Deuri Kharahan • Gawali • Maanal • Paav Maanal • Sangna	7 (17.50)
5.	Overall development index			46.71		

*Figures in parentheses represent percentage

4.3 Socio-economic profile of sample households

The following section puts forth the important socio-economic characteristics of sample households *viz.*, size and structure of the farm families, literacy rate, land holdings, etc., in sample villages of selected districts.

4.3.1 Age and gender wise distribution

It is well accepted that decision making skills as well as rationality for assessing effectiveness of any programme/activity develops with age, hence age plays an important factor for taking these decisions. It is expected to have an impact on the respondents perception either positively or negatively as older respondents being more experienced can take better decisions while young respondents are more active and agile and hence quick to adapt to new technologies and programmes. The age wise distribution of respondents in the selected panchayats is given in Table 4.16. The table puts forth that maximum population in the developed districts was in the age group of 16-30 years (25.83%) closely followed by 31-45 years age group (25.44%). On the other hand the age group of 31-45 years accounted for the maximum population among under-developed districts (28.74%) followed by age group of 46-60 years (26.76%). Across all age groups the share of males was higher compared to females.

A considerable percentage *i.e.* 11.84 per cent and 8.54 percent of population for developed districts and under-developed districts, respectively, has been sent outside their native places for higher education amongst which ratio of girls was higher which showed that irrespective of developmental status girls were being given equal opportunities to pursue higher studies. Population below the age of 15 years, 16-30 years of age attending schools/colleges and above 60 years has not been included for estimating the availability of workforce. Population ranging between 16-60 years has been considered as available active workforce. In under-developed districts 68.14 per cent population was calculated as active work force whereas in developed districts the availability was 55.92 per cent.

Table 4.16 Age wise classification of sample households

(Number)

Age-groups (in years)	Developed districts			Under-developed districts		
	Male	Female	Total	Male	Female	Total
Upto 15	43 (16.04)	42 (17.00)	85 (16.50)	41 (12.85)	34 (11.72)	75 (12.32)
16-30	68 (25.37)	65 (26.32)	133 (25.83)	78 (24.45)	71 (24.48)	149 (24.46)
31-45	68 (25.37)	63 (25.51)	131 (25.44)	90 (28.21)	85 (29.31)	175 (28.74)
46-60	55 (20.52)	51 (20.65)	106 (20.58)	84 (26.33)	79 (27.24)	163 (26.76)
>60	34 (12.70)	26 (10.52)	60 (11.65)	26 (8.15)	21 (7.24)	47 (7.72)
Total	268 (100.00)	247 (100.00)	515 (100.00)	319 (100.00)	290 (100.00)	609 (100.00)
Population outside the home place for education (16-30 years)	30 (11.19)	31 (12.55)	61 (11.84)	26 (8.15)	26 (8.97)	52 (8.54)
Dependency ratio	118 (44.03)	109 (44.12)	227 (44.08)	103 (32.29)	91 (31.38)	194 (31.85)
Active workforce	150 (55.97)	138 (55.87)	288 (55.92)	216 (67.71)	199 (68.62)	415 (68.14)

*Figures in parentheses show percentage

4.3.2 Type of family and demographic features

The family structure and size are important indicators that determine the social and economic well-being of the family and play a vital role in decision-making process in the farm business. The distribution of sample households according to family structure and size is given in Table 4.17. More than 40 per cent of households in under-developed districts were having joint family structure where they had more than 6 members. This may be due to more dependence on agriculture and the families having joint assets. On the other hand, in developed districts nuclear family structure was more prevalent (70%).

Table 4.17 Average family size and family structure of sample households

Sr.No.	Particulars	Developed districts	Under-developed districts
1.	Family size		
i)	Males	2.44	3.34
ii)	Females	2.22	3.04
2.	Average family size	4.66	6.38
3.	Family structure		
i)	Nuclear	70 (70.00)	58 (58.00)
ii)	Joint	30 (30.00)	42 (42.00)
	Total	100 (100.00)	100 (100.00)

*Figures in parenthesis show percentage

4.3.3 Educational status

Education is an important parameter for accelerating the process of overall development of any society. The level of education becomes more significant when one has to take decisions regarding farm enterprises, availing government schemes or facilities. The gender-wise educational status of sample households has been shown in Table 4.18. It showed that literacy rate was considerably good in both developed and under-developed districts showing that education is being given due importance in the state. The percentage of people completing higher education like graduation and post graduation was higher in developed districts compared to under-developed districts.

Table 4.18 Educational status of sample households

Educational status	Developed districts			Under-developed districts		
	Male	Female	Total	Male	Female	Total
Illiterate	20 (7.46)	17 (6.88)	37 (7.18)	30 (9.40)	24 (8.28)	54 (8.87)
Non-school going	10 (3.73)	7 (2.83)	17 (3.31)	15 (4.70)	12 (4.14)	27 (4.43)
Primary	25 (9.33)	23 (9.31)	48 (9.32)	25 (7.84)	22 (7.59)	47 (7.72)
Matric	75 (27.99)	72 (29.15)	147 (28.54)	100 (31.35)	92 (31.72)	192 (31.53)
Senior Secondary	65 (24.25)	63 (25.51)	128 (24.85)	90 (28.21)	87 (30.00)	177 (29.06)
Graduate	45 (16.79)	41 (16.60)	86 (16.70)	40 (12.54)	38 (13.10)	78 (12.81)
Post Graduate	28 (10.45)	24 (9.72)	52 (10.10)	19 (5.96)	15 (5.17)	34 (5.58)
Total	268 (100.0)	247 (100.0)	515 (100.0)	319 (100.0)	290 (100.0)	609 (100.0)
Literacy Rate (%)	92.25	92.92	92.57	90.13	91.37	90.72

*Figures in parentheses shows percentages

4.3.4 Occupation and workforce

In all the sample households agriculture was the main occupation, 50.38 per cent and 54.43 per cent in developed and under-developed districts, respectively, followed by government service and pension contributing the next source of income. In the sample population women were more engaged in agriculture and they were responsible for carrying out animal care, milking, churning as well as field operations of weeding, transplanting and harvesting. They were also keeping up with attending and care of livestock. In both the developed and under-developed districts the next source of income was private jobs. In developed districts 3.79 per cent population is working as daily wage labourers as against 6.65 percent in under-developed districts. On an average in developed districts the active workforce available was 2.88 while in under-developed districts it was 4.15. This may be primarily due to more opportunities in developed districts and people from developed districts move out for better opportunities to cities or towns.

Table 4.19 Distribution of sample households as per occupation and workforce

Sr.No.	Particulars	Developed districts			Under-developed districts		
		Male	Female	Total	Male	Female	Total
1	**Main occupation**						
a	Agriculture	60 (44.12)	73 (57.03)	133 (50.38)	80 (47.62)	92 (62.16)	172 (54.43)
b	Government service & pension	40 (29.42)	32 (25.0)	72 (27.27)	34 (20.24)	24 (16.21)	58 (18.35)
c	Private job	21 (15.44)	18 (14.06)	39 (14.77)	34 (20.24)	23 (15.54)	57 (18.04)
d	Business	10 (7.35)	0	15 (5.68)	8 (4.76)	0	8 (2.53)
e	Daily wage labourers	5 (3.68)	5 (3.91)	10 (3.79)	12 (7.14)	9 (6.08)	21 (6.65)
	Total	136 (100.0)	128 (100.0)	264 (100.0)	168 (100.0)	148 (100.0)	316 (100.0)
2.	Average available work force	1.5	1.38	2.88	2.16	1.99	4.15

*Figures in parentheses shows percentages

4.3.5 Land resources

The most valuable resource in any rural economy is land. The distribution of land into cultivated land, fallows, pastures etc., is given in Table 4.20. The land holding size is the determinant of basic strength of the farming family and its usage shows how effectively this resource is utilised by farmers. The holding size in developed districts was 0.78 ha while in under-developed districts it was 0.60 ha. This can be attributed to difficult and undulating topography of district Chamba and Sirmaur where holdings were fragmented compared to plain topography in Una and Solan districts. The area under cultivated crops attributed to 71.79 per cent in developed districts while 80 per cent in under-developed districts. Pastures and grasslands contributed 10 per cent in under-developed districts and 7.69 per cent in developed districts. Area under fruit crops was comparatively more in developed districts (11.53%) than under-developed districts (5.00%).

Table 4.20 Land inventory of sample households

(Hectare/farm)

Sr.No	Particulars	Developed Districts	Under-developed districts
1.	Owned land	0.92	0.64
i.	Leased- in	0.02	0.00
ii.	Leased out	0.16	0.04
2.	Total	0.78 (100.00)	0.60 (100.00)
3.	Cultivated area under field crops	0.56 (71.79)	0.48 (80.00)
4.	Cultivated area under fruit crops	0.09 (11.53)	0.03 (5.00)
5.	Fallow land	0.09 (11.54)	0.02 (3.33)
6.	Pastures and grasslands	0.06 (7.69)	0.06 (10.00)
7.	Wasteland and barren land (uncultivable)	0.02 (2.56)	0.01 (1.67)

*Figures in parentheses show percentage

4.3.6 Livestock inventory

The respondents were also rearing livestock to meet requirements of milk and farm yard manure etc. The livestock inventory has been portrayed in Table 4.21. The milch animal were categorised according to breed and stage of milking. The average

number of local cows was 0.81 units in under-developed districts and 0.33 units in developed districts. The number of crossbred cows was 0.86 units and 0.38 units in developed and under-developed districts, respectively. The dry to wet ratio for local cows was 0.94 and 0.69 for developed and underdeveloped districts, for crossbred cows it was 0.48 and 0.36 in developed and uner-developed districts, respectively. The total investment on livestock per farm was Rs.47,937 for developed districts and Rs. 42,928 on under-developed districts.

Table 4.21 Composition of livestock population in sample households

(Per farm)

Sr.No.	Particulars	Developed Districts		Under-developed districts	
		No.	Value (Rs.)	No.	Value (Rs.)
1.	**Local cow**				
i	In milk	0.17 (51.52)	5914 (68.77)	0.48 (59.26)	14400 (82.14)
ii	Dry	0.16 (48.48)	2686 (31.23)	0.33 (40.74)	3132 (17.86)
iii	Sub-Total	0.33 (100.00)	8600 (100.00)	0.81 (100.00)	17532 (100.00)
	Dry to wet ratio	0.94		0.69	
2.	**Cross bred Cow**				
i	In milk	0.58 (67.44)	20328 (71.46)	0.28 (73.68)	11200 (79.23)
ii	Dry	0.28 (32.56)	8120 (28.54)	0.10 (26.32)	2936 (20.77)
iii	Sub-Total	0.86 (100.00)	28448 (100.00)	0.38 (100.00)	14136 (100.00)
	Dry to wet ratio	0.48		0.36	
3	**Heifer**				
i	Local cow	0.11 (39.29)	1129 (41.71)	0.14 (60.87)	1148 (49.83)
ii	Cross-bred cow	0.17 (60.71)	1578 (58.29)	0.09 (39.13)	1156 (50.17)
iii	Sub-Total	0.28 (100.00)	2707 (100.00)	0.23 (100.00)	2304 (100.00)
4	**Calves**				
i	Local cow	0.06 (37.5)	900 (37.50)	0.18 (66.67)	2700 (66.67)
ii	Cross-bred cow	0.10 (62.50)	1500 (62.50)	0.09 (33.33)	1350 (33.33)
iii	Sub-Total	0.16 (100.00)	2400 (100.00)	0.27 (100.00)	4050 (100.0)
5	**Buffaloes**				
i	In-milk	0.31	10200	0.55	23936
Ii	Dry	0.13	5582	0.10	5020
iii	Sub-total	0.44	15782	0.65	28956
	Dry to wet ratio	0.42		0.18	
6	Total livestock	1.97	47937	2.07	42928

*Figures in parentheses show percentages

4.3.7 Investment on farm implements and tools

Mechanization is crucial for agriculture in order to perform timely farm operations, time management, ensuring enhanced efficiency of expensive inputs *i.e.* seed, fertilizers, plant protection chemicals etc., enhanced land and labour productivity in agriculture and reducing drudgery. The information regarding farm implements and machines on sample households has been put forth in Table 4.22. Per farm total investment on farm implements and machine amounted to Rs.3,17,473 in

Table 4.22 Investment on farm implements and tools in sample households

(Per farm)

Sr.No.	Particulars	Developed districts		Under-developed districts	
		No.	Value (Rs.)	No.	Value (Rs.)
1.	**Tools**				
i)	Iron Plough	0.35	275	0.31	257
ii)	Wooden Plough	0.08	250	0.95	1900
iii)	Darat	1.58	337	1.84	343
iv)	Sickle	2.34	253	2.81	248
v)	Axe	1.11	483	1.23	453
vi)	Rakes	0.11	39	0.09	31
vii)	Khurpi	2.14	171	2.36	189
v)	Milk vessels, churner/curdmaker, water pump etc.	2.56	1280	2.77	1385
	Sub-Total	10.27 (70.49)	3088 (0.97)	12.36 (78.83)	4806 (4.92)
2	**Spray equipments**				
i)	Knapsack sprayer	1.33	4517	1.19	4157
ii)	Foot sprayer	0.09	398	0.05	221
	Sub-total	1.42 (9.75)	4915 (1.55)	1.24 (7.91)	4378 (4.48)
3	**Machinery**				
i)	Tractor	0.37	231250	0.04	15217
ii)	Chaffcutter	0.87	7225	0.65	1706
iii)	Thresher	0.81	19440	0.31	13051
iv)	Power weeder	0.60	41980	0.89	49840
v)	Grasscutter	0.23	9575	0.19	8648
	Sub-total	2.88 (19.77)	309470 (97.48)	2.08 (13.27)	88462 (90.59)
	Total	14.57 (100.0)	317473 (100.0)	15.68 (100.0)	97646 (100.0)

*Figures in parentheses show percentages

developed districts and Rs.97,646 in under-developed districts. The farmers of developed districts had considerably more number of power driven farm machinery like tractors, chaffcutters, weeders etc. owing to favourable topography of these districts for these machines. Majority of farmers had ample number of minor tools to carry out day to day farm operations. In under-developed districts tools and spray equipments were considerably more in number than power driven machinery *i.e.* 4.92 per cent investment on tools in under-developed districts while 0.97 per cent in developed districts.

