

FOOD INSECURITY VULNERABILITY AND COPING MECHANISMS-A STUDY OF AGRICULTURAL SECTOR IN HIMACHAL PRADESH



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CONTANTS

Chapter	Title	Page
	EXECUTIVE SUMMARY	i-xii
1	INTRODUCTION	1-8
	Need of the study	7
	Objectives	8
2	METHODOLOGY	9-16
	Selection of study district and Blocks	9
	Sample Design	12
	Choice of Indicators of Food Security	14
	The Data	14
	Analytical Tools	15
	Limitations of the Study	16
	Reference Period	16
3	IDENTIFICATION AND ASSISTANCE TO THE GROUPS VULNERABLE TO FOOD INSECURITY	17-29
	Guidelines for finalization of above categories	17
	Guidelines for identification of additional households	19
	Food Security	19
	Details of various schemes under TPDS	22
	Allocation of essential commodities from Government of India	24
	Special subsidized scheme of the state	25
	Quality control	26
	Commodities Lifted by the State Government	27
	Generation of consumer Awareness	29
	Transparency	29
	Enhanced Scale of Food grains	29
4	SOCIO-ECONOMIC PROFILE OF SAMPLE HOUSEHOLDS	30-60
	Caste Classification	30
	Family Size	30
	Age Classification	33
	Education Level	34
	Government Assistance Provided to Children	38
	Occupation of sample household	42
	Land Resources of Sample Households	45
	Cropping Pattern of Sample Households	48
	Livestock Profile of Sample Households	53
	Identification of Food Secure Categories in Production	56
	Categories Wise Income from Different Sources of Sample Households	58

5	AVALAIBILITY OF BASIC AMENITIES	61-74
	Dwelling Houses	61
	Availability of Drinking Water	62
	Quality of Drinking Water	65
	Availability of Medical Facilities	66
	Income from Natural Resources	70
	Credit Facilities	70
	Satisfaction from Credit Facilities	74
6	CONSUMPTION BEHAVIOR	75-93
	Annual Consumption and Net Availability of Cereals	75
	Assistance of Cereals from PDS	78
	Annual Purchase of Cereal to meet out Deficit	79
	Per Capita Consumption and Availability of Cereals	81
	Status of Food Security	81
	Consumption and Availability of Pulses	84
	Low Income and Consumption Pattern	87
	Per Capita Calorie Intake from Food Items	90
7	POLICY ISSUES	94-97
	BIBLIOGRAPHY	98

EXECUTIVE SUMMARY

Abstract FAO (1983) had formulated that the basic concept of food security implied that "all people at all times have both physical and economic access to the basic food they need". The World Bank (1986) has modified this formulation to indicate that food security is "access by all people at all times to enough food for an active, healthy life. Now that we have grown so much food, is every Indian getting more to eat? Not according to the Economic Survey. The per capita availability of cereals, pulses, and vegetable oils are all sharply down from last year (2000- 01). Only 390.6 grams of wheat and rice were available for every Indian per day in 2000-01, down from 426 grams per day in 1999. On the production front, during the 1990s the growth of agricultural productivity and production decelerated as compared to the 1980s. The per capita food production failed to keep pace with the population growth. During 1990s, while population increased at the rate of 1.84 percent per annum, food grain production per year increased by only 0.90 percent. Per capita availability of food grains declined from 177 Kgs per year in 1991-92 to 163.2 Kgs during 2000-01. It was estimated that decline of cereal intake varies across regions by as little as 1 percent in Himachal Pradesh to 11 percent in Rajasthan. The state of Himachal Pradesh has attained the distinction of being regarded as model of hill development. There are still doubts about the equitable distribution of gains of development and less privileged sections of farming community may not have gained significantly and their status may have remained more or less stagnant. In Himachal Pradesh, average size of land holdings are small and marginal, where agriculture being practiced on subsistence basis and cereals, pulses, oilseeds, and animal husbandry farming are taken up almost on all farms. But the declining size of average holdings in general and of marginal holdings particularly has further aggravated the problem of food, feed, and nutritional insecurity in the state.

Objectives

1. To identify the groups vulnerable to food insecurity and to quantify the extent of food insecurity in terms of hunger gap.
2. To highlight the socio-economic conditions of food insecure groups in the state.
1. 3 To highlight coping mechanism adopted by food insecure and vulnerable groups to mitigate the food insecurity
2. 4 To analyze the public / private and financial capital of food insecure groups and their dependence on such capital for avoiding the food insecurity.
3. 5 To examine the role of government intervention through policy and programs for providing food security net to vulnerable groups.

Methodology

Two districts with highest concentration of below poverty line in the state (Shimla and Chamba) were selected to find out the availability of different food items from home production and supply of these items through Public Distribution System (PDS). Further a sample of 100 respondents was drawn with in the highest concentrating blocks of selected districts to following categories.

1. Below Poverty Line (BPL), 2. Antodaya Anna Yojna (AAY), 3. Above Poverty Line (APL), 4. Additional PDS families, 5. Annapurna Scheme

Since the consumption pattern has direct relation with food insecurity therefore data on consumption pattern of food items for selected households has also been studied. Responsible factors for accessing food insecurity in relation to present income, consumption and food intake have been analyzed in detail.

Main Findings

One of the main constituents of the Govt. strategy for poverty alleviation is Targeted Public Distribution system which ensures availability of essential commodities like wheat, rice, levy, sugar and kerosene through a net work of 4335 fair price shops for distribution of essential commodities among below mentioned categories in Himachal Pradesh.

At present 9,33,438 (on 1.4.2007 the number of A.P.L. Ration cards was 8,89,334 which is on the increase families are covered in APL 15 kg. of wheat flour and 20 kg of rice per month is being provided to each family under specially subsidized rates by the State Govt. of Rs.8/- per kg. and Rs.9/- per kg. respectively on the landed cost policy prescribed by Govt. of India. w.e.f. 28.7.2007.

A total No. of 5, 14,000 BPL families have been targeted for placement in BPL Scheme out of which 1,97, 100 poorest of the poor families have been further transferred to AAY Scheme. Thus, the resultant families under this scheme are 3,16,900. The Govt. of India is presently allocating 3965 M.T. wheat and 7130 M.T. rice per month.

Under Antodaya Anna Yojna (AAY the poorest of the poor 1,97,100 families out of the BPL list has been identified. The Govt. of India is presently allocating 2955 M.T. wheat and 3940 M.T. rice per month. The scale of issue per family is as per GOI norms, 15 Kgs of wheat and 20 Kgs of rice which has been enhanced by the H.P. Govt. w.e.f. 28.7.2007. The Annapurna Scheme has been introduced in the State w.e.f. 1st April, 2000. The numerical ceiling of the beneficiaries has been fixed by the Govt. of India at 6373 persons for this State for providing food security to the old destitute/indigent citizens of 65 years of age or above. Out of the fixed target, 4997 persons stand indentified in the Pradesh (up to 2/2008) under this scheme. Rice is being issued to beneficiaries free of cost at the scale of 10 Kgs per person per month.

SOCIO-ECONOMIC PROFILE OF SAMPLE HOUSEHOLD

Study reveals that in Chamba district Tissa block is dominated by schedule tribes (40%) whereas; block Salooni has highest percentage of general categories (83.33%). The highest percentage of schedule tribes (Muslims) among various economic categories of Tissa block is due to the reason of situation of block near the border of Pakistan in the state.

The higher size of families (6.33) of Tissa block of district Chamba is due to the fact of concentration of Muslim families in the block who normally have higher family size. In case of Shimla district the size of family were 4.80 and 5.30 persons in Chirgaon

and Nerwa blocks respectively. The female section was far behind in the level of education when compared to male in both the study block. Govt. of Himachal Pradesh is providing assistance in the shape of mid day meal and provision of free books up to primary classes of children. This system is helping children in both ways i.e. encouragement in getting education as well as financial assistance. In Tissa block percentage of male and female in Anganwari and primary section was higher as compared to other block under study.

Further study indicates that 60 and 58 percent of the households have agriculture as their main occupation in Tissa and Salooni blocks respectively. Service is the second major occupation in mentioned blocks. Female participation in agriculture is more than 90 percent and it is higher among AAY households as compared to other categories. In district Shimla 35 and 68 percent of the households have agriculture as their main occupation.

The per farm area under agriculture accounts 0.23 and 0.39 hectare in Tissa and Salooni block of district Chamba. Both the blocks have additional benefit of horticultural crops under which 0.09 and 0.10 hectare per farm area has been recorded. The distribution of land resources indicates that major share of the area under agriculture and horticulture was with APL category of households. The per farm area under horticulture was less than 0.03 hectare with BPL and AAY categories in both the blocks, whereas , in APL households it varied between 0.24 and 0.40 hectare in Tissa and Salooni blocks respectively.

In Shimla district also all the crops are grown under un-irrigated conditions like Chamba. At overall level the per farm area was recorded 0.41 and 0.52 hectare in Chirgaon and Nerwa blocks. In both the blocks horticultural crops have dominated the cropping pattern and per farm area was recorded 0.20 and 0.14 hectare but again major portion was in the hands of APL category of households
Study shows that apple is contributing cash income of rupees 3450 and 3766 in Tissa and Salooni blocks respectively. Out of total value of produce at farm level, about 86 percent was from apple (Rs. 3450) and Maize (Rs. 2886) in Tissa block

whereas, Rs. 4706, 3766 and 2326 (98 percent) were from maize, apple and wheat in Salooni block. Out of total values of produce 47 and 34 percent was from apple production and proving helpful to the households economy per farm benefit from apple production was floating in the hands of APL category of farms and accounted 78 and 92 percent in Tissa and Salooni blocks respectively.

Out of total gross cropped area the highest; 0.20 hectare per farm was recorded in apple followed by wheat 0.12, maize 0.10 in Chirgaon block. But in case of Nerwa block per farm area under wheat was highest 0.18 hectare followed by maize 0.15 and apple 0.14 hectares. Paddy, pulses, tomato were the other supporting crops in the block. This study shows that at per farm level in both blocks more than 90 percent of the produce value was from apple production. Low level of produce value from food grains indicating food insecurity among different categories.