4.3.8 Asset endowment

Table 4.23 shows the valuationof farm assets. The valuation offarm assetsfor developed districts amounted to Rs.1126192 lakh and for under-developed district sample farms it was Rs.761886 lakh. The maximum share among the total assets was accounted by residential building (64.33% and 77.76%) followed by farm machinery (28.19% and 12.82%).

Table 4.23 Value of different farm assets in sample households

(in Rs.)

Sr.No	Particulars	Developed districts	Under-developed districts
1.	Residential building	724500 (64.33)	592475 (77.76)
2.	Cattle shed	36282 (3.22)	28837 (3.78)
3.	Livestock	47937 (4.26)	42928 (5.63)
4.	Farm machinery & implements	317473 (28.19)	97646 (12.82)
	Total	1126192 (100.0)	761886 (100.0)

*Figures in parentheses show percentages

4.4 Natural resource conservation

Prudent management and sustainable utilization of natural resources is an area of debate between communities and government as a considerable population of India is dependent on natural resources. The formation of panchayats and various powers vested in them somehow resolve this issue to an extent as they provide PRIs the authority to conserve and maintain natural resources in their area. The efficiency of natural resource management and conservation through decentralization increases the likelihood of positive outcomes for the natural environment –people are less likely to degrade their resource base if they feel a sense of ownership in decision-making and see positive returns from the judicious use of available natural capital (Campbell, 2006). Thus, it can contribute to both environmental management and development of livelihoods.

4.4.1 Availability of natural resources in selected panchayats

In the given study the natural resource base of panchayats was studied and in the following tables it has been put forth (Table 4.24, 4.25, 4.26 and 4.27). In the selected panchayats land resources were used by respondents for firewood, timber, fruits, parking facilities, conducting community or personal functions, garbage dumping, grazing of livestock, fodder, etc. The water resources in all panchayats were predominantly *baolis* and *kuhls* followed by wells/springs, ponds, etc. In Sansowal panchayat, Swan river flows through, whose basin area is predominantly used for vegetable (cucurbits) cultivation. These water resources are used by the panchayat residents for bathing, washing clothes, irrigation, washing livestock etc. In certain areas mining of rait, bajri was done from streams predominantly in Chamba district's selected panchayats. The cost of firewood was Rs.6/kg at current prices and cost of timber ranged from Rs.800-2000/cubic feet at current prices which was available to people free of cost in their area, therefore there is huge importance of people to understand the value of these resources and conserve them.

Table 4.24 Natural resources in selected panchayats of Amb and Haroli block

Sr. No.	Particulars	Unit	Amb block					Haroli block				
			Amb	Mubarikpur	Nehri	Kuthiyari	Jawar	Haroli	Sansowal	Badhera	Dharampur	Kangar
A. Land resources												
1.	Forests	ha.	12.20 (1.50)	0	0	0	75.00 (5.51)	0	40.00 (9.32)	373.70 (19.06)	0	0
2.	Barren and unculturable land	ha.	104.00 (12.80)	162.00 (42.83)	267.00 (35.70)	26.00 (6.50)	90.00 (6.60)	180.00 (18.60)	59.00 (13.75)	0	166.00 (34.43)	34.00 (9.29)
3.	Land put to non-agricultural uses	ha.	69.60 (8.56)	30.70 (8.12)	113.00 (15.11)	125.00 (31.25)	82.00 (6.02)	178.00 (18.39)	6.00 (1.40)	0	0	2.00 (0.54)
4.	Culturable wasteland	ha.	124.00 (15.26)	47.80 (12.64)	4.00 (0.53)	12.00 (3.00)	120.00 (8.80)	200.00 (20.66)	0	100.00 (5.09)	0	36.00 (9.83)
5.	Area under pasture/grazing	ha.	75.70 (9.32)	2.00 (0.53)	44.00 (5.88)	37.00 (9.25)	76.20 (5.59)	165.00 (17.05)	93.00 (21.68)	0	0	18.00 (4.92)
6.	Land under miscellaneous tree crops etc.	ha.	4.30 (0.53)	2.70 (0.71)	18.00 (2.41)	10.00 (2.50)	17.00 (1.25)	0	26.00 (6.06)	11.10 (0.57)	163.00 (33.82)	2.00 (0.55)
7.	Fallow land	ha.	34.00 (4.18)	0	16.00 (2.14)	19.00 (4.75)	9.00 (0.66)	70.00 (7.23)	0	0	0	114.00 (31.15)
8.	Net sown area	ha.	382.00 (47.02)	133.00 (35.17)	239.00 (31.95)	158.00 (39.50)	138.00 (10.12)	170.00 (17.56)	205.00 (47.79)	575.20 (29.33)	153.00 (31.74)	160.00 (43.72)
B.	**Water resources**											
1.	Wells/springs	No.	1	0	0	0	0	0	0	0	0	0
2.	Baolis	No.	2	2	1	0	2	2	1	0	2	1
3.	Streams	No.	0	0	0	0	0	0	1	0	0	0
4.	Ponds	No.	2	1	0	0	1	0	0	0	0	0
5.	Kuhls	No.	4	5	3	4	5	4	4	2	3	3
6.	Others	No.	4	3	4	2	2	5	3	4	2	4

*Others includes jharnas, springs, local small water bodies

*Figures in parentheses show percentages

Table:4.25 Natural resources in selected panchayats of Solan and Dharampur block

Sr. No.	Particulars	Unit	Solan block					Dharampur block				
			Saproon	Jaunaji	Barog	Chewa	Seri	Dharampur	Hurang	Jabli	Rauri	Kotbeja
A.	**Land utilization**											
1.	Forests	ha.	0	0	0	0	1.00 (0.34)	0	38.80 (8.89)	1.70 (0.23)	0	26.60 (3.01)
2.	Barren and unculturable land	ha.	72.00 (29.45)	197.90 (28.85)	166.20 (36.71)	78.80 (22.38)	79.80 (27.01)	15.20 (9.57)	106.60 (24.44)	263.50 (34.93)	262.10 (28.77)	176.70 (20.02)
3.	Land put to non-agricultural uses	ha.	68.00 (27.81)	89.50 (13.05)	67.50 (14.91)	65.90 (18.72)	92.90 (31.45)	68.00 (42.82)	77.80 (17.84)	119.50 (15.84)	109.30 (12.00)	84.90 (9.62)
4.	Culturable wasteland	ha.	21.30 (8.71)	26.00 (3.79)	22.60 (4.99)	12.40 (3.52)	26.70 (9.04)	2.00 (1.26)	19.20 (4.40)	57.40 (7.61)	71.00 (7.79)	15.30 (1.73)
5.	Area under pasture/grazing	ha.	31.50 (12.88)	158.20 (23.06)	82.70 (18.27)	79.80 (22.66)	17.40 (5.89)	21.60 (13.60)	92.80 (21.28)	97.30 (12.90)	314.60 (34.54)	271.00 (30.71)
6.	Land under miscellaneous tree crops etc.	ha.	0	0	0	30.30 (8.61)	0	12.50 (7.87)	6.60 (1.51)	2.10 (0.28)	6.90 (0.76)	13.60 (1.54)
7.	Fallow land	ha.	3.40 (1.39)	10.60 (1.55)	2.80 (0.62)	0.80 (0.23)	0	0	0	2.10 (0.28)	1.80 (0.20)	4.00 (0.45)
8.	Net sown area	ha.	48.20 (19.71)	153.70 (22.41)	10.10 (2.23)	81.40 (23.12)	75.80 (25.66)	39.40 (24.81)	93.90 (21.53)	211.00 (28.00)	167.50 (18.39)	184.30 (20.88)
B.Water resources												
1.	Wells/springs	No.	0	0	0	0	0	0	0	0	0	0
2.	Baolis	No.	2	2	3	4	2	3	2	1	1	0
3.	Streams	No.	0	0	0	0	0	0	0	0	0	0
4.	Ponds	No.	0	0	0	0	0	0	0	0	0	0
5.	Kuhls	No.	2	1	3	2	1	1	0	0	0	0
6.	Others	No.	2	3	1	2	1	2	1	2	2	1

*Others includes jharnas, springs, local small water bodies

*Figures in parentheses show percentages

Table 4.26 Natural resources in selected panchayats of Bhattiyat and Mehla block

Sr. No.	Particulars	Unit	Bhattiyat block					Mehla block				
			Hatli	Gola	Thulel	Garnota	Ghatasani	Mehla	Rajera	Karian	Gagla	Kuther
A. Land utilization												
1.	Forests	ha.	5.00 (12.82)	70.10 (11.52)	166.80 (24.37)	0	4.10 (1.84)	0	245.20 (25.21)	0	0	0
2.	Barren and unculturable land	ha.	12.00 (30.77)	0	0	27.50 (4.94)	0	34.80 (24.89)	0	0	0	0
3.	Land put to non-agricultural uses	ha.	0	29.70 (4.88)	57.60 (8.42)	38.40 (6.90)	18.50 (8.32)	7.30 (5.22)	62.70 (6.45)	93.90 (14.46)	54.20 (11.37)	19.90 (2.85)
4.	Culturable wasteland	ha.	5.00 (12.82)	43.90 (7.22)	52.50 (7.67)	19.40 (3.48)	28.80 (12.96)	2.40 (1.72)	12.90 (1.33)	18.20 (2.80)	12.20 (2.56)	9.50 (1.36)
5.	Area under pasture/grazing	ha.	0	342.60 (56.33)	280.30 (40.96)	234.40 (42.11)	101.80 (45.79)	28.30 (20.24)	468.20 (48.13)	348.80 (53.70)	332.20 (69.67)	560.20 (80.19)
6.	Land under miscellaneous tree crops etc.	ha.	8.00 (20.51)	0	0	0	0	0	0	0	0	0
7.	Fallow land	ha.	5.00 (12.82)	0	3.90 (0.57)	0	0.60 (0.27)	0	0	29.50 (4.54)	0	0
8.	Net sown area	ha.	4.00 (10.26)	115.10 (18.92)	116.90 (17.08)	228.80 (41.01)	64.80 (29.15)	66.00 (47.21)	168.20 (17.29)	145.70 (22.43)	78.10 (16.38)	109.00 (15.60)
B.Water resources												
1.	Wells/springs	No.	2	3	2	1	3	3	2	4	2	3
2.	Baolis	No.	3	4	3	2	4	3	2	4	3	2
3.	Streams	No.	1	1	0	0	0	0	1	1	1	0
4.	Ponds	No.	0	1	0	0	0	0	0	0	0	0
5.	Kuhls	No.	4	5	3	4	2	3	6	3	3	2
6.	Others	No.	1	0	1	0	0	0	0	0	0	0

*Others includes jharnas, springs, local small water bodies

*Figures in parentheses show percentages

Table 4.27 Natural resources in selected panchayats of Shillai and Sangrah block

Sr. No.	Particulars	Unit	Shillai					Sangrah				
			Shillai	Balikoti	Maanal	Paav maanal	Gawali	Sangrah	Sangna	Deuri Kharahan	Charana	Baunal Kakog
A. Land utilization												
1.	Forests	ha.	100.00 (6.05)	103.00 (3.43)	0	1.00 (0.36)	38.00 (5.23)	302.30 (20.58)	267.00 (32.36)	356.00 (49.04)	248.80 (20.17)	112.60 (18.79)
2.	Barren and unculturable land	ha.	22.00 (1.33)	76.00 (2.53)	28.00 (5.05)	6.00 (2.19)	6.00 (0.83)	8.10 (0.55)	44.00 (5.33)	5.00 (0.69)	7.00 (0.57)	46.50 (7.76)
3.	Land put to non-agricultural uses	ha.	102.00 (6.17)	0	64.00 (11.53)	17.00 (6.20)	49.00 (6.74)	114.60 (7.80)	16.00 (1.94)	22.00 (3.03)	40.90 (3.32)	43.60 (7.28)
4.	Culturable wasteland	ha.	52.00 (3.15)	46.00 (1.53)	11.00 (1.98)	10.00 (3.65)	45.00 (6.19)	162.30 (11.05)	18.00 (2.18)	5.00 (0.69)	29.80 (2.42)	26.40 (4.41)
5.	Area under pasture/grazing	ha.	528.00 (31.94)	311.00 (10.36)	137.00 (24.68)	94.00 (34.31)	172.00 (23.66)	173.30 (11.80)	282.00 (34.18)	234.00 (32.23)	511.30 (41.54)	15.70 (2.62)
6.	Land under miscellaneous tree crops etc.	ha.	522.00 (31.58)	242.00 (8.06)	135.00 (24.32)	74.00 (27.00)	242.00 (33.29)	447.70 (30.48)	40.00 (4.85)	18.00 (2.48)	159.20 (12.91)	260.00 (43.39)
7.	Fallow land	ha.	0	1.00 (0.03)	9.00 (1.62)	0	6.00 (0.83)	8.80 (0.59)	7.00 (0.85)	0	10.00 (0.81)	0
8.	Net sown area	ha.	300.00 (18.15)	371.00 (12.36)	171.00 (30.81)	65.00 (23.72)	169.00 (23.25)	234.00 (15.93)	145.00 (17.58)	86.00 (11.85)	167.20 (13.56)	93.30 (15.57)
B.Water resources												
1.	Wells/springs	No.	2	2	1	0	0	0	0	0	0	0
2.	Baolis	No.	1	1	1	1	0	1	1	1	1	1
3.	Streams	No.	0	1	0	0	0	0	0	0	0	0
4.	Ponds	No.	0	0	0	0	0	0	0	0	0	0
5.	Kuhls	No.	1	0	0	1	1	1	1	0	0	0
6.	Others	No.	0	0	0	0	0	0	0	0	0	0

*Others includes jharnas, springs, local small water bodies

*Figures in parentheses show percentages

4.4.2 Perception of respondents regarding utility of natural resources

To understand the utility and willingness of people to pay for the natural resourcesin selected panchayats have been broadly categorized into forestland, fallow land and pastures for land resources and rivers, baolis and kuhls for water resources. Table 4.28 and 4.29 put forth the perception of respondents regarding the utility of natural resources in developed and under-developed districts, respectively. The sample farmers of various blocks in both developed and under-developed districts were asked to rank the utility of natural resources under four categories of agreement followed by percentage analysis. The tables reveal that in both the district categories, respondents strongly agree with the utility of natural resources. In both the district categories more than 50 per cent of farmers agreed that forests, fallow lands and water resources provide several benefits. The respondents willingness to pay is also given in these tables.The perusal of these tables show that 29.50 per cent respondents from developed districts and 26.50 respondents from under-developed districts, respectively, were ready to pay for conservation of natural resources while 20.50 and 23.50 respondents from developed and under-developed districts were unwilling to pay for resource conservation as they felt that these would not be utilized effectively. In developed districts maximum bid value that respondents were willing to pay was between Rs.150-250 (25%) while in under developed districts it was Rs. 100-150 (31%). In under-developed districts as the bid value increased the willingness to pay decreased. Ekka and Pandit (2012) studied the willingness of people in Gosaba islands of Sunderban mangrovesfor restoration of natural ecosystem.The results of this study revealed that 65.00 per cent of the respondents agreed to pay for conservation and restoration of mangroves at different bid levels. Thirty-five per cent of the respondents did not agree to pay at specified bid level. The maximum bid value which the respondents were willing to pay was Rs. 10 (40.07%) followed by Rs. 20 (20.27%) and Rs.30 (18.86%). As the bid value increased the willingness to pay decreased.

Table 4.28 Willingness to pay for natural resources in selected panchayats of developed districts

Sr.No.	Natural Resources	Developed Districts				WTP Bid Value	Accepted (WTP=1)	Rejected (WTP)=0
		SA	A	DA	NR	(in Rs.)		
1.	Forests provide fuel wood, timber and minor forest produce	55.92	28.92	7.25	7.91	<150	10	41
2.	Fallow lands provide benefits	19.73	5.24	--	75.03	150-250	25	--
3.	Pastures and grazing lands are useful for providing fodder etc.	45.02	22.45	--	32.53	250-350	8	--
4.	Baolis and tubewells provide drinking water and for other purposes	89.87	10.13	--		350-450	5	--
5.	Kuhls and tanks are useful for irrigation and other purposes	85.68	9.90	--	4.42	450-550	11	--
	Total						29.50	20.50

*SA-Strongly Agree; A-Agree; DA-Disagree; NR-No response
#WTP-Willingness to Pay

Table 4.29 Willingness to pay for natural resources in selected panchayats of under-developed districts

		Under-developed districts				WTP Bid Value	Accepted (WTP=1)	Rejected (WTP)=0
Sr.No.	**Natural Resources**	**SA**	**A**	**DA**	**NR**	**(in Rs.)**		
1.	Forests provide fuelwood, timber and minor forest produce	76.87	16.94	--	6.25	<150	31	47
2.	Fallow lands provide benefits	45.23	12.83	--	41.94	150-250	12	--
3.	Pastures and grazing lands are useful for providing fodder etc.	79.84	13.55	--	6.61	250-350	4	--
4.	Baolis and tubewells provide drinking water and for other purposes	90.56	9.44	--		350-450	3	--
5.	Kuhls and tanks are useful for irrigation and other purposes	82.55	7.21	--	10.24	450-550	3	--
	Total						26.50	23.50

*SA-Strongly Agree; A-Agree; DA-Disagree; NR-No response
#WTP-Willingness to Pay

4.4.3 Factors affecting the Willingness to pay for conservation of natural resources

Logit model has been used to find the probability of willingness to pay for conservation of natural resources. Table 4.30 shows the factors that are relevant in affecting the willingness to pay. The logit analysis puts forth that variables like education, income and bid value had positive and significant impact on willingness to pay for conservation of natural resources of the respondents, while factors viz., age,

satisfaction with functioning of PRIswere foundto have positive relation but were non-signifiant.

Table 4.30 Factors affecting willingness to pay for natural resources

Sr.No	Variable	Mean of Variable	Estimated coefficients	Standard error	t-stat	Marginal effect	Elasticity at mean
1.	Constant		0.23	0.25	0.61		
2.	Age (years)	49.97	0.42	0.24	1.45	0.16	0.01
3.	Income (Rs.)	8.33	0.06*	0.02	2.01	0.26	0.001
4.	Education	4.26	1.68*	0.74	2.02	0.01	0.02
5.	Satisfaction with PRIs	20.97	1.15*	0.07	2.32	0.29	0.01
6.	Bid Value	5.97	0.11	0.42	1.36	0.02	0.004
	Statistical coefficients	Log-Likelihood	Log-Likelihood ratio	Mcfadden R^2	Chow R^2		
		-38.59	53.51	0.41**	0.44**		

*Significant at 5% level
** Significant at 1% level

The magnitude of change in probability of willingness to pay due to unit change in the explanatory variables, marginal effect of the associated variables was calculated. The maximum marginal effect was exhibited by satisfaction with PRIs (0.29) followed by income (0.26). The elasticity at mean is indicative of percentage change in willingness to pay with one percent change in explanatory variables. Therefore this suggests that with one percent increase in incomeand satisfaction with working of PRIs, the probability of willingness to pay might increase by 0.02 and 0.01per cent, respectively.

The goodness of fit of logit model was demonstrated by Mcfadden and Chow R^2 revealing that the explanatory variables explained 41 to 44 per cent of the variation in chances of probability of willingness to pay in the study area.

Table 4.31 shows the developed and under-developed district respondents' probability for willingness to pay to conserve natural resources. It was found that in both the developed and under-developed districts respondents were willing to pay for natural resource conservation in their respective areas. In case of developed districts, the probability was 0.88 whereas in case of under-developed districts the probability was 0.85. The odds ratio was higher for developed districts. On overall basis, it was found hat respondents were willing to pay for natural resource conservation as they understood the value of preserving the natural resources. But in under-developed districts people were not willing to pay higher bid amounts as their income were comparatively low.

Table 4.31 Probability of willingness to pay and odds ratio with respect to natural resource conservation

Sr.No.	Particulars	Pi	Odds Ratio(Pi/1-Pi)
1.	Developed Districts	0.88	7.19
2.	Under-Developed Districts	0.85	5.89

4.5 Functioning of PRIs

4.5.1 Sources of income of panchayats

Panchayats have been bestowed with the power of levying taxes, cess or fees for various services in their area. This tax income contributes to source of income to the panchayats along with some external sources of income. In the internal sources of income property tax, service fee, liquor cess and duty on mobile towers are the major contributors while grants from Finance Commission, Centre Sponsored Schemes, donation from MLA/MPs and grants from Panchayat Samiti and Zila Parishad, etc. are considered external sources. The PRIs can collect house tax/property tax as perceived fit by them from residential/commercial buildings. During the year under study the maximum house tax being charged was Rs.50 per annum/per household from owners of houses having a total built up area above 100 sq.metres while Rs.25 per annum from house owners having area upto 40-100 sq.mtrs. PRIs also levy service fee for maintenance of cleanliness, lightning of streets and sanitation, registration of birth/deaths and livestock registration, ration cards and teh-bazaari (cess) from shopkeepers in fairs. Liquor cess also contributes considerably to the income of panchayats in which Rs.2 is charged per bottle, out of which Rs.1 is

retained by the Government and Rs.1 given to gram panchayats for developmental activities. Liquor cess is charged on quarterly sale of liquor. Installation of mobile towers in their area also fetches income for panchayats at the rate of Rs.10,000/tower for installation and Rs.5000/per tower as annual renewal fee. Among the external sources of income, the major source of funds for panchayats is through Centre Sponsored Schemes and Finance Commission.

Table 4.32 shows the different sources of income for panchayats in which maximum share was of external sources *i.e.*funds under Centre Sponsored Schemes like MGNREGA, PMAY, NRLM, etc. and funds from Finance Commission, across majority panchayats. Panchayats generated lot of income from various internal sources in which maximum share was contributed by liquor cess followed by house/land tax across all sample panchayats. Sahasranaman (2012) studied the panchayat finances of three panchayats in Tamil Nadu and found out that panchayats were majorly dependent on devolutions from state government than their own revenue sources but he felt that panchayats could be made capable of substantially financing themselves by increasing their tax rates.

In Amb block the total income was Rs.51.08 lakh amongst which house tax contributed 1.94 per cent, 1.56 per cent by service fee and 2.94 per cent from liquor cess in internal sources and 43.07 per cent by funds from Centre Sponsored Schemes. The income for Mubarikpur was Rs.75.80 lakh, Rs.110.17 lakh for Nehri, Rs.74.13 lakh for Kuthiyari and Rs.107.89 lakh for Jawar panchayat. In Haroli block the income for Haroli, Sansowal, Badhera, Dharampur and Kangar panchayats was Rs.97.09 lakh, Rs.74.40 lakh, Rs.119.11 lakh, Rs.71.90 lakh and Rs.59.49 lakh, respectively.

In Solan district the income of Saproon panchayat was Rs.115.84 lakh, Rs.95.46 lakh for Jaunaji, Rs. 75.35 lakh for Barog panchayat, Rs.65.37 lakh for Chewa panchayat, Rs.48.86 lakh for Seri panchayat, Rs. 149.90 lakh for Dharampur panchayat, Rs.48.59 lakh for Hurang panchayat, Rs.97.26 lakh for Jabli, Rs.75.37 lakh for Rauri, Rs.71.84 lakh for Kotbeja panchayat. In Sirmaur district Shillai panchayat's income was Rs.120.59 lakh, Balikoti was Rs.121.80 lakh, Sangrah was Rs.98.73 lakh, Sangna was Rs.93.75 lakh, Charana was Rs.103.65 lakh and Baunal Kakog was Rs.104.69 lakh.