Identification of Food Secure Categories in Production

Production of major crops and production of milk is the very important indicator for measuring food security of different economic categories. In this regard average production of all the categories including APL has been worked out and the categories those were below the average production of milk and main crops have been considered as insecure category. Similarly those who were producing above the average or equal to average have been marked as food secured categories.

Categories Wise Income from Different Sources of Sample Households

In this study it may be observed that agriculture, Horticulture, Animal Husbandry, Labour, Govt. Services, and Business were the major sources from where the rural households were drawing income for their livelihood. In agriculture maize and wheat and in horticulture apple were the main crops grown by the farmers in study districts. The distribution of income from different sources indicates that at per farm level the households were drawing highest income 17816 and 46440 rupees from govt. services in Tissa and Salooni blocks of Chamba district. Whereas, in Shimla district the main source of income was horticulture from where the total income generated by the farmers was rupees 89500 and 46440 in Chirgaon and Nerwa Blocks. In this

study it may be observed that the category generating low income from average income of all the categories has been identified as insecure category.

Consumption and Availability of Pulses

This study shows that except Tissa the pulses crops were grown in all other blocks of district Chamba and Shimla. In pulses growing blocks the percentage of deficit after meeting out of net availability from farm produce was 84.00 72.00 and 60.00 percent in Salooni, Chirgaon and Nerwa blocks respectively.

In fact pulses are the essential item in consumption pattern of the people but its production has been decreasing since last two decades. In such a scenario the highly subsidized pulses provided through PDS are proving very helpful in improving food security status of poor households. Study reflects that out of total authorized quota of pulses about 85.00, 82.00., 73.00 and 62.00 percent has been lifted by Tissa and Salooni, blocks of Chamba and Chirgaon and Nerwa of district Shimla respectively.

As per sources of income the detail of different secure and unsecured economic categories has been presented in the end of the third chapter which indicates that the category generating less income from average income of particular source has been identified as insecure category.

AVAILABILITY OF BASIC AMENITIES

The following text provides details of some of important basic amenities available to different categories.

Dwelling Houses

This study shows that 33 and 30 percent of the households in Tissa and Salooni blocks of Chamba district are living in pucca houses. But at the same time almost all the households of BPL category are living in kutcha houses. Only AAY category has made some progress in developing pucca and semi-pucca houses. This may be due to the reasons of government assistance provided for construction of houses to AAY households. Further table shows that every household has about three rooms in Tissa and Salooni blocks. In Shimla district majority, 86 to 90 percent of the

households are living in kutcha houses. In this district majority of the households have their separate kitchen, toilets and animal shed in all the category of households.

Availability of Drinking Water:

The State Government has made all efforts to provide water and electricity even in remote corners of hilly state. It was found that piped drinking water is available in every study blocks of district Chamba and Shimla, despite to the fact these blocks are situated at the height ranging from 1600 to 2000 meters above MSL. In this study it may be seen that more than 70 percent of the households have public tap for drinking of water, in each of the study blocks. The BPL and AAY families have been enjoyed the facility of drinking water in a better way as they are living compactly and coverage of these households for drinking water is the major concern of the department of IPH of state government Mountain water is usually considered to be pure but, because of increasing pollution; non-treatment of water and low level of maintenance of water sources, some of the respondents have doubts about its suitability for health.

Income from Natural Resources:

In hilly society people generate some cash income from natural resources like forests in the shape of wood, herbs and grass. Grass collected from forests and CPRS does not generate any cash earnings but is used by majority of the sample households for tending livestock. The detail of cash income from wood and herbs is presented in table 5.5. This table shows that only BPL and AAY category of households are involved in this collection in all the study blocks of Chamba and Shimla. There are number of herbs in the forest but trade of 'Guchhi' (Morcela) is very popular due to higher demand and easy marketing facilities available.

Availability of Credit Facilities

This study shows that banks are the major source of credit in district Chamba whereas; in Shimla Co-operative Societies play an important role for meeting out the credit requirement of the sample households. The average per farm off take of

credit from banks was Rs.5000 in Tissa block as compared to Rs. 2300 in Salooni of district Chamba. The average credit availed was rupees 43132 and 4732 in Chirgaon and Nerwa blocks of district Shimla. The quantum of credit taken from cooperatives was highest and accounted for 73 percent of total credit in Chirgaon as compared to only 35 percent in Nerwa.

Results of multiple response analysis about on reasons for non-satisfaction from credit facilities are indicating that in Chamba district, 60 to 100 households were dissatisfied on reasons for non- satisfaction with credit facilities on one or another account. Among these reasons majority of the households felt that the high rate of interests followed by endless formalities for availing credit and uncertainly of repayment of credit were the main reasons of dissatisfaction with credit facilities.

Annual Consumption and Net Availability of Cereals

In this study the detail of total consumption and net availability of food grains from home produce and supply through PDS to different economic categories in district Chamba and Shimla has been discussed. In district Chamba on an average total annual requirement of cereal was recorded 234 Qtls among BPL, AAY, APL and APDS category of household whereas, it was 198 Qtls in Salooni block per annum. Out of total consumption of cereals, the net availability from home produce was 53.00 and 63.00 per cent in Tissa and Salooni blocks respectively indicating a deficit of 47 and 37 percent in these blocks. In Shimla district, average annual consumption of cereals was 231 and 241 Qtls in Chirgaon and Nerwa blocks respectively. On an average the net availability of home produce was 38 and 61 per cent in these blocks which has indicated a deficit of 62 and 39 percent respectively.

Assistance of Cereals from PDS

As discussed earlier that at overall level per annum deficit of cereals for consumption varied between 37 to 63 percent among different categories of households. In this concern public distribution system of state Government has made provisions for the supply of cereals on subsidized rates under certain norms to different categories of households. Study reveals that in Tissa block annual quantity allowed to sampled

categories was 126 Qtls. out of which about 86 percent of the total sanctioned quantity. Similarly, in Salooni block the total authorized quota of cereals was 128 Qtls out of which 57 percent was used for consumption. Study reflects that total quantity authorized and lifted was higher in rice as compared to wheat in district Chamba.

In Shimla district, average annual consumption of cereals was 231 and 241 Qtls in Chirgaon and Nerwa blocks respectively. On an average the net availability of home produce was 38 and 61 per cent in these blocks which has indicated a deficit of 62 and 39 percent respectively. The said deficit use to be purchased from PDS.

Per Capita Consumption and Availability of Cereals

Regarding per capita consumption of cereals indicates on an average 0.372 and 0.377 gram of cereals were required for consumption in a day in Tissa and Salooni blocks respectively. Category wise picture indicates that in both blocks per capita consumption was highest 0.432 and 0.430 grams in the category of AAY and lowest 0.335 and 0.342 grams in APL category of farms in Tissa and Salooni blocks of district Chamba respectively. This shows households that belonged to the category of APL were consuming less when compared to other categories. Similar pattern may be observed in Shimla district where per capita consumption in day was less in APL category of households.

Status of Food Security

The cereals are the staple diet of sampled households and shortfall in its on-farm production indicator food insecure nature of these households. However, they have enough resources for purchasing the requisite quantities of cereals and as such, by definition, may not be food insecure. Presently, an attempt has been made to make a reflection of food security based on average production of cereals on farm. The categories of farms/farmers groups having production less than average farm production of different categories have been termed as food insecure groups.

Low Income and Consumption Pattern

It has been found that the sampled households have comparatively poor consumption pattern. This scenario has been attributed directly to low income levels. The low income level interns have been a result of multiple factors. In this

concern opinion recorded from the households reflects that unviable agriculture; unemployment in the family; poor level of health to work and burden of interests were the major reasons for non-fulfillment of daily expenditure in study districts of Chamba and Shimla. More than 70 percent of the household's complained that unviable nature of agriculture has created poverty in the study blocks. The second major reason behind low income in the households was unemployment. The percentage of opinion confirming this reason among different blocks varied between 47 to 87 percent in four study blocks.

Per Capita Calorie Intake from Food Items

Average calorie intake from different food articles¹ by different groups of family members has been presented in this study. The study shows that on an average per capita calorie intake in Chamba district was 2141 and 2502 in Tissa and Salooni blocks respectively. In both blocks the average calorie intake was highest 2201 and 2602 in APL category of households respectively. This analysis indicates that Salooni block is better in calorie intake as compared to Tissa of district Chamba. In Tissa block, research team came across a family sharing the room with livestock, an example of stock poverty in the area. In case of Shimla district study shows that on an average per capita calorie intake was 2482 and 2157 in Chirgaon and Nerwa blocks respectively. Among all category of household's calories intake was the highest 2601 and 2378 in APL category of households in Chirgaon and Nerwa blocks respectively.

On the basis of this analysis, the food secure and insecure groups have been identified in the study. Therefore the categories consuming less than the total average calorie intake of the block have been marked as insecure and those consuming equal or more than the average were categorized as secure categories.

POLICY ISSUES

There are large scope for cultivation of fruit and vegetables including off season vegetables in all the blocks but due lack of irrigation facilities especially in Tissa and Salooni blocks the farm families are unable to diversify cropping pattern at their desired extent.

Therefore, for elevating hunger and increasing poverty it is important to support more public investment in rain- fed and backward hilly areas. In hilly topography of the

study districts, there are numbers of scope of lifting water flowing below the mark of cultivated land. In agriculture herbal cultivation is emerging in a very big way. Therefore, availability of irrigation facilities will not only become helpful for cultivation of fruit and vegetable but also generate big returns from herbal cultivation due to suitable agro-climatic conditions of hilly topography in Himachal Pradesh.

The direct food and nutrition support for the poor through a minimum safety net should be properly balanced with improvements in the quality of life of local people through investments in education, drinking water and sanitation, and health care. Further, future food security programmes should have a broad objective of increased agricultural production and enhanced access to food through a participatory approach of local people with emphases on resources efficiency, social equity and preservation of the environment.