Table 4.32 Sources of income of panchayats in the study area

Sr.No	District/Block/Panchayats	Internal sources of income (% of total income)					External sources (%of total income)			
		House tax	Service fee	Tax on extraction of sand	Liquor cess	Duty on mobile towers	F.C	Donation from MLA	Funds from Centre sponsored schemes	Total (Rs. In lakhs)
A.	**Una-Amb Block**									
1.	Amb	1.94	1.56	0.14	2.94	0.37	38.23	11.75	43.07	51.08 (100.00)
2.	Mubarikpur	0.35	0.74	0	0.59	0.17	23.75	0.53	73.88	75.80 (100.00)
3.	Nehri	0.36	0.57	0	0.36	0	21.78	2.50	74.43	110.17 (100.00)
4.	Kuthiyari	0.34	0.51	0	0.21	0	20.24	11.92	66.78	74.13 (100.00)
5.	Jawar	0.24	0.21	0	0.37	0	22.25	2.55	74.38	107.89 (100.00)
Aii	**Una-Haroli Block**									
6.	Haroli	0.31	1.02	0	0.93	0.41	32.96	1.29	63.09	97.09 (100.00)
7.	Sansowal	0.33	0.95	0.14	1.01	0.14	18.14	2.69	76.61	74.40 (100.00)
8.	Badhera	0.37	0.13	0	0.21	0.52	18.47	2.52	77.79	119.11 (100.00)
9.	Dharampur	0.30	0.26	0	0.42	0	20.86	1.67	76.49	71.90 (100.00)
10.	Kangar	0.52	0.54	0	0.54	0	20.17	2.52	75.71	59.49 (100.00)
B	**Solan-Solan**									
11.	Saproon	0.26	0.52	0	1.04	0.08	40.26	6.04	51.80	115.84 (100.00)

12.	Jaunaji	0.37	0.44	0	0.42	0.04	18.86	1.31	78.56	95.46 (100.00)
13.	Barog	0.35	0.42	0	0.60	0.44	17.25	7.96	72.98	75.35 (100.00)
14.	Chewa	0.42	6.43	0	1.22	0.15	30.59	7.65	53.54	65.37 (100.00)
15.	Seri	0.34	0.48	0	0.65	0	30.58	5.10	62.86	48.86 (100.00)
Bii	**Solan-Dharampur**									
16	Dharampur	0.52	3.29	0	1.33	0.13	26.68	6.67	61.37	149.90 (100.00)
17.	Hurang	0.47	1.06	0	1.65	0.10	30.87	12.35	53.51	48.59 (100.00)
18.	Jabli	0.45	0.34	0	2.06	0.20	26.73	10.28	59.94	97.26 (100.00)
19	Rauri	0.45	0.24	0	0.80	0	33.17	9.62	55.72	75.37 (100.00)
20	Kotbeja	0.37	0.18	0	0.62	0	25.05	13.92	59.85	71.84 (100.00)
C	**Chamba-Bhattiat**									
21	Hatli	0.45	0.55	0	3.94	0.39	19.72	3.94	70.10	50.71 (100.00)
22	Gola	0.38	0.56	0	0.67	0	20.13	22.36	55.90	44.72 (100.00)
23	Thulel	0.33	0.46	0.09	1.40	0.18	14.01	7.01	76.53	57.10 (100.00)
24	Garnota	0.64	0.54	0	0.54	0	23.55	4.08	70.64	55.21 (100.00)
25	Ghatasni	0.37	0.28	0	0.65	0	15.48	3.22	79.99	38.75 (100.00)
Cii	**Chamba-Mehla**									
26	Mehla	0.23	0.31	0	1.60	0	15.96	2.13	79.78	94.00 (100.00)

27	Rajera	0.32	0.26	0	1.18	0	11.77	0.98	85.49	101.99 (100.00)
28	Karian	0.32	0.30	0.04	1.57	0	16.55	2.83	78.39	114.82 (100.00)
29	Gagla	0.24	0.31	0	0.15	0	5.43	2.47	91.40	80.96 (100.00)
30	Kuther	0.27	0.29	0	0.24	0	5.29	2.65	91.27	75.60 (100.00)
D1	**Sirmaur-Shillai**									
31	Shillai	0.20	0.19	0	0.81	0.11	14.01	3.32	81.26	120.59 (100.00)
32	Balikoti	0.26	0.18	0	0.12	0.01	13.96	4.11	81.28	121.80 (100.00)
33	Maanal	0.16	0.18	0	0.01	0	9.86	1.97	87.74	101.44 (100.00)
34	Paav manal	0.13	0.18	0	0	0	8.20	1.28	90.20	97.56 (100.00)
35	Gawali	0.13	0.12	0	0.52	0.07	8.99	2.12	88.05	109.03 (100.00)
Dii	**Sirmaur-Sangrah**									
36	Sangrah	0.32	0.38	0	0.96	0.10	16.20	1.01	81.02	98.73 (100.00)
37	Sangna	0.21	0.21	0	0.37	0	13.87	5.33	79.10	93.75 (100.00)
38	Deuri Kharahan	0.14	0.17	0	0.11	0	11.83	3.94	83.81	101.43 (100.00)
39	Charana	0.21	0.17	0	0.24	0	7.72	5.79	85.87	103.65 (100.00)
40	Baunal Kakog	0.13	0.19	0	0.29	0.05	7.64	5.73	85.97	104.69 (100.00)

4.5.2 Expenditure by panchayats

Panchayats receive grants under various sources for developmental works to be carried out in their respective panchayat areas. The various grants under different schemes are utilized for developmental works like community asset creation, land development, sanitation, water supply, lightening and welfare etc. Schemes like Pradhan Mantri Awas Yojna, Mukhya Mantri Awas Yojna are helping people to build houses for themselves by aid through government, MNREGA is helpful in employment generation as well as asset creation and land development.Schemes like Swacch Bharat Mission are helping in creating sanitation facilities in villages and grants of Finance Commission, MPLADS, Vidhayak Nidhi are useful in bringing about overall development by asset creation and developmental works.

The table 4.33 given below displays the expenditure pattern in various panchayats of Una district. The maximum share of expenditure has been done on generating community assets which include creation of *Samudayik Bhawans*, Mahila Mandal buildings, *Sanjha Parangans, Moksh Dhaams*,etc. In developed blocks considerable amount was spent on motorable roads, mule roads with impetus being on connectivity. Panchayats have given considerable importance to irrigation facilities by construction and maintenance of *kuhls* etc. Among all selected blocks the maximum expenditure was for Haroli panchayat in Haroli block (Rs.85.54 lakh) and in Amb block for Jawar panchayat (Rs. 60.3 lakh). In Solan Districtexpenditure to the tune of Rs.123.65 lakh and Rs.146.95 lakh was incurred by Saproonand Dharampur panchayats. Out of the given expenditure maximum share was spent on asset generation followed by roads and welfare (Table 4.34).

Table 4.35 and 4.36 show the expenditure pattern for Chamba and Sirmaur districts. In these districts also the same pattern was observed where maximum expenditure is on asset creation and land development. But a considerable amount was spent on construction/repair of kuhls/ponds and baolis as people give more importance to natural resources in these areas as they are considerably more dependent on them. In under-developed districts road connectivity was still poor, though efforts are beingmade to connect each village by roads but still enough needs to be done. In Shillai block panchayats like Balikoti are still not connected by road and it poses a major problem for bringing about development.

Table 4.33 Expenditure pattern of panchayats in Una District

Sr.No.	Particulars	Amb Block					Haroli Block				
		Amb	Mubarikpur	Nehri	Kuthiyari	Jawar	Haroli	Sansowal	Badhera	Dharampur	Kangar
1.	Community assets (buildings, cremation grounds, samudayik bhawan,land levelling etc)	35.97	35.54	38.47	53.49	33.15	35.21	33.46	39.55	44.93	59.90
2.	Roads, bridges other connectivity roads	14.99	31.22	33.54	23.83	41.40	11.69	30.28	23.54	33.98	26.40
3.	Construction/repair of kuhls/ponds/baolis	3.41	2.19	2.10	5.67	5.81	2.34	3.30	8.48	3.49	2.54
4.	Watersupply and sanitation	3.41	6.56	12.58	4.70	8.37	23.38	14.10	14.88	9.59	4.06
5.	Street lightning	24.52	13.12	2.41	3.88	6.67	21.30	11.46	3.77	3.48	1.83
6.	Welfare (houses etc.)	17.70	11.37	10.90	8.43	4.60	6.08	7.40	9.78	4.53	5.27
	Total expenditure (Rs. in lakhs)	36.7 (100.0)	45.73 (100.0)	47.7 (100.0)	30.85 (100.0)	60.3 (100.0)	85.54 (100.0)	52.35 (100.0)	26.55 (100.0)	28.69 (100.0)	49.25 (100.0)

*Figures in parentheses show percentages

Table 4.34 Expenditure pattern of panchayats in Solan District

Sr.No.	Particulars	Solan block					Dharampur block				
		Saproon	Jaunaji	Barog	Chewa	Seri	Dharampur	Hurang	Jabli	Rauri	Kotbeja
1.	Community assets (buildings, cremation grounds, samudayik bhawan,land levelling etc)	57.02	50.62	62.99	34.51	33.83	51.04	46.51	41.75	55.87	52.64
2.	Roads, bridges other connectivity roads	28.31	27.03	20.17	43.14	15.04	29.77	23.26	15.66	27.93	26.91
3.	Construction/repair of kuhls/ponds/baolis	3.84	3.25	2.78	8.63	7.52	1.70	5.81	2.09	0.00	3.68
4.	Watersupply and sanitataion	3.64	8.68	2.78	6.90	11.28	5.92	11.63	26.10	5.59	5.26
5.	Street lightning	1.62	2.89	1.67	2.33	22.56	1.36	3.49	6.26	6.98	3.68
6.	Welfare (houses etc.)	5.57	7.53	9.61	4.49	9.77	10.21	9.30	8.14	3.63	7.83
	Total expenditure (Rs. In lakhs)	123.65 (100.0)	69.14 (100.0)	71.88 (100.0)	57.95 (100.0)	53.2 (100.0)	146.95 (100.0)	34.4 (100.0)	95.8 (100.0)	71.6 (100.0)	66.49 (100.0)

*Figures in parentheses show percentages

Table 4.35 Expenditure pattern of panchayats in Chamba District

Sr.No.	Particulars	Bhattiyat block					Mehla block				
		Hatli	Gola	Thulel	Garnota	Ghatasni	Mehla	Rajera	Karian	Gagla	Kuther
1.	Community assets (buildings, cremation grounds, samudayik bhawan,land levelling etc)	40.11	32.82	38.22	41.43	44.80	44.82	57.82	54.82	45.65	51.25
2.	Roads, bridges other connectivity roads	27.41	32.17	32.61	22.10	22.40	29.37	16.53	25.45	26.69	10.38
3.	Construction/repair of kuhls/ponds/baolis	14.17	14.60	7.53	10.36	9.67	6.96	7.23	3.52	11.10	10.38
4.	Watersupply and sanitataion	8.69	6.46	7.32	8.15	7.47	7.73	6.22	7.83	5.62	11.91
5.	Street lightning	2.67	3.88	4.26	3.59	3.73	1.55	4.13	4.31	3.65	2.60
6.	Welfare (houses etc.)	6.95	10.07	10.06	14.37	11.93	9.57	8.07	4.07	7.29	13.48
	Total expenditure (Rs. In lakhs)	37.40 (100.0)	38.70 (100.0)	51.67 (100.0)	36.2 (100.0)	26.79 (100.0)	64.7 (100.0)	48.4 (100.0)	63.85 (100.0)	35.6 (100.0)	38.54 (100.0)

*Figures in parentheses show percentages

Table 4.36 Expenditure pattern of panchayats in Sirmaur District

Sr.No.	Particulars	Shillai Block					Sangrah Block				
		Shillai	Balikoti	Maanal	Paav Maanal	Gawali	Sangrah	Sangna	Deuri Kharahan	Charana	Baunal Kakog
1.	Community assets (buildings, cremation grounds, samudayik bhawan,land levelling etc)	35.88	51.11	53.42	54.35	69.87	38.56	49.54	73.35	60.46	66.25
2.	Roads, bridges other connectivity roads	46.70	34.53	30.05	30.80	11.64	34.27	31.29	14.27	19.61	20.86
3.	Construction/repair of kuhls/ponds/baolis	0.80	0.00	0.00	0.00	2.59	4.28	3.39	0.00	0.00	0.00
4.	Watersupply and sanitation	12.52	8.98	6.68	7.25	9.78	9.18	9.78	6.34	9.80	5.37
5.	Street lightning	1.14	0.00	1.17	1.80	2.76	4.90	2.61	1.90	1.63	1.79
6.	Welfare (houses etc.)	2.96	5.38	8.68	5.80	3.36	8.81	3.39	4.14	8.50	5.73
	Total expenditure (Rs.in lakhs)	87.8 (100.0)	72.4 (100.0)	59.9 (100.0)	55.2 (100.0)	77.29 (100.0)	40.85 (100.0)	38.35 (100.0)	63.05 (100.0)	61.2 (100.0)	55.85 (100.0)

Perusal of table 4.35 and 4.36 show that maximum expenditure in Bhattiyat block was for Thulel panchayat (Rs.51.67 lakh) followed by Gola panchayat (Rs. 38.70 lakh), Hatli panchayat (Rs.37.40 lakh), Garnota panchayat (Rs.36.20 lakh) and Ghatasni panchayat (Rs.26.79 lakh). InMehla block the expenditure was maximum for Mehla panchayat (Rs.64.70 lakh), Karian panchayat (Rs.63.85 lakh), Rajera (Rs.48.40 lakh), Kuther (Rs.38.54 lakh) and Gagla (Rs.35.60 lakh). Among panchayats in Sirmaur block the maximum expenditure in Shillai block was for Shillai panchayat (Rs.87.80 lakh) followed by Gawali panchayat (Rs.77.29 lakh) and in Sangrah block it was forDeuri Kharahan (Rs.63.05 lakh) followed by Charana (Rs.61.20 lakh).