In Himachal Pradesh, rural farming households have usufruct rights for timber, fuel wood, grasses and grazing in the demarcated protected forests. These rights are also extended to the un-classed forests, which mainly include those areas which fall under nullahs/khads/rivers and barren rocky hills. Un-classed forests have thin vegetation and commercial forestry is not possible in these areas. The proportion of reserve forests in the state as well as in the selected areas has been declining over the last two decades. In the reserve forests people have no usufruct rights. However, in study area illegal tree felling, grass cutting and animal grazing is common. Mostly those forest areas which have good potential for commercial forestry are declared reserve forests for a period of 20 to 25 years. Therefore, it is to be suggested that plantation of trees should be started on priority basis and a special provision of finance for plantation of forests should be managed.

It is very interesting to note that in some categories quantity of cereals supplied through PDS is more when compared to the quantity produced at home among all economic categories. This shows PDS has control over the demand of cereals consumption among all categories of households. In this concern it is suggested that more dependency on public distribution system is harming the production system as, farmers are not putting efforts for better production due to availability of cereals in cheap rates from PDS.

In this study it was observed that poor quality seeds lead to variation and low level in productivity. There are many sources from which farmers obtain seeds- retained crop produce, other farmers, traders , co-operatives, government departments, agricultural universities, public and private seed companies and since certification is not compulsion, it is difficult to monitor the quality of seeds from informal sources. Therefore it is suggested that extension services should educate farmers in the importance of using quality seed.

This study makes a strong case for a drastic change in the food management policy and, therefore, in the overall agricultural strategy. Apart from reforming procurement and price support policies, the government should seek to increase production of non-cereal foods, namely fruits, vegetables and animal products including milk, their storage facilities and the processing of agricultural produce. There are number of scope to increase production of mentioned products in study districts as well as hill agricultural of Himachal Pradesh.

The impact of changes in climatic factors on crop productivity raises several researchable issues. The need for short duration wheat variety is felt necessary to address the problem of shorter winter as well as growing period temperature rise, which affect the productivity adversely. Since the food security is the primary concern of the Government, the declining production and productivity has to be revered sooner than later. This is a challenge to agricultural research system, which also necessitate revamping of the crop breeding programme suitably to fit the regionally differentiated policy strategy. Technology policy needs to stress more on development of short duration variety to escape climatic aberrations. The study concludes that without assistance of PDS the state of Himachal Pradesh is insecure in availability food.

Chapter - 1

INTRODUCTION

Food security has been a consistent theme raised in specific contexts in a number of world conferences convened by the United Nations in the 1990s. The World Conference on Human Rights (Vienna, 1993) emphasized the need to ensure that everyone enjoyed a right to food. The concept of food security as understood now has been considered at a number of levels: global, regional, national, state, household and individual. While the ultimate concern may be at the household and individual levels it is important to realize that food security at the levels outside the household has a strong bearing on the performance at the household level.

FAO (1983) had formulated that the basic concept of food security implied that "all people at all times have both physical and economic access to the basic food they need". The World Bank (1986) has modified this formulation to indicate that food security is "access by all people at all times to enough food for an active, healthy life.

Now that we have grown so much food, is every Indian getting more to eat? Not according to the Economic Survey. The per capita availability of cereals, pulses, and vegetable oils are all sharply down from last year (2000- 01). Only 390.6 grams of wheat and rice were available for every Indian per day in 2000-01, down from 426 grams per day in 1999. in pulses ,the situation is even more stark with only 26.4 grams per day or less than half a bowl is available, dropping from the already meager 32 grams available last year. The drop has been even sharper when it comes to vegetable oils. From a per capita availability of 9.1 Kgs per year in 1999, it has dropped to only 8 Kgs in 2000-01. The World Health Organization recommends a minimum requirement of at least 10 kgs per person per annum, so though the surge in soft oil imports appears worrisome on the face of things, actually they remain insufficient to meet the needs of a healthy diet for the average Indian.

In fact, production, procurement and distribution are the three pillars for food security and self-sufficiency at the national level. On the production front, during the 1990s the growth of agricultural productivity and production decelerated as compared to the 1980s. The growth rate of food grains production declined to 1.92 percent from 3.54 percent per annum. The growth rate of productivity in food grains declined to 1.32 % in the 1990s as compared to 3.3% in the 1980s. The overall growth rate of crop production declined from 3.72 % to 2.29 % and productivity from 2.99 % to 1.21 % per annum. The per capita food production failed to keep pace with the population growth. During 1990s, while population increased at the rate of 1.84 percent per annum, food grain production per year increased by only 0.90 percent. This is also reflected in the decline in per capita availability of food grains. Per capita availability of food grains declined from 177 kgs per year in 1991-92 to 163.2 kgs during 2000-01.

In India rice and wheat are the two most important staple crops, which play a critical role in food security. Rice is more widely grown in diverse ecosystems, while wheat is grown in reasonably homogenous and irrigated production condition. Reliable irrigation infrastructure made wheat production environment more favorable and stable in Punjab, Haryana, Uttar Pradesh and Rajasthan. This is in a sharp contrast to rice, as over two-third area under paddy is rainfed. Productivity of paddy is low and subjected to relative higher risk.

Rice and wheat together cover a major chunk of gross cropped area. But the growth of area and productivity has reached a plateau like situation and system has become more vulnerable to instability and uncertainty. The deceleration of agriculture is a major concern, as the sector employs 65 percent of the work force. The per capita availability of rice as well as other food grains is also decreasing over the recent years. Rice being an important food crop, the declining tendency of its per capita availability has resulted in availability of rice to 79 kg / year, which declined to 75 kg. in 1999 and further to 68 kg. in 2005.

Not only rice, the per capita production of cereals in general also declined from 192 kg. in 1991/1995 to only 174 kg. in 2004-2007 (Planning Commission, 2007). The

continuation of the trend is likely to trigger the country into a regular grain import trap, as it happens in case of edible oils and wheat in recent years.

Despite its critical importance, cultivation of wheat is concentrated in only six out of 32 States in India. These are viz, Uttar Pradesh, Punjab, Madhya Pradesh, Haryana, Bihar, and Rajasthan. These States occupy more than 88 percent of the total wheat area and contribute 93 percent of total wheat production in 2004-05. As stated earlier, the wheat growing regions are fairly equipped with effective irrigation infrastructure, efficient input supply mechanism, excellent technology penetration and good market network. Farmers are also well informed in these regions and agriculture is more rewarding. Yet, despite being well endowed, the farmers in these states are subject to increasing production risk, and agriculture is becoming less attractive. More particularly certain climatic factors such as rise of winter temperature and other concomitant policy changes, has increased the vulnerability of production system.

Rice is the staple food of nearly 65 percent of the total population in India. The production of rough rice (paddy) reached 135 million tones in the he year 2002 from a base year production of 32.3 million tons in 1950-51 . This was possible primarily due to the speedy adoption of modern technology in the favorable areas and dynamic pathway in transforming traditional mode of production into modern agriculture. The yield improvement programme was ingrained in the input- intensive green revolution in rice and wheat, which helped increasing of food production in the early years. But the pace of increase in production and productivity has been uneven, and the disparity is highly pervasive among the states and across the diverse ecosystems. (B.C. Barah, 2007)

The size and availability of food gaps is directly linked with production within the States and the relative availability from central pool through Public Distribution System (PDS), meaning that if lifted the available food grains from central pool grew at a slightly higher rate, the projected gaps could close. In present scene the PDS system has proved a very important programme for poverty alleviation.

The poor are a gold mine," wrote economist Thomas Sowell (Panagariya, 2002) two decades ago, arguing that often anti-poverty programmes benefit those who administer them rather than those for whom they are administered. Sowell went on to suggest that the US spending on anti-poverty programmes at the time was three times that needed to lift every man, woman and child in America above the poverty line by simply sending money to the poor."

Considering Sowell's impeccable credentials as a conservative economist, it is tempting to dismiss this assessment as reflective of the general hostility of conservatives towards government interventions. But the current state of India's food procurement, storage and distribution system lends such unequivocal support to his position that even die-hard liberals must take him seriously. Much of the food subsidy in India today pays for sustaining the 400,000 strong bureaucracy of the Food Corporation of India (FCI).and "aiding" the relatively well to do farmers of Punjab and Haryana. In 2000-01, the latest year for which data are available, FCI sold approximately 0.3 crore tons of wheat to the below-poverty-line (BPL) households. Per ton wheat subsidy being Rs 415, this resulted in a total transfer of Rs 124.50 crores to BPL families. A similar calculation for rice, based on the sales of 0.31 crore tons to the BPL households and a subsidy of Rs 565 per ton, yields a transfer of additional Rs 175.15 crore. The sum of the two subsidies is, thus, Rs 300 crore or a tiny 2.5 percent of the total food subsidy of Rs 12010 crore during 2000-01.

This calculation slightly understates the benefit to the poor since the element of subsidy was higher in the grain sold under the Antodaya Anna Yojna (AAY). But even after we apply the higher AAY rates of Rs 630 per ton for wheat and Rs 830 per ton for rice to all of the BPL purchases, the subsidy to the poor rises to only Rs. 445 crore or 3.7 percent of the total budgeted subsidy. The picture emerging for 2001-02 is similar.

Some may dispute these calculations on the ground that they provide exclusive benefit to poor farmers from the high procurement prices paid by FCI. But this factor turns out inconsequential since the bulk of the procurement takes place in the relatively rich states. According to the Economic Survey 2001-02, Punjab and

Haryana account for over 80 percent of the wheat procurement and Punjab and Andhra Pradesh for more than 70 percent or the rice procurement. The proportion of the poor in the total population in Punjab, Haryana and Andhra Pradesh is only 6.16, 8.74 and 15.77 percent, respectively, against the national average of 26.10 percent.

Therefore, the inescapable conclusion is that our Targeted Public Distribution System is missing the poor by miles, delivering them only Rs 3.70 out of every Rs100 it spends.