A comparison of income and expenditure tables showed that across all panchayats there was a surplus *i.e.* difference among income and expenditure showing that all funds were not utilized during the given financial year. This surplus could be attributed to the fact that funds were released late under State and Centre sponsored schemes. The Government needs to ensure timely release of funds so that these funds are utilized well in time.

4.5.3 Status ofMahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGs) across different panchayats

Out of all the schemes implemented through panchayats MGNREGA has been extremely efficient in generating employment for people. The performance of MGNREGA for various panchayats of developed and under-developed districts is presented in Table 4.37 and 4.38. It can be observed that the growth rate for job cards given has increased between 2-3 per cent in three years and per cent of households that demanded employment to the ones provided employment was also not 100 per cent for developed districts whereas in under-developed districts there was a significant increase in number of job cards issued and comparatively a huge proportion of households that demanded employment were provided employment. This can be attributed to the fact that developed districts have better job opportunities owing being near to towns, having factories in vicinity whereas these options were comparatively less in under-developed district areas. It was observed that no other scheme was effective enough in generating income and employment at panchayat level.

Table 4.37 Performance of Mahatma Gandhi National Rural Employment Guarantee Scheme in sample panchayats of Una and Solan districts

Block	Panchayat	Financial year	Total no. of job cards	No.of households who have demanded employment	Employment provided to households	%of households demanded employment to households provided employment	No.of households completed 100 days of employment
Amb	**Amb**	2017-18	296	65	63	96.92	4
		2018-19	313	85	77	90.59	1
		2019-20	344	87	86	98.85	2
		Growth Rate (%)	7.80	15.69	16.84	0.99	-29.29
	Mubarikpur	2017-18	384	36	33	91.67	0
		2018-19	389	58	51	87.93	1
		2019-20	409	46	43	93.48	5
		Growth Rate (%)	3.20	13.04	14.15	--	0
	Nehri	2017-18	260	101	93	92.08	0
		2018-19	286	111	109	98.20	9
		2019-20	317	117	110	94.02	5
		Growth Rate (%)	10.42	7.63	8.76	--	0
	Kuthiyari	2017-18	249	67	63	94.03	0
		2018-19	252	57	52	91.23	0
		2019-20	257	51	46	90.20	0
		Growth Rate (%)	1.59	-12.75	-14.55	--	0
	Jawar	2017-18	412	158	147	93.04	1
		2018-19	420	134	127	94.78	1
		2019-20	426	40	36	90.00	0
		Growth Rate (%)	1.68	-49.68	-50.51	--	0
Haroli	**Haroli**	2017-18	153	96	88	91.67	0
		2018-19	175	94	91	96.81	0

		2019-20	275	157	154	98.09	7
		Growth Rate (%)	34. 07	27.88	32.29	--	0
	Sansowal	2017-18	268	113	110	97.35	0
		2018-19	282	118	113	95.76	50
		2019-20	330	184	179	97.28	9
		Growth Rate (%)	10.97	27.61	27.57	--	32.18
	Badhera	2017-18	519	133	131	98.50	2
		2018-19	529	148	144	97.30	23
		2019-20	608	167	155	92.81	3
		Growth Rate (%)	8.24	12.06	8.78	-2.93	22.47
	Dharampur	2017-18	282	64	63	98.44	0
		2018-19	300	74	74	100.00	3
		2019-20	317	89	87	97.75	0
		Growth Rate (%)	6.02	17.92	17.51	--	0
	Kangar	2017-18	339	146	140	95.89	5
		2018-19	352	152	151	99.34	5
		2019-20	412	210	201	95.71	32
		Growth Rate (%)	10.24	19.93	19.82	-0.09	152.98
Solan	**Saproon**	2017-18	420	26	13	50	0
		2018-19	417	18	7	38.89	0
		2019-20	427	52	44	84.62	2
		Growth Rate (%)	0.83	41.42	83.97	--	0
	Jaunaji	2017-18	428	122	111	90.98	8
		2018-19	428	121	112	92.56	30
		2019-20	454	107	83	77.57	10
		Growth Rate (%)	2.99	-6.35	-13.53	--	11.80
	Barog	2017-18	358	122	106	86.89	3
		2018-19	366	130	116	89.23	7
		2019-20	273	51	38	74.51	2
		Growth Rate (%)	-12.67	-35.34	-40.13	--	-18.35

	Chewa	2017-18	341	50	46	92	0
		2018-19	341	39	36	92.31	0
		2019-20	351	53	50	94.34	3
		Growth Rate (%)	1.46	2.96	4.26	--	0.00
	Seri	2017-18	260	77	63	81.82	12
		2018-19	271	48	38	79.17	9
		2019-20	276	23	19	82.61	1
		Growth Rate (%)	3.03	-45.35	-45.08	--	-71.13
Dharampur	**Dharampur**	2017-18	284	21	18	85.71	0
		2018-19	285	23	18	78.26	0
		2019-20	291	21	15	71.43	0
		Growth Rate (%)	1.22	0.00	-8.71	--	0
	Hurang	2017-18	320	118	113	95.76	1
		2018-19	354	182	168	92.31	24
		2019-20	391	232	209	90.09	19
		Growth Rate (%)	10.54	40.22	36.00	--	335.89
	Jabli	2017-18	608	152	135	88.82	1
		2018-19	649	263	258	98.10	8
		2019-20	460	63	58	92.06	5
		Growth Rate (%)	-13.02	-35.62	-34.45	1.81	123.61
	Rauri	2017-18	634	273	256	93.77	5
		2018-19	632	277	253	91.34	78
		2019-20	501	160	147	91.88	49
		Growth Rate (%)	-11.11	-23.44	-24.22	--	213.05
	Kotbeja	2017-18	480	227	213	93.83	53
		2018-19	532	350	339	96.86	176
		2019-20	554	307	294	95.77	104
		Growth Rate (%)	7.43	16.29	17.49	--	40.08

Table 4.38 Performance of Mahatma Gandhi National Rural Employment Guarantee Scheme in sample panchayats of Chamba and Sirmaur districts

Block	Panchayat	Financial year	Total no.of job cards	No.of households who have demanded employment	Employmentprovided to households	%of HH demanded employment to HH provided employment	No.of HH completed 100 days of employment
Bhattiyat	**Thulel**	2017-18	257	107	96	89.72	1
		2018-19	285	143	127	88.81	18
		2019-20	375	280	267	95.36	62
		Growth Rate (%)	20.80	61.77	66.77	3.09	687.40
	Hatli	2017-18	259	8	8	100.00	0
		2018-19	265	89	61	68.54	3
		2019-20	323	163	132	80.98	24
		Growth Rate (%)	11.67	351.39	306.20	--	0
	Gola	2017-18	165	35	31	88.57	0
		2018-19	171	83	63	75.90	5
		2019-20	225	147	133	90.48	10
		Growth Rate (%)	16.77	104.94	107.13	--	0
	Garnota	2017-18	305	167	147	88.02	2
		2018-19	315	195	161	82.56	9
		2019-20	389	271	255	94.10	22
		Growth Rate (%)	12.93	27.39	31.71	--	231.66
	Ghatasni	2017-18	120	23	20	86.96	0
		2018-19	149	106	99	93.40	25

		2019-20	206	174	168	96.55	62
		Growth Rate (%)	31.02	175.05	189.83	--	0
Mehla	**Mehla**	2017-18	409	324	300	92.59	8
		2018-19	415	321	309	96.26	103
		2019-20	426	227	200	88.11	22
		Growth Rate (%)	2.06	-16.30	-18.35	--	65.83
	Rajera	2017-18	682	367	364	99.18	4
		2018-19	727	384	357	92.97	30
		2019-20	763	473	466	98.52	69
		Growth Rate (%)	5.77	13.53	13.15	--	315.33
	Karian	2017-18	514	316	308	97.47	44
		2018-19	551	376	372	98.94	147
		2019-20	631	388	376	96.91	68
		Growth Rate (%)	10.80	10.81	10.49	-0.29	24.32
	Gagla	2017-18	350	257	241	93.77	1
		2018-19	372	244	237	97.13	80
		2019-20	383	286	281	98.25	121
		Growth Rate (%)	4.61	5.49	7.98	--	1000.00
	Kuther	2017-18	456	231	213	92.21	3
		2018-19	474	259	249	96.14	32
		2019-20	498	359	348	96.94	91
		Growth Rate (%)	4.50	24.66	27.82	--	450.76
Shillai /	**Shillai**	2017-18	421	245	237	96.73	21
		2018-19	423	169	158	93.49	21

		2019-20	435	130	110	84.62	5
		Growth Rate (%)	1.65	-27.16	-31.87	--	-51.20
	Gawali	2017-18	399	141	129	91.49	2
		2018-19	437	244	222	90.98	49
		2019-20	464	142	128	90.14	11
		Growth Rate (%)	7.84	0.35	-0.39	--	134.52
	Balikoti	2017-18	533	169	160	94.67	160
		2018-19	546	302	262	86.75	33
		2019-20	581	101	95	94.06	7
		Growth Rate (%)	4.41	-22.69	-22.94	--	-79.08
	Maanal	2017-18	308	155	144	92.90	0
		2018-19	368	259	242	93.44	52
		2019-20	377	70	42	60.00	0
		Growth Rate (%)	10.64	-32.80	-45.99	--	0
	Paav Maanal	2017-18	247	190	189	99.47	92
		2018-19	253	201	196	97.51	98
		2019-20	258	155	150	96.77	18
		Growth Rate (%)	2.20	-9.68	-10.91	--	-55.77
Sangrah	**Sangrah**	2017-18	429	197	184	93.40	0
		2018-19	440	144	131	90.97	3
		2019-20	448	132	118	89.39	1
		Growth Rate (%)	2.19	-18.14	-19.92	--	00
	Sangna	2017-18	314	104	101	97.12	3
		2018-19	344	172	164	95.35	24

		2019-20	344	192	181	94.27	18
		Growth Rate (%)	4.67	35.87	33.87	--	144.95
	DeuriKharahan	2017-18	206	89	84	94.38	1
		2018-19	219	146	139	95.21	6
		2019-20	231	104	102	98.08	5
		Growth Rate (%)	5.89	8.10	10.19	1.94	123.61
	BaunalKakog	2017-18	189	75	72	96.00	0
		2018-19	191	50	47	94.00	6
		2019-20	192	68	61	89.71	1
		Growth Rate (%)	0.79	-4.78	-7.96	--	00
	Charana	2017-18	388	196	171	87.24	1
		2018-19	388	163	146	89.57	21
		2019-20	406	60	56	93.33	2
		Growth Rate (%)	2.29	-44.67	-42.77	--	41.42

4.5.4 Process of preparation of micro-plans

Micro planning implies planning for the smallest units in the governance structure so that the possible needs of all individuals in the village communities can be included in the planning process.Gram Panchayats are vested with the responsibility of preparing Gram Panchayat Development Plans (GPDPs) also called micro plans for economic development and social justice. Each village in the country has its peculiar requirements as well as resources; therefore, planning process must also be inclusive of these. The process of 'Micro-Planning' got due importance after the 73rd Amendment which empowered the elected representatives of PRIs to plan and formulate local area development plans. The Amendment gave PRIs complete control over the resources and area in their control along with the responsibility of monitoring and implementing developmental plans at village level. This micro-planning needs to be comprehensive and based on a participatory process which requires full convergence with schemes of all related Central Ministries/Line departments related to 29 subjects listed in the Eleventh Schedule of the Constitution.These plans are consolidated ward level plans aimed at economic as well as human development by enhancing orientation about village problems like sanitation, drinking water sources, electricity, transport etc.

Figure 4.4 shows the process of micro-plan development in a participatory approach although in real field situation the quorum is hardly complete to ensure complete participation. The plans are majorly formulated by elected representatives to ensure maximum development in their area. The GPDPs for panchayats have been annexed (Annexure I & II).