The pattern and trends of economic growth of India stimulate the changing consumption pattern at the household level. It is important to recognize that the pattern of income changes has direct reflection on nutritional and income changes. If people have enough income, they may not always choose to consume a nutrition and balanced diet at the least cost. Factors which help the diet diversification are monetization in the rural economy, changes in wage payment systems, commercialization in the rural economy, changes in wage payment systems, commercialization of food economy, education and exposure to mass media. (Datta and Mandal ,2000)

Decline in cereal consumption variations across states is the main contour of the debate on why and to what extent cereal consumption has declined needs to be expanded to take into account regional differences. Often these differences tend to be obscured when they are aggregated at the national level. Looking at the decade between 1983-84 and 1993-94 there are three distinct types of states according to consumption behavior in relation to the average level. The first consists of states where the consumption per capita has increased across the board, implying higher average consumption. This category includes West Bengal, Orissa and Kerala. Average intake in Kerala remains among the lowest in the country in both the end-point years.

The second includes states where groups earlier consuming less than average have increased consumption closer to the average, and those consuming above the average have reduced consumption closer to average, that is , the incidence of extremely low and extremely high consumption has become lower. The net effect on

average intake then depends on which of the two shifts is larger. Bihar, Rajasthan, Jammu & Kashmir, Tamil Nadu and Uttar Pradesh belong to this group.

Places where the probability of people consuming below the norm is the same, but the probability of above the norms has declined from the third group of states. Andhra Pradesh, Gujarat, Haryana, Himachal Pradesh, Karnataka, Punjab and Madhya Pradesh belong to this group, where the decline in calorie intake is restricted to those already consuming above average calories.

One argument in terms of nutrition is that the overall reduction in cereals, which is the cheapest source of nutrition for the poor, actually signals a trend towards substitution of higher value food items for lower value ones like cereals (including pulses). In both years of reckoning, cereals contributed 70 percent of nutrition intake in all states. Besides, there are sharp regional and income disparities that underlie the averages: the rich in (Punjab derives 26 percent of their calorie intake from milk whereas the poorest quintile (20 percent) in Orissa gets only 0.3 percent, a negligible figure.

Another indication of the insubstantial nature of this argument of substitution is the fact that the decline of cereal intake varies across regions by as little as 1 percent in Himachal Pradesh to 11 percent in Rajasthan. The state of Himachal Pradesh has attained the distinction of being regarded as model of hill development. There are still doubts about the equitable distribution of gains of development and less privileged sections of farming community may not have gained significantly and their status may have remained more or less stagnant. Agriculture and its allied activities i.e. forestry and logging (wood-cutting), contributes about 22 percent to the gross state domestic product, providing livelihood to about 71 percent of working population and continue to be the mainstay of working community. But the mountainous topographic features of the state restricted the area under plough just to 1/10 of the total geographical area of the state while about 88 percent of the gross cropped area is under food grains.

Need of the Study

In Himachal Pradesh, size of land holdings are predominantly, small and marginal, where agriculture being practiced on subsistence basis and cereals, pulses, oilseeds, and animal husbandry farming are taken up almost on all farms. But the declining size of average holdings in general and of marginal holdings particularly has further aggravated the problem of food, feed, and nutritional insecurity in the state.

The increasing number of holdings and ever increasing trend towards marginal holdings combined with poor yields from such holdings is leading towards unsustainability of these holdings in terms of providing means of sustenance. It has been growing apprehension that the present trend may be leading to a situation where the output from farms may not be sufficient for meeting out the food requirements and may be leading to hunger gap. Even if such groups are not food insecure, the present scenario definitely makes them vulnerable to food insecurity in not so distant future. A slight shock can push some groups to realms of food insecurity although they may not be food insecure presently. Such shocks can be in the form of bad weather, adverse input and output prices, labour shortages or changes in policy regime. One of the most welcome changes in mitigating food insecurity, is diversification of cropping pattern towards high pay of commercial crops, the returns from such crops are higher than the traditional subsistence crops, but the minuscule farm size offsets the benefits of such cropping pattern and the marginal commercial farms may also be suffering from food insecurity. This fact is also substantiated by the fact that even the marginal commercial farmers migrate during harvesting season to work as skilled workers on large orchards.

The above facts indicate that there may be prevalence of food insecurity on both, subsistence as well as in commercial farming scenarios. It becomes therefore important to identify the farming groups which are food insecure or may be vulnerable to food insecurity. The outcome of the present study will provide input for devising ways and means to form measures for alleviating such food insecure groups from present situation. The intervention can be in the form development programmes not only in the agriculture sector but also in health, education and rural development sectors etc.

In the light of foregoing discussion the study will be based on following specific objectives.

Objectives:

1. To identify the groups vulnerable to food insecurity and to quantify the extent of food insecurity in terms of hunger gap.
2. To highlight the socio-economic conditions of food insecure groups in the state.
- 3 To highlight coping mechanism adopted by food insecure and vulnerable groups to mitigate the food insecurity
- 4 To analyze the public / private and financial capital of food insecure groups and their dependence on such capital for avoiding the food insecurity.
- 5 To examine the role of government intervention through policy and programs for providing food security net to vulnerable groups.

Chapter- 2

METHODOLOGY

The present chapter deals with the selection procedure adopted for finalizing the sample for detailed study. During this exercise, care has been taken to make the sample as representative of the population as possible so that the findings based on sample could be applied for the population as a whole without significant error. The following presents the details of the sampling technique adopted.

Selection of Study district and Blocks:

The issue of food security is most relevant for the poorer section of the society. Thus, it was considered pertinent to adopt population below poverty line as a basic sampling parameter. It was with this assumption that, two districts with highest concentration of below poverty line (BPL) families in the state (Table 2.1), viz Shimla and Chamba districts were selected for detailed study and to find out the availability of different items supplied through PDS among following categories:

- Below Poverty Line (BPL).
- Antodaya Anna Yojna (AAY)
- Above Poverty Line (APL)
- Additional PDS families.
- Annapurna Scheme

Among selected districts two blocks in each district comprising highest poverty within the blocks were chosen for the study. The selected blocks were Tissa and Salooni in district Chamba and Chirgaon and Nerwa in district Shimla.

Table 2.1: District/Block wise Position of BPL Census (up to 30th Aug. 2007).

District/Block		Total households (HPSEDC data)	No.of Panchayats in lthe block	Maximum ceiling of BPL households	BPL households identified
Bilaspur					
1.	Bilaspur	27156	63	6352	6352
2.	Ghumarwin	22459	40	4349	4349
3.	Jhandutha	25436	48	6636	6636
	Total	75051	151	17337	17337
Chamba					
1.	Chamba	14715	39	6917	6917
2.	Mehla	15368	42	8244	8244
3.	Salooni	13133	46	8374	8374
4.	Tissa	11217	42	8791	8791
5.	Bhattiyat	19918	69	8221	8221
6.	Pangi	3407	16	2162	2162
7.	Bharmour	7918	29	3684	3684
	Total	85676	283	46393	46393
Hamirpur					
1.	Bamsan	18298	46	3546	3546
2	Bhijri	19308	48	2398	2398
3	Bhoranj	18907	33	4014	4014
4	Nadaun	22046	58	6255	6255
5.	Hamirpur	9719	24	1984	1984
6.	SujanpurTihra	7517	20	1317	1317
	Total	95795	229	19514	19514
Kangra					
1.	Baijnath	17983	51	5307	5307
2	Bhawarna	17569	46	4505	4505
3	Panchrukhi	13397	36	3704	3704
4	Lambagaon	19631	56	4607	4607
5	N- Surian	19916	48	4463	4463
6	N – Bagwan	19839	54	4862	4862
7	Kangra	26762	67	5502	5502
8	Rait	23036	61	6065	6065
9	Nurpur	21921	52	3030	3030
10	Indora	19548	49	3237	3237
11	D-gopipur	26833	64	5806	5806
12	Pragpur	25572	75	4465	4465
13	Fatehpur	21229	54	4541	4541
14	Sullah	15949	47	3156	3156
	Total	289185	760	63250	63250

Conti....

Kinnaur					
1.	Pooh	3964	24	1170	1170
2.	Kalpa	4741	23	842	842
3.	Nichar	4550	18	812	812
	Total	13255	65	2824	2824
Kullu					
1.	Ani	11099	32	1690	1690
2.	Banjar	10346	36	2071	2071
3.	Kullu	21597	70	3293	3293
4.	Nirmand	10041	26	2423	2423
5.	Naggar	16305	40	1790	1790
	Total	69388	204	11267	11267
Lahaul & Spiti					
1.	Lahaul	3272	28	1239	1239
2	Spiti	2245	13	1161	1161
	Total	5517	41	2400	2400
Mandi					
1.	Mandi Sadar	24698	61	5529	5529
2	Balh	24474	51	4538	4528
3	Gohar	15769	37	3260	3260
4	Darang	17499	40	3540	3540
5	Seraj	16805	45	4023	4023
6	Karsog	18743	60	4759	4759
7	Sundernagar	20694	49	4390	4390
8	Gopalpur	25709	41	3564	3564
9	Dharampur	24055	49	4894	4894
10	Chauntra	17650	40	2842	2842
	Total	206096	473	41339	41329
Shimla					
1	Mashobra	11172	45	2696	2696
2	Theog	14315	50	4522	4522
3	Narkanda	9916	26	1528	1528
4	Rampur	17135	48	5962	5962
5	Chopal	14559	54	5302	5302
6	Jubbal	15140	48	2960	2960
7	Rohru	11181	32	2427	2427
8	Chirgaon	8031	31	4211	4211
9	Basantpur	7550	29	2074	2074
	Total	108999		31682	31682

Conti.....

Sirmour					
1.	Nahan	11694	34	2323	2323
2.	Paonta	26554	64	5194	5194
3.	Pachhad	8515	30	1275	1275
4.	Shillai	6726	29	1781	1781
5.	Sangrah	9204	41	1382	1382
6.	Rajgarh	7746	30	1740	1740
	Total	70439	228	13695	13695
Solan					
1.	Dharampur	14749	38	3072	3072
2.	Kandaghat	6499	24	2377	2377
3.	Nalagarh	26696	69	6425	6425
4.	Kunihar	15582	45	3460	3460
5.	Solan	10207	35	2144	2144
	Total	73733	211	17478	17478
Una					
1.	Una	20573	62	2571	2571
2	Amb	18834	51	3989	3989
3	Gagret	16597	39	3075	3075
4	Bangana	15124	40	2510	2510
5	Haroli	18664	43	3046	3046
	Total	89792	235	15191	15191
	Grand total	1182926	3243	282370	282360

Sample Design

Among selected blocks 30 farm families of different categories out of total benefited families were selected for the detail study. The sampled families were selected for personal interview through multi-stage random sampling technique.

At first stage list of villagers and beneficiaries covered under the scheme during the study period was collected from the Block records. Then a cluster of 3 to 4 contiguous villages comprehensively covered under the programme and having good number of Below Poverty Line (BPL), AAY, Annapurna, Scheduled Caste (SC) and Scheduled Tribes (ST) households was chosen from each Block. The selection of the clusters was also confirmed with the concerned officials for their suitability to this study.

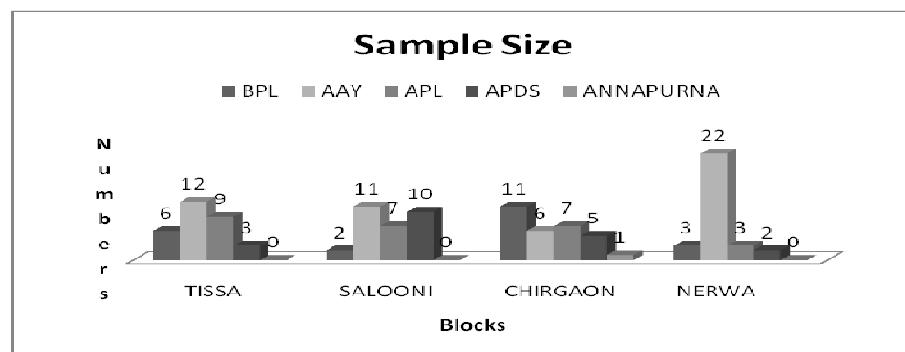
Second stage of sampling involved the selection of ultimate beneficiaries for personal interview from the cluster villages. The respondents of different categories were chosen through purposive-cum-random sampling.

In so drawn sample, due representation has been given to the various categories of target groups such as small and marginal farmers, landless etc. The composition of each group in the sample was determined by their proportion in total families assisted in each block. Thus 120 families (30 from each block) spread over all the clusters were selected in the final sample to study their resource endowments, their utilization, sources of income, information regarding the sanitary and credit facilities as well as production and consumption pattern etc. etc. through personal interview on well designed and pre-tested schedule. Breakup of the sample and total families assisted under the Targeted Public Distribution System (TPDS) is given in table 2.2.

Table 2.2: Sample Size of Selected Households.

District/Block	CHAMBA					TOTAL
	BPL	AAY	APL	APDS	ANNAPURNA	
TISSA	6 (20.00)	12 (40.00)	9 (30.00)	3 (10.00)	0	30 (100.00)
SALOONI	2 (6.67)	11 (36.67)	7 (23.33)	10 (33.33)	0	30 (100.00)
SHIMLA						
CHIRGAON	11 (36.67)	6 (20.00)	7 (23.33)	5 (16.67)	1 (3.33)	30 (100.00)
NERWA	3 (10.00)	22 (73.33)	3 (10.00)	2 (6.67)	0	30 (100.00)

Note: Figures in parenthesis are the percentage to the total.



Since the consumption pattern has direct relation with food insecurity therefore data on consumption pattern of food and non food items for selected households has also been studied. Responsible factors for accessing food insecurity in relation to present income, consumption and food intake have been analyzed in detail. The said factors would be the main indicators of the study and explained below.

Choice of Indicators of Food Security

Background factors

Percentage of agricultural labour to all labour, proportion of ST and SC population to total population, percentage of area under forest and proportion of net irrigated area to net sown area is the first indicator of the study.

Factors affecting household access to food

In this factor value of agricultural output per capita, dependency ratio, per capita food consumption expenditure and average wage rate of agricultural labour have been discussed in detail.

Factors affecting Individual access to food

Women's literacy rate (Adult), women's workforce participation rate (main +marginal) are covered under this indicator.

Public Entitlements /Governance

Indicators like percentage women and children covered under PDS, monthly average off take of food grain per BPL household are covered under this.

Access to basic health facilities

In this factor the major indicator is the percentage of HH having safe drinking water, of village percentage with paved road, and villages having Primary Health Centre (PHC) within 5 km distance

The Data

Both secondary as well as primary data has been used in this study. The secondary information was collected from the various levels of administrative machinery of the

state. It includes the records maintained at block, district and state levels. Information thus collected was further scrutinized and supplemented through the records maintained by the Department of Food, Civil Supplies and Consumer Affairs; State Civil Supplies Corporation Limited, Shimla and Department of District Rural Development offices. Basic statistics on economic aspects was also collected from the Directorate of Economics & Statistics and Directorate of Land Records of Himachal Pradesh. Primary data used in this study was collected through personal interview of the ultimate beneficiaries of Public Distribution System (PDS) operating in the state. The information recorded from the PDS beneficiaries were also supplemented by the discussions with the officials involved in implementation of the programme.



Pic-1: Data collection for the study under progress

Analytical Tools

In general, to make the analysis simple and more understandable, tabular analysis has been used.

Limitations of the Study

This study suffers from some limitations, but it is hoped that quality of this report is not affected on this account. Some of the limitations are listed below:

- Most of the secondary data was not available in desired format at any level to attempt sophisticated analysis on performance appraisal;
- It was not only the maintenance of information on some meaningful format but some of the data on crucial aspects was not available at all , particularly at Block level.

Reference Period

The study refers to the agriculture year 2007-2008

Chapter- 3

IDENTIFICATION AND ASSISTANCE TO THE GROUPS VULNERABLE TO FOOD INSECURITY

One of the main constituents of the Govt. strategy for poverty alleviation is Targeted Public Distribution System which ensures availability of essential commodities like wheat, rice, levy, sugar and kerosene through a net work of 4335 fair price shops for distribution of the essential commodities in Himachal Pradesh. For this purpose, total families have been divided in to four categories viz.

- ❖ Above Poverty Line (APL),
- ❖ Below Poverty Line (BPL),
- ❖ Antyodaya (poorest) and
- ❖ Annapurna (Indigent)

Guidelines for finalization of above categories

The State government of Himachal Pradesh has taken number of measure to help the rural poor and has adopted necessary guidelines for finalization of above mentioned categories in following manner:

1. The selection of the BPL families will be conducted under over all control of concerned Deputy Commissioner.
2. The details of number of BPL households and number of additional households for subsidized ration at BPL rates for each Panchayat will be provided to the DRD by the Directorate of Rural Development.
3. However the allocation of BPL households to be identified in the Panchayat is based on previous BPL Census but due to voluminous data, there can be possibilities about any difference in the number of BPL families in previous BPL census. Hence, it may be ensured that the numbers of BPL families in the Panchayat as per previous survey are correct. In case of any irregularity, the same may be rectified and adjustment of BPL households in the Panchayat be done keeping in view the overall ceiling for the Development Block so that any future litigation could be avoided.
4. The Rural Development Department has given the Panchayat wise position of BPL households as per existing Panchayat at the time of survey, whereas some new Pinheads have been created from bifurcating old Pinheads in the State. In this respect necessary data for newly created Panchayat may be

prepared separately. The DRDAs will take necessary action in this respect immediately and the allocation of BPL households will be done in proportion of old BPL families in the area. It will also be ensured that there should be at least 10 BPL households in every Panchayat.

5. The District/block-wise C.Ds. of surveyed households showing scores of each surveyed household have been provided to all the DRDAs by the Directorate.
6. The DRDAs will supply the lists of surveyed households showing scores of each surveyed households including newly created Panchayat to the Block Development Officer concerned on which the name of surveyed households will be written in Hindi by hand. This will be completed on war footing.
7. The lists of all surveyed households will be placed before the Gram Sabha on the date of meeting so that the names of families for identification in BPL list and additional households for subsidized ration at BPL rates be read out in the meeting along with scores for decision by the Gram Sabha.
8. One official like Panchayat Secretary, Panchayat Sahayak, Technical Assistant, Clerk Patwari, Teacher etc. will be deputed by the respective Deputy Commissioner for recording the proceeding of the meeting of Gram Sabha.
9. One officer like extension Officer, Junior Engineer, Lecturer, Superintendent etc, will be deputed as observer by the Deputy Commissioner.
10. In the meeting of Gram Sabha, the names for selection of BPL families from the list of surveyed households showing the scores in ascending order will read for selection in BPL list as per number fixed for the Panchayat and thereafter the selection of additional households for subsidized ration at BPL rates will be finalized.
11. The poorest of the poor will be identified in the BPL list by the Gram Sabha and then the poor families will be identified for subsidized ration at BPL rates.
12. In case of any dispute on the selection of any households, the decision will be taken on the basis of majority.
13. The observers will ensure the participation of all the participants in selection process.
14. In case Gram Sabha is not agreed with the score awarded to any family, then reasons are to be explained before making any change in the scores.
15. In case, any family is left out as per position of Pariwar Registers on 31st December 2005 , and gram Sabha will consider such type of families in the BPL list. The survey schedule of that family shall be filled up with in week's time.

16. The benefits to the identified families will be applicable from 1.3.2007 after approval of Gram Sabha.
17. The households of the following category may not be considered in the BPL list.
 - i) The households having more than two hectare of unirrigated land or more than one hectare irrigated land.
 - ii) Families having pucca urban type of big house.
 - iii) The families which are income tax payers.
 - iv) Families having four wheel vehicles like Car, Motor, Jeep, Tractor, Truck, Bus etc.
 - v) Families having regular monthly income from salary, pension, honorarium, wages, profession etc. more than Rs. 2500.