The micro-planning process comprises of three phases:

a) Pre-planning phase
b) Planning phase
c) Post-planning phase

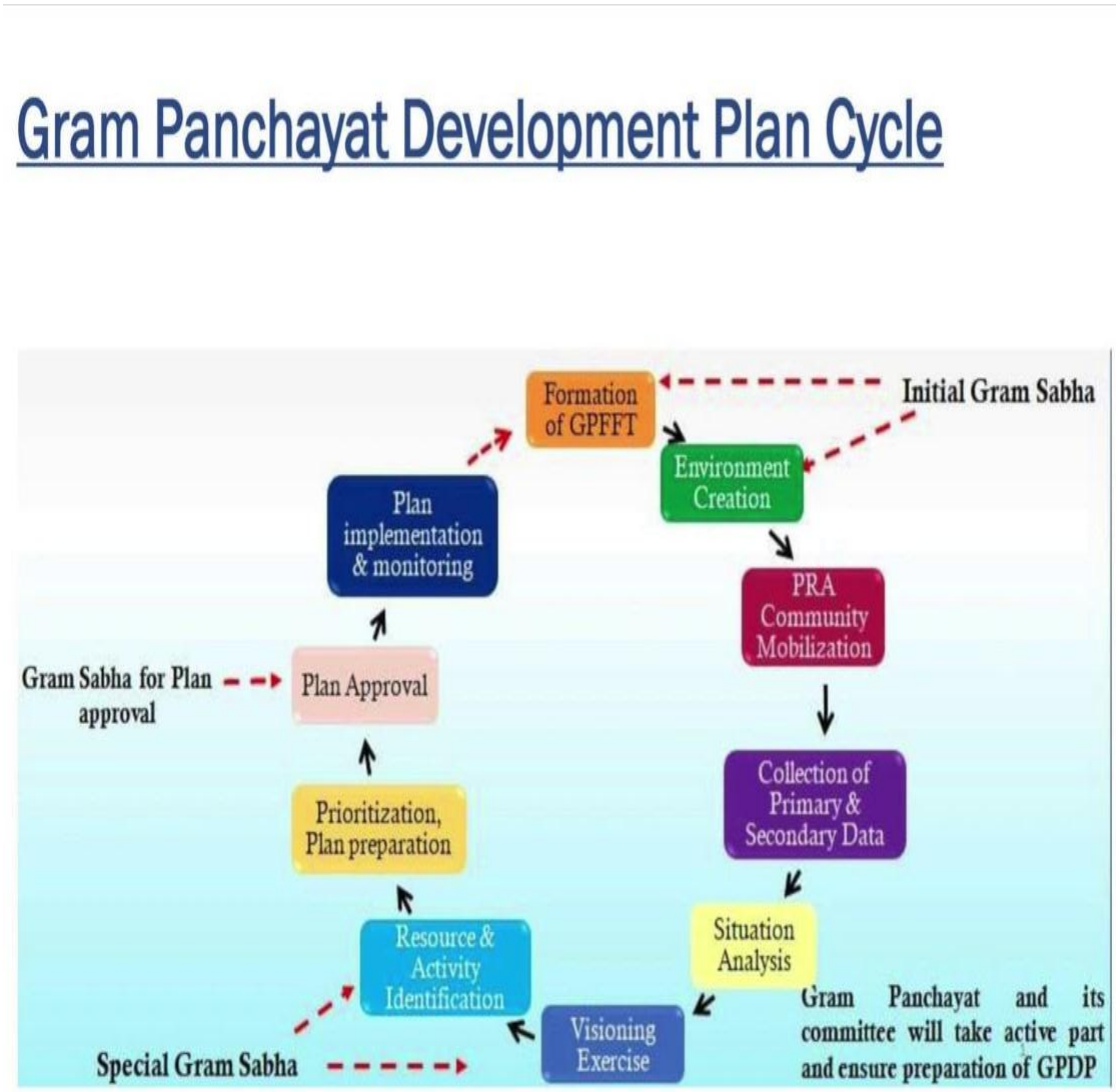

Fig 4.4 Gram Panchayat Development Plan Cycle

A. Pre-planning Phase: This phase deals with preparation and orientation activities.

Firstly the gram panchayat and villages are identified. The secondary data regarding population, households, resources and livelihoods of the people are collected. The panchayat members are appraised about the process of micro-planning.

Secondly, all communities and groups like SC,ST,minorities, disabled persons, women, etc. in the village are identified. Then, people are made aware about the process of micro-planning, its need and benefits.

B. Planning Phase:

In this phase the problems peculiar to that village are identified and probable solutions are sought. The working committee is assigned the work of collecting ward level problems and possible solutions by interacting with people. Then the problems are prioritized based on their severity as all problems cannot be resolved at the same time. Next the information regarding social map of the village including houses, infrastructure, facilities, details about the community such as caste,age, sex, occupations, etc. and resources of the village *viz.,* forest, land, water sources, tanks, canals, check - dams, roads, wells etc. are collected. After completing the data from each ward this data are compiled together to form a consolidated micro-plan.

The next step is integral as it deals with funds mobilization. Funds plan is designed and how much money can be mobilized by contribution and how much money can be mobilised from the various government departments is planned. In the village, people may contribute both in cash or kind.

C. Post –planning Phase: Implementation and Review of the Micro Plan

The micro plans commonly referred to as "Gram Panchayat Development Plan" are comprehensive and based on participatory process which involves the full convergence with schemes of all related line departments related to 29 subjects enlisted in the Eleventh Schedule of the Constitution.

The micro-plans annexed in the Annexure show that all 29 subjects are not catered to in the real field situation. The major drawback in the formation of micro-plans is non-attendance of people in Gram Sabhas and a complete collaboration among line Departments and PRIs is not present at field level therefore it becomes difficult to incorporate different activities. It is pertinent to ensure that people are made aware regarding the importance of GPDPs and the impact of their presence in its formulation and line Departments should make efforts to attend these gram sabhas and contribute effectively to GPDP and further their implementation. Panchayats are expected to cater to the agricultural needs of the village but it was found during the study that panchayats are not working effectively in distribution of agricultural inputs or other agricultural related subjects but in collaboration with Department of Agriculture training camps are organized to create awareness regarding various schemes being implemented by the Department of Agriculture and inputs are being provided in villages through Agriculture Sale Centres located in various blocks.

4.5.5 Digital initiatives

As the Government of India is pressing hard on digitalization of each and every service in the country the PRIs have also not been left untouched. The Government launched the e-panchayat Mode Mission Project (MMP) under which 11 applications have been developed to regulate planning, monitoring, implementation, budgeting, accounting, etc. Seven applications from the Panchayat Enterprise Suite (PES) comprising of eleven applications have been made functional which are namely:

1. **PRIA Soft**: It is an accounting application that generates cash book, register, etc. from reciept and expenditure details entered. It ensures better financial management of PRIs by bringing about transparency and accountability in the maintenance of accounts thereby leading tobetter credibility.
2. **Action Soft**: It is used to monitor the physical and financial progress made under different programmes.
3. **Plan Plus:** It is useful in helping PRIs, urban bodies and line departments to prepare their annual action plans and check whether the plans have been approved or not.

4. **National Asset Directory**: This regulates the details of assets created. It keeps record of movable and immovable assets present within the geographical boundaries of the panchayats. This app generates an unique asset ID for identifying the assets created/maintained by PRIs.
5. **Area Profiler:** This is responsible for maintaining the complete database of an area like geographical, demographic, infrastructural, socio-economic andnatural resources. It also maintains record of elected representatives of the area.
6. **Gram Panchayat Development Plan (GPDP):** This software is used to upload the Gram Panchayat Development Plan prepared by panchayats in consent with Gram Sabha. This planning is done in a particiapatroy approach involving full convergence with schemes of all related Central Ministries/Line Departments relatedto 29 subjects enlisted in the Eleventh Schedule of the Constitution.
7. **Local Government Directory (LGD):** It maintains all information regarding local governments and assigns them a uniquecode. This software is maintained by state government.

Though all these applications are being used but the Government of Himachal Pradesh has now opted for e-gram swaraj application which was launched by Prime Minister Sh. Narender Modi on April 24, 2020. This portal will ensure transparency in panchayati raj works by enabling people to access any information related to panchayat development for each village. It is a single platform providing access to all records of panchayats in all villages and their works, from planning to implementation under GPDP.

It was observed that though panchayats are using these softwares but due to non-availability of technical staff, internet facilities data uploading was not complete for all applications. The panchayat members were of the view that proper trainings should be provided to all elected members or technical staff should be provided so that digitization of all panchayat activities could be done effectively.

4.5.6 Opinion of respondents regarding functioning of panchayats

In this section the respondents' view regarding functioning of panchayats on the basisof opinion survey is put forth. Table 4.39 shows that respondents in developed districts felt that maintenance of public property, provision of water supply, management of waste was doneadequately by panchayats while in under-developed districts provision of water supply, sanitation and maintenance of public property were found to be most satisfactory. Perusal of table shows that though respondents felt that various activities were adequately being done by panchayats but also majority felt that functioning of panchayats could be adequately improved by ensuring more transparency in their working, by timely execution of works and ensuring that works to be done in the panchayat area is taken up with the consent of all people.

Table 4.39 Opinion of beneficiaries regarding functioning of panchayats

Sr.No.	Particulars	Developed districts		Under-developed districts	
		Score	Rank	Score	Rank
1.	Maintenance of public property	43.52	1	22.75	3
2.	Management of waste disposal	34.44	3	20.00	5
3.	Provision of solar lights/electrification	21.50	5	13.13	7
4.	Road construction	19.75	7	11.75	8
5.	Employment opportunities	15.56	8	21.25	4
6.	Working of PRIs	19.84	6	14.38	6
7.	Sanitation	32.54	4	24.25	2
8.	Provision of water supply	43.31	2	38.25	1

Fig 4.5 Land development work undertaken in Haroli panchayat under MGNREGA

Fig 4.6 Display of PRI representatives and staff in Dharampur panchayat of district Una

Fig 4.7 Community toilets constructed by panchayat Shillai under Swacch Bharat Mission

Fig 4.8 Sillai teacher teaching local women in panchayat Amb

Fig 4.9 Data collection at panchayat office in Balikoti panchayat, block Shillai, Sirmaur district

Fig 4.10 Drain pipe being installed in panchayat Saproon, Solan district under sanitation activities carried out by panchayat

5. SUMMARY AND CONCLUSIONS

5.1 Introduction

The Panchayati Raj Institutions (PRIs) are system of local self- government in the South-Asian political system. They are vested with powers to cater to the entire social and economic requirements of the village community and play a crucial role in rural development. In order to safeguard the needs and aspirations of the local people, Article 40 of the Indian Constitution clearly envisaged the role of State to organize village panchayats and to delegate such powers and authority to them as may be necessary to enable them to function as units of self-government.

Gram Panchayats (GPs) in Himachal Pradesh were established in the year 1952 for the first time in a regular fashion under the Himachal Pradesh Panchayati Raj Act 1952. The state took effective steps towards the re-introduction of PRIs in 1968. During this year, statutory position was given to the Panchayati Raj Institutions. The Himachal Pradesh Panchayati Raj Act, 1968, was introduced w.e.f. 15thNovember 1970 and provided for a three-tier system of PRI, *i.e.* Gram Panchayat at village level, Panchayat Samiti at the block level and Zila Parishad at the district level. Despite all the attempts to strengthen these institutions they were plagued by several weaknesses but the 73rd Amendment Act changed the scenario and with a view to bring the laws of PRIs in conformity with this Act at the state level, the Himachal Pradesh Panchayati Raj Act, 1994 was enacted on 23rdJanuary 1994 and came into force w.e.f. 23rdApril 1994. All the provisions of 73rd Amendment Act were incorporated in the state. The new law provided for Gram Sabhas, Gram Panchayat, Panchayat Samiti and Zila Parishad at village, block and district level, respectively.

Himachal Pradesh has marched ahead of other states after Kerala and has set a model for decentralized planning with people's participation. PRIs inter-alia have initiated the process of participatory management of natural resources, watershed development and even implementation of MGNREGA and other social upliftmentschemes. A study of these grass-root institutions is not only important from an academic point of view but also holds importance from socio-economic point of view. Moreover, in a state like Himachal Pradesh where majority of the population lives in rural areas this study becomes more relevant as PRIs embrace every aspect of

rural life and are considered as harbingers of democracy and guardians of the village community. So far, no in-depth study has been carried out in the state to examine the role and impact of Panchayati Raj Institutions (PRIs) in the development of rural people. Therefore, present study was planned to examine the performance and role of PRIs in preparing micro-plans, assess their financial and execution status and the eventual impact on rural livelihoods.

5.2 Objectives of the study

1. To study the dynamics of demography, socio-economic parameters and infrastructural facilities in rural area,
2. to study availability and utilization of natural resources and the role of Panchayats in conservation and maintenance of resources,
3. to evaluate the process of preparation of micro plans, implementation of development schemes, delivery mechanism of agricultural inputs and impact on income and employment opportunities.

5.3 Methodology

The study was carried out in 40 villages of 40 panchayats of four districts i.e. two developed (Solan and Una) and two under-developed (Chamba and Sirmaur). The study was done based on both primary and secondary data. Primary data were collected by interviewing PRI representatives and farmer respondents. Secondary data were collected from District Census Handbooks, Statistical Yearbooks and official websites of Panchayati Raj Department. In order to achieve the objectives of the study tabular analysis, Principal Component Analysis and Willingness to Pay model were applied.

5.4Major Findings

1. Solan and Una constituted 8.5 per cent and 7.6 per cent of the total population of Himachal Pradesh while Chamba and Sirmaur constituted about 7.6 and 7.7 per cent of the total population of Himachal Pradesh, respectively. Majority of the population resided in rural areas in districts Chamba (7.82%), Sirmaur (7.65%) and Una (7.71%) but Solan district had comparatively more population residing in urban areas. Himachal Pradesh has a population density

of 123 person per sq.km., but developed districts Solan and Una showed a higher population density of about 300 and 338 inhabitants per sq. km. while less developed districts of Sirmaur and Chamba had lesser population density of 188 and 80 persons per sq.km.

2. Developed districts Solan and Una revealed a higher literacy rate of 83.70 per cent and 86.50 per cent, respectively compared to 82.80 per cent literacy rate of the state whereas low developed districts of Chamba and Sirmaur had comparatively lower literacy rates *viz.,*72.20 and 78.80 per cent.

3. Out of total geographical area, net sown area in Solan and Una accounted for 20.45 per cent and 25.19 per cent as against 12.02 per cent at the state level while in Chamba net sown area was accounted for only 6 per cent and in Sirmaur 18.11 per cent of total geographical area. Despite having the largest geographical area, Chamba, had lowest net sown area primarily due to the fact that most of its geographical area was formed by snow-clad mountain ranges, passes, river gorges and inhospitable terrains as well as majority of the area in the district was covered by forest area and pastures. The cropping intensity of Sirmaur (185%) and Una (193%) was much higher compared to the state (169%). In Chamba and Solan districts, cropping intensity was 161 per cent and 164 per cent, respectively. The better cropping intensity in Una and Sirmaur could be attributed to the fact that these districts are comparatively in plain regions with better irrigation facilities and are predominantly foodgrain and vegetable producing areas.

4. It was observed in all the selected panchayats that meetings of Gram Sabha were scheduled four times annually but the quorum was not met more than two times in most of the selected panchayats.

5. The principal component analysis (PCA) was employed to devise the development index and it was found that variables like road connectivity, drinking water facility, educational facilities, existing cooperative societies, bank branches (per 1000 households), health institutions (per 1000 households), marketing infrastructure, extent of women literacy, sex ratio,

veterinary clinics and formation of Self-Help Groups played a significant role in extent of development.

6. Fifteen per cent (6 no.) of panchayats primarily of Una and Solan districts were very highly developed fairing well in all the development indicators. Around 22.50 per cent (9 no.) panchayats were highly developed which were namely, Badhera, Kangar, Sansowal, Dharmapur, Barog of Una district; Chewa of Solan district and Hatli, Kariyan of Chamba district.

7. Among the moderately developed panchayats were Kuthiyari and Jawar of Una, Seri, Jaunaji, Hurang, Jabli, Kotbeja of Solan, Thulel, Gola, Ghatasni, Garnota, Rajera, Gagla, Kuther of Chamba, Shillai, Sangrah, Baunal Kakog and Charana of Sirmaur district accounting for 45 per cent (18 no.). The less developed panchayats were all from Chamba and Sirmaur district both being less developed districts thus showing that these panchayats still lag behind in developmental indicators. The less developed districts accounted for 17.50 percent (7 no.).

8. It was found that maximum population in the developed districts was in the age group of 16-30 years (25.83%) closely followed by 31-45 years age group (25.44%). On the other hand the age group of 31-45 years accounted for the maximum population among under-developed districts (28.74%) followed by age group of 46-60 years (26.76%). Across all age groups the share of males is higher compared to females. A considerable percentage *i.e.* 11.84 per cent and 8.54 per cent for developed districts and under-developed districts, respectively had been sent outside their native places for higher education amongst which ratio of girls is higher which shows that irrespective of developmental status girls are being given equal opportunities to pursue higher studies.

9. More than 40 per cent of households in under-developed districts were having joint family structure where they had more than 6 members. This may be due to more dependence on agriculture and the families having joint assets. On the other hand, in developed districts nuclear family structure was more prevalent (70 %).

10. In all the sample households agriculture was found to be the main occupation, 50.38 per cent and 54.43 per cent in developed and under-developed districts, respectively, followed by government service and pension contributing the next source of income. In the sample population women were more engaged in agriculture and they were responsible for carrying out animal care, milking, churning as well as field operations of weeding, transplanting and harvesting. They were also keeping up with attending and care of livestock. In both the districts the next source of income were private jobs. In developed districts 3.79 per cent population was working as daily wage labourers while 6.65 percent in under-developed districts. On an average in developed districts the active workforce available was 2.88 while in under-developed districts it was 4.15. This may be primarily due to more opportunities in developed districts and people from developed districts move out for better opportunities to cities or towns.

11. The land holding size is the determinant of basic strength of the farming family and its usage shows how effectively this resource is utilised by farmers. The holding size in developed districts was 0.78 ha while in under-developed districts it was 0.60 ha. The area under cultivated crops attributed to 72 per cent in developed districts while 80 per cent in under-developed districts. Pastures and grasslands contributed about 10 per cent in under-developed districts and 7.69 per cent in developed districts. Area under fruit crops was comparatively more in developed districts (11.53%) than under-developed districts (5.00%).

12. Mechanization is crucial for agriculture in order to perform timely farm operations, time management, ensuring enhanced efficiency of expensive inputs *i.e.* seeds, fertilizer, plant protection chemicals etc., enhanced land and labour productivity in agriculture and reducing drudgery. Per farm total investment on farm implements and machine amounted to Rs.3,17,473 in developed districts and Rs.97,646 in under-developed districts.

13. In the selected panchayats land resources were used by respondents for firewood, timber, fruits, parking facilities, conducting community or personal

functions, garbage dumping, grazing of livestock, fodder etc. The water resources in all panchayats were predominantly baolis and kuhls followed by wells/springs, ponds etc. In certain areas mining of rait, bajri was done from streams predominantly in Chamba district's selected panchayats. The cost of firewood was Rs.6/kg at current prices and cost of timber ranged from Rs.800-2000/cubic feet at current prices which was available to people free of cost in their area, therefore there is huge importance of people to understand the value of these resources and conserve them.

14. In both the district categories more than 50 per cent of farmers agreed that forests, fallow lands and water resources provide several benefits. Around 29.50 per cent respondents from developed districts and 26.50 respondents from under-developed districts respectively were ready to pay for conservation of natural resources while 20.50 and 23.50 respondents from developed and under-developed districts were unwilling to pay for resource conservation as they felt it would not be utilized effectively.

15. In developed districts maximum bid value that respondents were willing to pay was between Rs.150-250 (25%) while in under developed districts it was Rs. 100-150 (31%). In under-developed districts as the bid value increased the willingness to pay decreased.

16. The probability of willingness to pay for conservation of natural resources was calculated using logit model. The logit analysis puts forth that variables like education, income and bid value had positive and significant impact on willingness to pay for conservation of natural resources of the respondents, while factors *viz.*, age, satisfaction with functioning of PRIs were found to have positive relation but were found non-significant.

17. The maximum marginal effect was exhibited by satisfaction with PRIs (0.29) followed by income (0.25). The elasticity at mean is indicative of percentage change in willingness to pay with one percent change in explanatory variables. Therefore this suggests that with one percent increase in income and satisfaction with working of PRIs, the probability of willingness to pay might increase by 0.02 and 0.01 per cent, respectively.

18. It was found that in both the developed and under-developed districts respondents were willing to pay for natural resource conservation in their respective areas. In case of developed districts, the probability was 0.878 whereas in case of under-developed districts the probability was 0.855. The odds ratio was higher for developed districts. On overall basis, it was found that respondents were willing to pay for natural resource conservation as they understood the value of preserving the natural resources. But in under-developed districts people were not willing to pay higher bid amounts as comparatively their income were low.

19. The different source of income for panchayats in which maximum share was of external sources *i.e.* Funds under Centre Sponsored Schemes like MGNREGA, PMAY, NRLM, etc. and funds from Finance Commission, across majority panchayats. Panchayats generated lot of income from various internal sources in which maximum share was contributed by liquor cess followed by house/land tax across all sample panchayats.

20. The maximum share of expenditure was done on generating community assets which included creation of *Samudayik Bhawans*, Mahila Mandal buildings, *Sanjha Parangans, Moksh Dhaams (*cremation sites*),*etc. In developed blocks considerable amount was spent on motorable roads, mule roads with impetus being on connectivity. Panchayats have given considerable importance to irrigation facilities by construction and maintenance of kuhls etc. Out of the given expenditure maximum share was spent on asset generation followed by roads and welfare

21. In Chamba and Sirmaur districts the maximum expenditure made was on asset creation and land development. But a considerable amount was spent on construction/repair of kuhls/ponds and baolis as people give more importance to natural resources in these areas as they are considerably more dependent on them. In under-developed districts road connectivity is still poor, though efforts were being made to connect each village by roads but still enough needs to be done.

22. It was observed that the growth rate for job cards under MGNREGA had increased between 2-3 per cent in three years and per cent of households that demanded employment to the ones provided employment was also not 100 per cent for developed districts whereas in under-developed districts there was a significant increase in number of job cards issued and comparatively a huge proportion of households that demanded employment were provided employment.

23. The micro-planning exercise being done put forth that all 29 subjects were not catered to in the real field situation. The major drawback in the formation of micro-plans is non-attendance of people in Gram Sabhas. It is pertinent to ensure that people are made aware regarding the importance of GPDP and the impact of their presence in its formulation.

24. It was observed that though digitization and use of digital apps has gained importance for carrying out PRI activities and panchayats are using these softwares but due to non-availability of technical staff, internet facilities data uploading was not complete for all applications. The panchayat members were of the view that proper trainings should be provided to all elected members or technical staff should be provided so that digitization of all panchayat activities could be done effectively.

5.5 Suggestions and policy implications

1. The survey of panchayats brought to the notice that there is lack of support staff in various panchayats like junior engineers, computer operators, data entry operators etc. which affects effective functioning of panchayats, uploading of data on various digital platforms therefore efforts must be made towards recruitment and appointment of support and technical staff.

2. People must be made aware regarding importance of gram sabhas, powers vested in them and the need for them to attend these sabhas so that quorum is complete and better and effective GPDPs are formulated inclusive of demands and needs of all people in the panchayat area.

3. Timely and proper trainings must be provided to all elected panchayat representatives so that they are better equipped to meet the requirements of people. It must be ensured that trainings are provided to elected members within three months of their election to ensure better services by them. This would be more effective in ensuring less developed panchayats also move on the lines of developed districts.

4. Panchayats are yet not making complete utilization of resources available with them to provide employment at village level except through MNREGA. The GPDP stress on 29 subjects in which Khadi, village and cottage industries too are included which can be given impetus by panchayats to generate income and employment opportunities for village populace.

5. Various stakeholder/line departments are vested with powers to bring about holistic development at grassroot level but these stakeholders are working at their level only, in order to increase the socio-economic standard of people it would be better if these stakeholders work in tandem with each other (a collaborative approach) to bring about socio-economic development of villages.

6. Since panchayats are not effectively implementing agricultural activities therefore efforts must be made for effective participation of PRIs in implementing agricultural activities with help of Agriculture Department of the state.

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APPENDICES

Appendix 1: Proposed GPDP Plan for Shillai panchayat

Plan Year	**State**	**District panchayat & equivalent**	**Block Panchayat & equivalent**	**Village Panchayat & equivalent**
2018-2019	**HIMACHALPRADESH**	**SIRMAUR**	**SHILLAI**	**SHILLAI**

Plan Summary

Total Amount Alloted(in Rs.)								**Total Planned Outlay(in Rs.)**							
Tied				**Untied**				**Tied**				**Untied**			
SC	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**
0	**0**	**0**	**0**	**0**	**0**	**1727093**	**1727093**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Sectoral view

			Planned outlay							
			Scheme							
		Sector	**Tied**					**Untied**		
			SC	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**
		Drinking water	0	0	0	0	0	0	550000	550000
		Health	0	0	0	0	0	0	1000000	1000000
		Public Distribution system	0	0	0	0	0	0	450000	450000
		Rural electrification	0	0	0	0	0	0	300000	300000
		Sanitation	0	0	0	0	0	0	1200000	1200000
		Small-scale industries	0	0	0	0	0	0	170000	170000
		Water conservation	0	0	0	0	0	0	410000	410000
		Total	**0**	**0**	**0**	**0**	**0**	**0**	**4080000**	**4080000**

Source:egramswaraj.gov.in

Appendix 2: Proposed GPDP plan for Saproon panchayat

Plan Year	**State**	**District panchayat & equivalent**	**Block Panchayat & equivalent**	**Village Panchayat & equivalent**
2018-2019	**HIMACHALPRADESH**	**SOLAN**	**SOLAN**	**SAPROON**

Plan Summary

Total Amount Alloted(in Rs.)								**Total Planned Outlay(in Rs.)**							
Tied				**Untied**				**Tied**				**Untied**			
SC	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**
0	**0**	**0**	**0**	**0**	**0**	**3272544**	**3272544**	**0**	**0**	**0**	**0**	**0**	**0**	**1203000**	**1203000**

Sectoral view

			Planned outlay							
			Scheme							
		Sector	**Tied**				**Untied**			
			SC	**ST**	**General**	**Total**	**SC**	**ST**	**General**	**Total**
		Administrative & Technical support	0	0	0	0	0	0	193000	193000
		Drinking water	0	0	0	0	0	0	180000	180000
		Non-conventional energy sources	0	0	0	0	0	0	120000	120000
		Roads	0	0	0	0	0	0	410000	410000
		Sanitation	0	0	0	0	0	0	300000	300000
		Total	**0**	**0**	**0**	**0**	**0**	**0**	**1203000**	**1203000**

Source:egramswaraj.gov.in

Appendix III

Code No.....