The guidelines for identification of additional households for subsidized ration at BPL rates:

After identification of poorest amongst the poor households in BPL list, the selection of additional households for subsidized ration at BPL rates will be done by the Gram Sabha. The priority for the households of following categories will be given:

- I. Households headed by widows or terminally ill persons. Disabled persons, persons aged 60 years or more and no assured means of subsistence and lack of social support.
- II. Widow or ill persons aged 60 years or more single women, single man with no assured means of subsistence or social support.
- III. Agriculture labourers, marginal farmers, rural artisans, potters, coolies, rickshaw pullers, cobblers, snake charmers, fruit and flower sellers etc with no assured means of subsistence or social support.
- IV. The families having no person in government and non government services.

The Department of Food & Civil Supplies and Consumer Affairs is constituted for furtherance of the Public Welfare with the following main policy ingredients:

Food Security

Implementation of all schemes under Targeted Public Distribution system (APL, BPL, AAY, Annapurna et al.)

Quality Control

Making available Fair Average Quality (FAQ) grains.

Checking up of inflationary trends

Ensure availability of essential commodities at reasonable prices and to check the unlawful trade practices by ensuring implementation of the provisions of Essential commodities Act, 1955 and the various control orders issued there under.

Generation of Consumer Awareness

Diffusion of knowledge about the rights granted under the Consumer Protection Act, 1986 (COPRA) and as amended in 2003.

Transparency

Implementation of the Right to Information Act (RTI)

(i) Food Security

(a) Targeted Public Distribution System (TPDS)

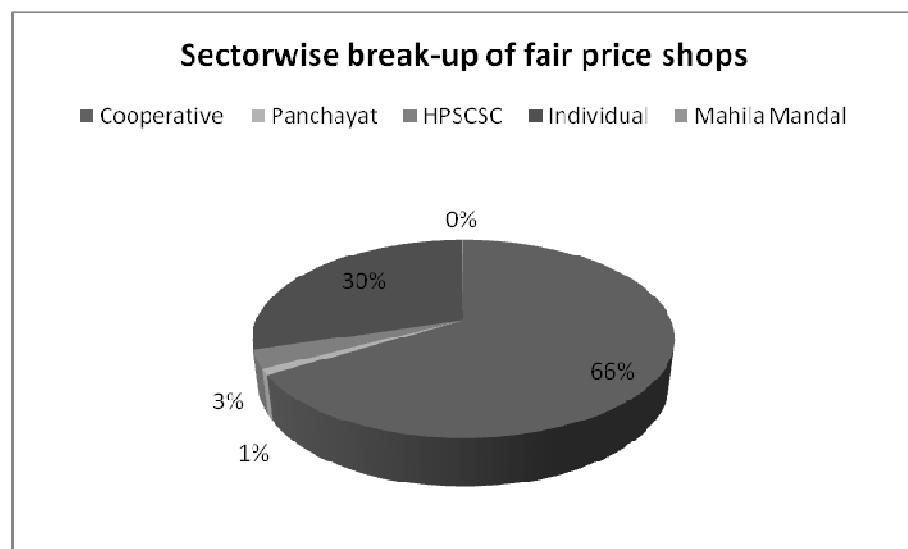
The original system of Public Distribution prevalent in the State was replaced on 1.6.1997 by the newly designed out system of Targeted Public Distribution through which the main emphasis of benefits was traversed to the venerable sections of the society especially those living Below Poverty Line (BPL). Although the Above Poverty Line (APL) families were not abandoned the benefits they have been already receiving in the original Public Distribution System. The TPDS was further made broad based with the introduction of Antodaya Anna Yojna Scheme (AAY) w.e.f. 1.3.2001 with additional benefits to the highly vulnerable sections and the poorest of the poor families. An Annapurna Scheme had also been started for destitute old persons who are eligible for old age pension under National Old Age Pension Scheme (NOAPS) but are not receiving these benefits w.e.f. 1.4.2000. A total number of 14,47,438 Ration Cards (Ration cards in A.P.L. category are increasing unabated since the launch of new subsidized State scheme on 1.4.2007) and 70,25,937 population are being provided benefits under TPDS through a network of 110 HPSCSC Ltd. Wholesale godowns and 4353 Fair Price Shops in the State.(Table 3.1).



Pic-2: Farmers buying provisions from PDS

Table 3.1 The sector-wise break-up of fair price shops (As on 2/2008)

Cooperative	Panchayat	HPSCSC	Individual	Mahila Mandal	Total
2888	41	132	1287	5	4353



Details of various schemes under TPDS

(i) Above Poverty Line (APL)

At present 9,33,438 (on 1.4.2007, the number of A.P.L. ration cards was 8,89,334, which is on the increase) families are covered in APL. Each family is being provided 15 kg. of wheat flour and 20 kg of rice per month under specially subsidized rates of Rs.8/- per kg. and Rs.9/- per kg. respectively by the State Govt. on the landed cost policy prescribed by Govt. of India. w.e.f. 28.7.2007. Government of H.P. has enhanced this issue scale in case of families having more than five members at an uniform scale of 3 kg. of wheat flour and 4 kg. of rice per person beyond 5 members in non-tribal areas. In tribal areas, this scale stands enhanced w.e.f. 28.7.2007 to an uniform scale of 8 kg. of wheat flour and 8 kg. of rice per person. The decision was subject to review within 3 to 6 months, however it has not been reviewed as yet.

(ii) Below Poverty Line (BPL)

A total No. of 5,14,000 BPL families have been targeted for placement in BPL Scheme out of which 1,97,100 poorest of the poor families have been further transferred to AAY Scheme. Thus, the resultant families under this scheme are 3,16,900. The Govt. of India is presently allocating 3965 M.T. wheat and 7130 M.T. rice per month. The scale of issue per family is, as per GOI norms, 15 kg. of wheat and 20 kg. of rice which has been enhanced by the H.P. Govt. w.e.f. 28.7.2007. If the family has more than five members, the increase is at a uniform scale of 3 kg. of wheat and 4 kg. of rice per person beyond 5 members in non-tribal areas, whereas in tribal areas, this scale stands now enhanced w.e.f. 28.7.2007 to an uniform scale of 8 kg. of wheat and 8 kg. of rice per person.

(iii) Antodaya Anna Yojna (AAY)

Under this Scheme, the poorest of the poor 1,97,100 families out of the BPL list has been identified. The Govt. of India is presently allocating 2955 M.T. wheat and 3940 M.T. rice per month. The scale of issue per family is as per GOI norms, 15kg. of wheat and 20 kg. of rice which has been enhanced by the H.P. Govt. w.e.f. 28.7.2007. The scale of increase, for the family having more than five members, at a

uniform scale of 3 kg. of wheat and 4 kg. of rice per person beyond 5 members in non-tribal areas, whereas in tribal areas this scale stands now enhanced w.e.f. 28.7.2007 to an uniform scale of 8 kg. of wheat and 8 kg. of rice per person.



Pic-3: Special ration cards issued to Antodaya families

(iv) Annapurna Scheme

This scheme has been introduced in the State w.e.f. 1st April, 2000. The numerical ceiling of the beneficiaries has been fixed by the Govt. of India at 6373 persons for this State for providing food security to the old destitute/indigent citizens of 65 years of age or above who are eligible for old age pension under the National Old Age Pension Scheme (NOAPS) but are not receiving the pension. Out of the fixed target, 4997 persons stand indentified in the Pradesh (up to 2/2008) under this scheme. Rice is being issued to beneficiaries free of cost at the scale of 10 kg. per person per month.

Allocation of Essential commodities from Government of India

In table 3.2 the allocation of different commodities to various categories has been presented. In this table it may be observed that allocation of rice is the major commodity under which Government of India is allocating more than double as compared to wheat flour. It may be due to the reason of very low rate of production of paddy in the state. The detail of the central issue price and consumer price is given in the table.



Pic- 4 : Subsidized pulses being provided under PDS

Table-3.2: The Government of India is allocating essential commodities to this state under the TPDS at the central issue price as under:-

S. N o.	Commodity	Category wise allocation per month in MT/KL				Category wise Central Issue Price (Rs. per quintal/Ltr)			Consumer Price (Per Kg./Liter)		
		Anto daya	BPL	APL	Total	Anto daya	BPL w.e.f. 12.7 .01	APL w.e.f. 1.7.0 2	AAY	BPL	APL
1	Wheat	2955	3965	-	6920	200	415	610	2.00	5.25	-
2	Wheat Flour	-	-	6748 Normal allocation 3400 Addl. allocation	10148	-	-	-	-	-	8/(Burden of transport subsidy beyond Rs.8/- being born by the State Govt.)
3	Rice Grade -A	3940	7130	9860	20930	300	565	830	3.00	6.85	9/-(Burden of transport subsidy beyond Rs.9/- being born by the State govt.)
4	Levy Sugar	4704			4704	1350			13.50	13.50	13.50
5	Kerosene Oil	5411 K.L.			5411 K.L.	Rs. 8066.61 to 8533.56 per K.L.			Rs.9 .50 to landed cost	Rs. 9.50 to landed cost	Rs.9.50 to landed cost

Special Subsidized Scheme of the state

Since 2007 the state Govt. has launched a special subsidized scheme under which pulses, edible oil, iodized salt are provided to the rural poor in the state. Items wise details of the commodities may be seen in table 3.3.

Table -3.3: GOVRNMENT OF H.P. SPECIALITY SUBSIDISED SCHEME (W.E.F. 1.8.07)

1. Dal Malka	Rs.20/-per kg.	1 kg. Per family per month
2. Dal Urd	Rs.25/-per kg.	1 kg. Per family per month
3. Dal channa	Rs.25/-per kg.	1 kg. Per family per month
4. Edible Oil/ Refined Oil	Rs.45/-per ltr. Rs.40/-per ltrs.	1 Ltr. Per family per month each or 2 Ltrs. Of either
5. Iodized Salt	Rs.4/-per kg.	1 kg. Per family per month

Quality Control

The department ensures in all probability that a Fair Average Quality (FAQ) of food-grains and their products are provided to the consumers under TPDS and all other welfare schemes. The Technical Staff takes up regular and periodical checkings and suggests remedial measures for the upkeep and safe preservation and health of the food-grains. The samples of food grains and their products drawn are physically analyzed at the food grains laboratory setup in this Directorate by analysts and the results thereof are conveyed to the concerned District Officers along with the remarks and guidelines for initiating further necessary action against the defaulters. The quality control officials also inspect the various roller flour mills situated in the Pradesh for ascertaining the quality of TPDS wheat flour and also inspect the HPSCSC whole sale godowns throughout the Pradesh. This Branch also does the maintenance of the food grains laboratory. The redressal of the disputes between Food Corporation of India, H.P. State Civil supplies Corporation Ltd. and any other agency involved in transaction of food-grains and their products regarding the quality of the food-grains is also being taken care of by the quality control staff of this department. Table 3.4 reveals that out of total samples 76, failed and results of 4 samples were still awaited due to some reason during 2007-08. Commodity wise visual inspection done by the inspectors during same period is presented in table 3.5.

Table: 3.4 Samples received from the Districts of various food-grains under quality control under the P.D.S. System for the year 2007-08.

S.No	Commodity	Total samples received	Pass	Fail	Result Awaited/other reasons
1	Rice	196	170	24	2
2	Wheat	133	112	19	2
3	Wheat Atta	15	14	1	-
4	Levy Sugar	18	17	1	-
5	Salt	7	6	1	-
6	Edible Oil	8	8	0	-
7	Dal channa	83	74	9	-
8	Dal Malka	79	65	14	-
9	Dal Urd	75	68	7	-
Total		614	534	76	4

Table: 3.5. Visual inspection done by the Inspectorate/Directorate staff during H.P. from 2007-2008

Sr.No.	Commodity	(upto 2/2008)
1	Rice	2358
2	Wheat	2152
3	Wheat Atta	1755
4	Levy Sugar	2104
5	Salt	1050
6	Edible Oil	952
7	Dal chana	1039
8	Dal Malka	1022
9	Dal Urd	968
	Total	13400

Commodities Lifted by the State Government

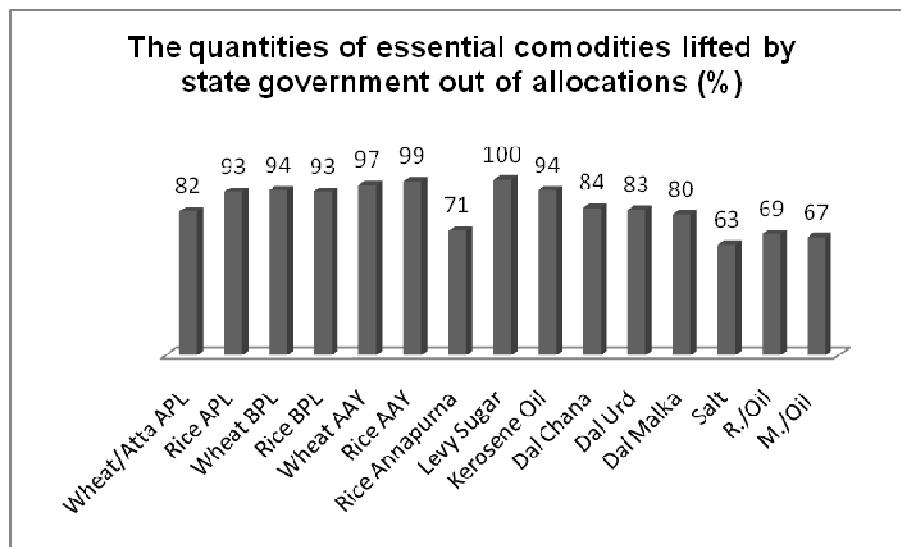
The allocation of essential commodities made by the Govt. of India for lifting by the State government and further distribution during the period 2007-2008 is presented in table 3.6. This table reveals that among food grains the highest quantity, 99 per cent of rice was lifted for distribution among AAY category families for ensuring food security and lowest 71 percent for Annapurna. The quantity of wheat/ Atta and rice lifted for APL category varied between 82 to 93 per cent during 2007-08. Above distribution indicated that there is a scarcity of food grains in the state and the government has made efforts for providing food grains. The detail of various other commodities may also be seen in this table.



Pic- 5: A PDS outlet selling essential commodities to consumers

Table 3.6: The allocation of essential commodities made by the Govt. of India, lifted by the State and further distribution during the period 2007-2008.

Sr. No.	Name of Commodities	Allocation	Lifted	Distributed	Balance to be lifted	(MT & KL) %age lifted
1	Wheat/Atta APL	142402	117301	194003	25101	82
2	Rice APL	108460	101089	192540	7371	93
3	Wheat BPL	43615	41034	41045	2581	94
4	Rice BPL	78430	72949	63641	5481	93
5	Wheat AAY	32505	31455	34620	1050	97
6	Rice AAY	43340	43073	47520	267	99
7	Rice Annapurna	701.25	496	329	205.25	71
8	SGRY Wheat	0	953	1325	-	-
	Rice	0	5247	4184	-	-
9	Rice Mid-day-meal	0	11295	10928	-	-
10	Levy Sugar	53804	54949	54287	-	100
11	Kerosene Oil	59521	56126	55898	3395	94
12	Dal Chana	15400	12977	12340	2423	84
13	Dal Urd	15400	12840	12052	2560	83
14	Dal Malka	15400	12243	11600	3157	80
15	Salt	15400	9688	9184	5712	63
16	R./Oil	15400	10628	10619	4772	69
17	M./Oil	9800	6565	7366	3235	67



Generation of Consumer Awareness

From April, 2007 to February, 2008, 436 consumer awareness camps were organized in the State to educate the consumers about TPDS and also under "Consumer Awareness Programme" launched by the Govt. to make consumers aware about their rights and responsibilities as provided and consumer protection Act, 1986. Besides to educate the children about consumer rights, consumer clubs are being set up in the middle/high and higher secondary schools under consumer club scheme launched by the Govt. of India. So far as 100 cases for seeking financial assistance @ Rs.10,000/- each club, have been sent to Govt. of India against which a sum of Rs.3,60,000/- have been sanctioned to 36 consumer clubs in various district of this State. In addition to above, the department has also brought out a magazine namely "Upbhokta Margdarshika" detailing various departmental welfare schemes undertaken by this department. The copies of this magazine are circulated to all the Gram Panchayats, local self bodies and consumers N.G.O.'s working throughout the State for the general awareness of the consumers of the State.

Transparency

The status of application/cases for seeking information under Right to Information Act, 2005 in respect of this department for the year 2007-2008 up to 2/2008 is as under:-

S.No.	Number of applications received	Information provided/disposal	Application rejected
1	48	48	Nil

Enhanced Scale of Food grains

Since 28.7.2007, the G.O.H.P. has enhanced this issue of scale where the family is more than five members at an uniform scale of 3 kg. of wheat/wheat flour and 4 kgs of rice per person beyond 5 members in non-tribal areas, whereas in tribal areas for all categories this scale stands now enhanced for all categories w.e.f. 28.7.2007 to an uniform scale of 8 kg. of wheat/wheat flour and 3 kgs of rice per person. The decision is subject to review within 3 to 6 months; however it has not been reviewed as yet.

Chapter – 4

SOCIO-ECONOMIC PROFILE OF SAMPLE HOUSEHOLDS

In this chapter, socio-economic features of sample households of Chamba and Shimla Districts have been discussed. Chapter focuses on general features, educational statues, occupation, land utilization, cropping pattern and livestock etc. of sampled households. Chapter also includes the identification of vulnerable households of different economic categories and status of food security has been worked out for different categories under consideration.

Caste Classification

The analysis pertaining to prevalence of social and economic categories, presented in table 4.1 reveals that in Chamba district, Tissa block is dominated by schedule tribes (40%) whereas, block Salooni has highest percentage of general categories (83.33%). This table indicates that highest percentage of schedule tribes (Muslims) among various economic categories. In Shimla district general category and schedule castes have larger strength in selected blocks (Chirgaon and Salooni). Among these two study districts, Chamba has been categorized as tribal district of Himachal Pradesh.

Family Size:

The analysis reveals, Table 4.2, that the average family size is 6.33 and 4.97 in Tissa and Salooni block of Chamba district respectively. The higher size of families of Tissa block is due to the fact of concentration of Muslim families in the block who normally have higher family size. In case of Shimla district the size of family were 4.80 and 5.30 persons in Chirgaon and Nerwa blocks respectively. The analyses indicates the highest family size to be 6.33 in Tissa block of Chamba district. In this table it may also be observed that generally the number of males is higher as compared to females among all the economic categories i.e. BPL, AAY, APL APDS and Annapurna.

Table. 4.1: Caste classification of Sample Households

(No)

CHAMBA													
Particulars	Tissa						Salooni						
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total	
S.C.	1 (16.67)	2 (16.67)	-	1 (33.33)	-	4 (13.33)	1 (50.00)	1 (9.09)	3 (42.86)	-	-	5 (16.67)	
OBC	- (-)	2 (16.67)	3 (33.33)	-	-	5 (16.67)	-	-	-	-	-	-	
S.T.	4 (66.67)	5 (41.66)	1 (11.11)	2 (66.67)	-	12 (40.00)	-	-	-	-	-	-	
General	1 (16.66)	3 (25.00)	5 (55.56)	-	-	9 (30.00)	1 (50.00)	10 (90.91)	4 (57.14)	10 (100.0)	-	25 (83.33)	
Total	6 (100.0)	12 (100.0)	9 (100.0)	3 (100.0)	-	30 (100.0)	2 (100.0)	11 (100.0)	7 (100.0)	10 (100.0)	-	30 (100.0)	
SHIMLA													
Chirgaon							Nerwa						
S.C.	7 (63.64)	4 (66.67)	2 (28.57)	2 (40.00)	-	15 (50.00)	-	8 (36.36)	1 (33.33)	-	-	9 (30.00)	
OBC	-	-	-	-	-	-	-	2 (9.09)	-	-	-	2 (6.67)	
S.T.	-	-	-	-	-	-	-	2 (9.09)	-	-	-	2 (6.67)	
General	4 (36.36)	2 (33.33)	5 (71.43)	3 (60.00)	1 (100.0)	15 (50.00)	3 (100.0)	10 (45.45)	2 (66.67)	2 (100.0)	-	17 (56.66)	
Total	11 (100.0)	6 (100.0)	7 (100.0)	5 (100.0)	1 (100.0)	30 (100.0)	3 (100.0)	22 (100.0)	3 (100.0)	2 (100.0)	-	30 (100.0)	

Table.4.2: Average Family Size of Sample households in Selected Blocks of Districts Chamba and Shimla of H.P.