Department of Agricultural Economics, Extension Education and Rural Sociology
CSK HP Krishi Vishvavidyalaya, Palampur (H.P.) – 176062

Title of research problem: Impact of Panchayati Raj Institutions on Socio-Economic Development of Rural Households of Himachal Pradesh

Objectives:

I. To study the dynamics of demography, socio-economic parameters and infrastructural facilities in rural area,
II. to study availability and utilization of natural resources and the role of Panchayats in conservation and maintenance of resources,
III. to evaluate the process of preparation of micro plans,implementation of development schemes, delivery mechanism of agricultural inputs and impact on income and employment opportunities.

SAMPLE FARMER SURVEY SCHEDULE

I. General Information about Respondent

Name of Respondent		
Age		
Education		
Caste		
Religion		
Contact No. (Mobile)		
Size of family (No.)	Male	
	Female	
Type of family (Joint/Nucleus)		
Occupation I. Main II. Subsidiary		
Type of Holder (Marginal/Small/Large)		

Date of survey _____

Signature of student _____

II. Family Features

Sr. No	Relation with the head of the family	Age (years)	Sex (M/F)	Education I/P/M/H/S/D/G/PG
1				
2				
3				
4				
5				

Where, I- Illiterate, P-Primary, M- Middle, H- high, S- Senior secondary, D-Diploma, G- Graduation and PG- Post Graduation

III. Occupational pattern of family members

Sr. No	Occupation	Main			Subsidiary		
		No. of family members	Time devotion per annum (%)	Annual income (Rs.)	No. of family members	Time devotion per annum (%)	Annual income (Rs.)
1	Agriculture						
2	Business / trade						
3	Rural Artisan						
4	Govt. Service						
5	Laborer						
6	Other (Specify)						

IV. Inventory and Land Utilization (kanal)

S.No.	Particulars	Area (kanal)			Source of irrigation
		Irrigated	Unirrigated	Total	
1.	Owned land				
2.	Leased-in land				
3.	Leased-out land				
4.	Total holding (1+2+3)				
Land Utilization:					
1.	Cultivated land				
2.	Orchard land				

3.	Fallow land				
4.	Cultivable wasteland				
5.	Land under Misc. (trees/grasses/forest)				
6.	Permanent pastures				
7.	Any other (grassland)				
8.	Total holding				

V. A) Farm Buildings:

Particulars	No.	Type of building			Year of purchase/ construction	Present Value (Rs)	Annual Repairs (Rs)	Remarks
		Kuccha	Pucca	Mixed				
Farm Buildings:								
i. Residential Building								
ii. Cattle Shed								
iii. Store house								
iv. Vermicompost Shed								
v. Any other								
vi.								

B)Farm Implements and Machinery

Major Farm Machinery:	Total No.	Year of purchase	Present Value (Rs)	Annual Repairs (Rs)	Remarks
i. Tractor					
ii. Power tiller					
iii. Chaff-cutter					
iv. Thresher					
v. Sprayer/Duster					
vi. Water pump					
vii. Seed drill					
viii. Any other					

Minor Implements:	Total No.				
i. Plough Wooden Iron					
ii. Spade					
iii. Hoe					
iv. Rake					
v. Sickle Small Large					
vi. Axe					
vii. Planker					
viii. Any other					

VI. Livestock Inventory and Investment

Sr. No	Particulars	No.	Breed	Age	Lactation (no.)	Present Value	Milk yield/ day (Lts)	Quantity Sold	Value (Rs)	Remark
A.	Cows (Cross bred) Milk Dry									
	Cows (Local) Milk Dry									
B.	Buffaloes Milk Dry									
C.	Heifer Cow Buffalo									
D.	Bullocks									
E.	Sheep Milk Dry									
	Goat Milk Dry									
F.	Poultry									
G.	Rabbitry									
H.	Any other									

VII. Farm investment

S.No.	Particulars	Investment		Year of investment	Remarks
		Own funds	Bank loan		
1.	Irrigation				
2.	Farm machinery				
3.	Farm implements				
4.	Farm store				
5.	Animal sheds				
6.	Godown/store				
7.	Any other				

VIII. Other off farm sources of income and employment

Particulars	No. of persons	No. of days employed	Annual income
Daily paid labourers			
MNERGA			
Business Tea stalls Shops Enterprises Private plant Flour mill Rice mill Oil expeller			
Village handicrafts			
Village artisans			
Private services			
Government jobs (specify			
Any other			

IX. Contribution of Panchayats in development

Particulars	Funds provided	No. of participants	Benefits	Remarks
Training/awareness (specify)				
1.				
2.				
3.				
Resource development (specify)				
1.				

2.				
Employment generation				
1.				
2.				
Infrastructure				
1.				
2.				
Supply of Agri-inputs				
1.				
2.				
Social welfare				
1.				
2.				
Any other				

X. What is your general opinion about the working/contribution of Panchayats

Particulars	Work progress				Suggestions
	Very good	Good	Fair	No progress	
1.					
2.					
3.					
4.					

Appendix IV

Code No. ----------

Department of Agricultural Economics, Extension Education and Rural Sociology

CSK HP Krishi Vishvavidyalaya, Palampur (H.P.) – 176062

Title of research problem: Impact of Panchayati Raj Institutions on Socio-Economic Development of Rural Households of Himachal Pradesh

Objectives:

IV. To study the dynamics of demography, socio-economic parameters and infrastructural facilities in rural area,

V. to study availability and utilization of natural resources and the role of Panchayats in conservation and maintenance of resources,

VI. to evaluate the process of preparation of micro plans,implementation of development schemes, delivery mechanism of agricultural inputs and impact on income and employment opportunities.

1. Introduction:

S.No.	**Particulars**	
1.	Name of Gram Panchayat (GP)	
2.	Name of block	
3.	Distance from block HQ (Km)	
4.	No. of Villages	
5.	No. of Wards	
6.	No. of households	
7.	**Names of Key informants/officials of GP**	
8.	Pradhan	
•	Up- Pradhan	

•	Panch	•
		•
		•
		•
		•
•	Panchayat Secretary	
•	Panchayat Sahayak	
•	**No. of wards/ ward members**	
9.	**Category**	
•	General	**Male** **Female**
•	SC	
•	ST	
•	OBC	
•	Total	
•	AEO	
•	Veterinary Officer	

2 Vital statistics of panchayats

S.No.	**Particulars**	
1.	Number of villages	
	Total population in the panchayat area	• Male- • Female-
2.	Literacy rate	• Male- • Female-
3.	Religious communities in the Panchayat	Hindus- Muslims- Sikhs- Others-

4.	Number of villages linked with motorable roads	
5.	Number of households having drinking water supply	
6.	Number of schools	• Primary- • Secondary- • Senior Secondary- • Technical institutions-
7.	Number of PHC/dispensary in the panchayat area	
8.	Number of villages electrified	
9.	Number of religious places in the Panchayat	• Temples- • Gurudwara- • Mosques- • Other-
10.	Number of Fair Price Shops in the panchayat	
11.	Number of veterinary clinics	
12.	Availability of primary market yard	
13.	Number of cooperative socities in the panchayat	
14.	Number of medical shops/pharmacies in the panchayat	
15.	Number of seed/fertilizer supply shops	
16.	Number of post office in the panchayat area	
17.	Number of bank branches in the panchayat area	
18.	Number of Tools repair shop	

3. Occupational distribution

S. No.		2001	2011	Increase/ Decrease
1.	Cultivators			
2.	Agricultural labourers			
3.	Non-agri workers			
4.	Other workers			

4. Structure of holdings

S. No..	Farm category	Holdings		Area	
		No.	Per cent	No.	Per cent
1.	Landless families				
2.	Marginal (Below 1 ha)				
3.	Small (1-2 ha)				
4.	Medium (2-4 ha)				
5.	Large (Above 4 ha)				
	Total families				

5. Operational Mechanism of the Panchayat

S. No.	Particulars	Number (Annually)	Headed By	Attendance	Activities Done
1.	Quorum				
2.	Aam Jalass				
3.	Meeting of Gram				

	Panchayat				
4.	Working Commitee				
5.	Budget Commitee				
6.	Vigilance Commitee				
7.	Meeting of Up-gram sabha				
8.	Audit				
Functions performed by the Panchayat during 2017-18					
Sr. No.	Particulars	Expenditure	Employment generation (days)	Target	Achievement
1.	Identifying IRDP beneficiaries				
2.	Identifying beneficiaries for various development schemes				
3.	Registration of cattle				
4.	Registration of birth, death and marriage				
5.	Remove encroachment on government land				
6.	Maintenance of public property				
7.	Disposal of waste, sewage, dead carcass of animals				
8.	Penalty for disobedince				

9.	Prohibit sale of liquor or any intoxicant				
10.	Regulation of markets and fairs				
11.	Electrification Installation of Solar lights				
12.	Construction of roads, mule roads etc.				
13.	Construction of bunds				
14.	Facilitating sanitation				
15.	Facilitating water supply				
16.	Construction/repair of kuhls, ponds etc.				
17.	Construction of bridges/culverts/bunds				
18.	Collection and disposal of waste and garbage				
19.	Regulation of aanganwadis				
20.	Regulation of Fair Price Shops				
21.	Other activities				

6. Natural Resources in the panchayat area

Sr. No.	Resource	Expenditure on maintenance	Participation	Employment generation	Income Generation
A.	**Land**				
1.	**Total geographical area**				
2.	**Forest land**				
3.	**Groves and misc. trees**				
4.	**Permanent pastures and grazing land**				
5.	**Culturable waste**				
6.	**Land put to non-agri. Uses**				
7.	**Barren and unculturable land**				
8.	**Current fallows**				
9.	**Other fallows**				
10.	**Net sown area**				
11.	**Total cropped area**				
12.	**Orchards**				

13.	**Bunds**				
14.	**Roads**				
15	**Mule roads**				
B.	**Water**				
13.	**Ponds**				
14.	**Kuhls**				
15.	**Public wells**				
16.	**Tubewells**				
17.	**Baolis**				
18.	**Nalahs**				
19.	**River embankment**				
20.	**Others**				

7. **Sources of income of panchayats**

Sr. No.	Particulars	Rate/Fee	Amount (Annually)
A.	**Internal Sources**		
1.	Ration Cards		
2.	Property Tax		
3.	Teh-bazaari		
4.	Service fee for sanitation etc.		
5.	Fee for registration of animals/livestock		
6.	Water rate		
7.	Land cess		
8.	Tax on extraction and export of		

	sand,stone, bajri and slates		
9.	Liquor cess		
10	Duty on mobile communication service towers		
11	Income from assets like orchards etc.		
12	Annual fair and festival tax		
13	Others		
B.	**External Sources**		
14	Grants from state government		
15	Loans		
16	Donation from MLAs/MPs		
17	Finance Commission		
18	Others		

8. Different development schemes in operation in panchayats

Sr. No.	Government Scheme	Budget	Expenditure	Achievement	Income generation	Employment generation	Benefits
1.	MGNREGA						
2.	SAGY						
3.	PMAY						
4.	BRGF						
5.	MPLADS						
6.	Vidhayak nidhi						
7.	NFSM						
8.	AAY						
9.	Other schemes						

10. Capacity Building Programmes conducted by different agencies

Sr. No.	Name of scheme	Agency involved	Training Duration	Aid/Expenditure	No. of beneficiaries	Achievement

11. Panchayat Buildings

S. No.	Particular	Year of construction	Capital investment	Present use	Annual rental income if any

12. New initiatives in the panchayat

Sr. No.	Particulars	Progress of work done	Funds spent
1.	e-Panchayat		
2.	Swacch Bharat Mission		
3.	Sarv Shiksha Abhiyaan		

13. Microplan formulation for panchayats

Issue to be resolved	Activities undertaken	Time frame	Responsibility	Budget	Benefits	Remarks

14. Problems in functioning of panchayats

Brief Biodata of student

Name	:	Mahima Gopal Ghabru
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Mother's Name	:	Smt.Sujata Ghabru
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1. Academic Qualification

Qualification	Year	School/Board/ University	Marks	Division	Major Subject
10th	2008	ICSE	85.00%	1st	English, Hindi, Mathematics, Science, Social Science, IT
12th	2010	CBSE	79.00%	2nd	Mathematics, Biology, Physics, Chemistry, English
B.Sc (Agriculture)	2014	CSKHPKV Palampur	7.62	1st	All subjects of Agriculture
M.Sc (Agriculture)	2016	AAU, Anand, Gujarat	8.44	1st	Agricultural Economics
Thesis title in M.Sc.			Dimensions of Regional Disparity in Sustainable Agricultural Development in Gujarat		
Fellowships/Scholarships/Gold Medals/Awards			1. JRF Fellowship 2. CSKHPKV Merit Fellowship		
Publications			7		
Research papers			4		
Published abstracts			3		