Particulars	(No) Average Family Size											
	CHAMBA											
	Tissa						Salooni					
	BPL	AAY	APL	APD S	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Male	3.00	2.17	4.11	3.33	0	3.03	3.00	2.64	2.43	2.40	0	2.53
Female	2.33	1.92	3.89	3.00	0	2.70	2.00	2.18	3.43	1.60	0	2.26
Total	5.33	4.08	8.00	6.33	0	5.73	5.00	4.82	5.86	4.00	0	4.79
SHIMLA												
Chirgaon							Nerwa					
Male	2.81	3.50	2.86	2.40	1.00	2.83	3.33	2.59	4.33	1.00	0	2.73
Female	2.91	3.16	1.71	2.40	0	2.50	1.33	2.45	4.67	1.00	0	2.56
Total	5.72	6.67	4.57	4.80	1.00	5.33	5.66	5.04	9.00	2.00	0	5.30

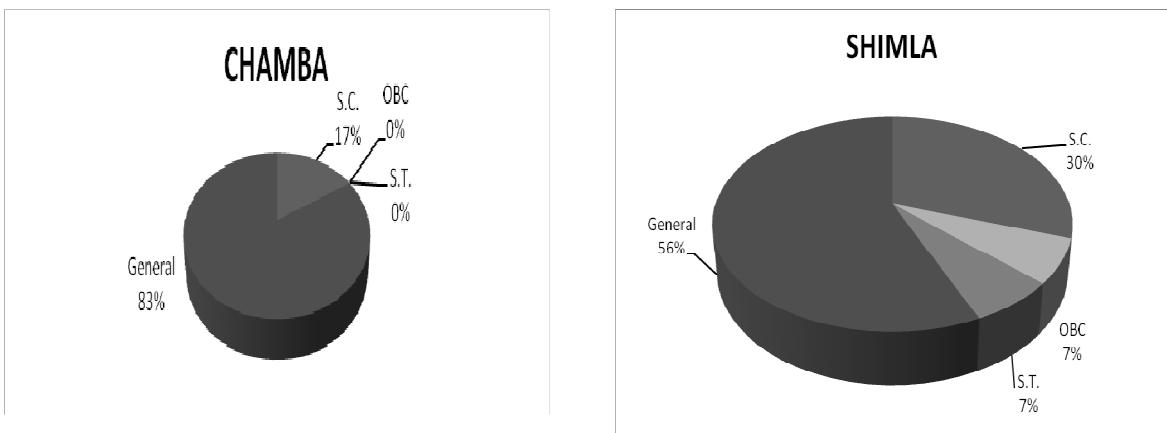


Fig.: Class Classification of Sample Households

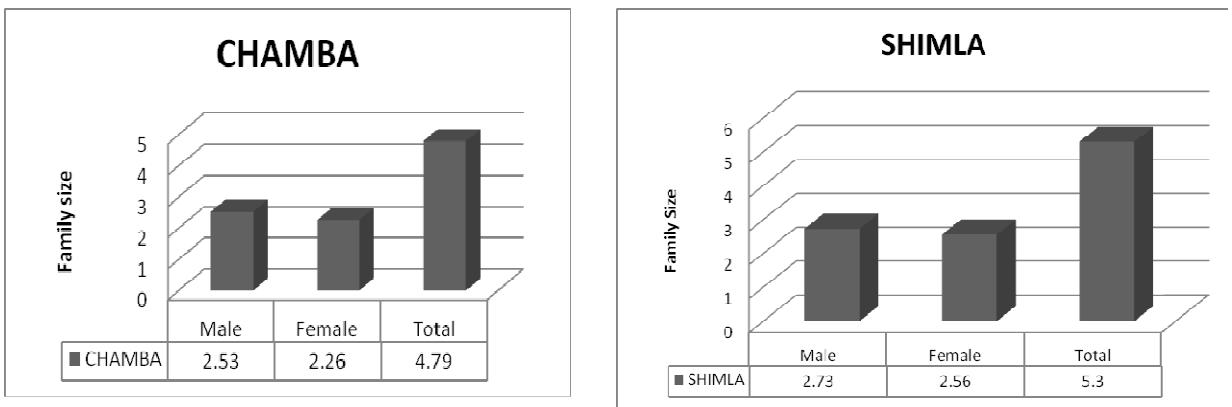


Fig.: Family Size of Sampled Households

Age Classification

Age wise classification of sampled households has been presented in table 4.3. In this table it may be seen that majority 59.30 and 68.06 percent of the population belonged to the age group of 15-60 years in Tissa and Salooni blocks of Chamba district respectively. Similarly 66.25 and 57.86 percent of the population belonged to

15-60 years age group respectively. General trend among different economic categories reflects that majority of the population belongs to the age group of 15-60 followed by 6-14 years of age in study districts.

Education level

Education is an important indicator and a facilitating factor for achieving food security through analysis of present situation and adoption of suitable coping mechanism. Table 4.4 shows that literacy level was 52.32 and 68.05 percent in Tissa and Salooni Block of district Chamba. In this table it may also be seen that literacy was lower (29%) among females of Tissa as compared to Salooni block. Among males, it was 67 and 78 percent in Tissa and Salooni blocks respectively. This shows level of literacy is lower in Tissa block as compared to Salooni block. Further, majority of the persons (24.42%) had education up to primary level in Tissa whereas it was up to middle standard in Salooni. There was no person having education above Senior Secondary levels in Tissa block. This analysis reflects that block Tissa is far behind in education as compared to Salooni block.

In comparison, the persons in district Shimla are better educated as compared to Chamba district (Table 4.4). At overall level the literacy rate was 62 and 75 percent in Chirgaon and Nerwa blocks of district Shimla respectively. In both cases the level of education remained higher among males. Further table shows that it is APL category, which has higher education levels in both the blocks of district Shimla.

Table: 4.3 Age-wise Classification of Sampled Household.

Particulars	CHAMBA										(Percentage)	
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Age 0-5	25.00	8.16	18.06	42.11	-	19.18	0	11.32	2.43	15.00	-	9.03
6-14	18.75	14.29	25.00	-	-	18.03	30.00	11.32	19.51	27.50	-	19.44
15-60	46.88	77.55	52.78	57.89	-	59.30	70.00	73.58	70.73	57.50	-	68.06
60 & above	9.37	0	4.16	-	-	3.49	-	3.78	7.33	0	-	-
Total	32 (100.0)	49 (100.0)	72 (100.0)	19 (100.0)	-	172 (100.0)	10 (100.0)	53 (100.0)	41.0 (100.0)	40 (100.0)	-	63 (100.0)
SHIMLA												
	Chirgaon						Nerwa					
Age 0-5	14.29	15.00	6.25	29.17	-	15.00	5.88	9.91	11.11	-	0	9.43
6-14	22.22	15.00	21.88	0	-	16.88	11.76	31.53	29.63	-	0	28.30
15-60	63.49	65.00	71.87	70.83	-	66.25	70.59	54.05	59.26	100.0	0	57.86
60 & above	0	5.00	0	0	100.0	1.87	11.77	4.51	-	0	0	4.41
Total	63 (100.0)	40 (100.0)	32 (100.0)	24 (100.0)	1 (100.0)	160 (100.0)	17 (100.0)	111 (100.0)	27 (100.0)	4 (100.0)	0	159 (100.0)

Table. 4.4: Educational Status of Sampled Households.

(Percentage)

Particular	CHAMBA											
	Tissa						Salooni					
	BPL	AAY	APL	APDS	Ann	Total	BPL	AAY	APL	APDS	An	Total
Illiterate												
Male	11.11	19.23	16.22	-	-	14.28	33.33	13.79	5.89	16.67	-	14.48
Female	42.85	60.87	31.43	55.56	-	44.44	50.00	41.67	20.83	31.25	-	32.35
Total	25.00	38.78	23.61	26.32	-	28.49	40.00	26.42	14.63	22.50	-	22.92
Literate												
Male	66.67	76.92	75.67	60.00	-	72.53	66.67	72.42	94.11	75.00	-	77.63
Female	28.57	26.09	40.00	-	-	29.63	50.00	50.00	75.00	43.75	-	57.35
Total	50.00	53.06	58.33	31.58	-	52.32	60.00	62.26	82.93	62.50	-	68.05
Primary												
Male	33.33	46.15	27.02	30.00	-	31.07	33.33	20.69	5.88	8.33	-	14.47
Female	28.57	8.69	14.28	-	-	13.58	25.00	29.17	29.17	6.25	-	23.53
Total	31.25	28.57	20.83	15.79	-	24.42	30.00	24.53	19.51	7.50	-	18.75
Middle												
Male	27.77	11.54	16.22	30.00	-	18.68	16.67	34.48	-	25.00	-	22.37
Female	-	13.04	5.71	-	-	6.17	-	12.50	25.00	25.00	-	19.12
Total	15.62	12.24	11.11	15.79	-	12.79	10.00	24.53	14.63	25.00	-	20.83
Matric												
Male	5.56	11.54	5.41	-	-	6.59	-	10.34	41.18	20.83	-	19.74
Female	-	4.35	8.57	-	-	4.94	-	8.33	12.50	12.50	-	10.29
Total	3.12	8.16	6.94	-	-	5.81	-	9.43	24.39	17.50	-	15.28
10+2												
Male	-	7.69	27.02	-	-	13.19	16.67	6.70	35.29	12.50	-	15.79
Female	-	-	11.43	-	-	4.94	25.00	-	8.33	-	-	4.41
Total	-	4.08	19.44	-	-	9.30	20.00	3.77	19.51	7.50	-	10.42
Above+2												
Male	-	-	-	-	-	-	-	-	11.76	8.33	-	5.26
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	4.88	5.00	-	2.78
N.S.G.												
Male	22.22	3.85	8.11	40.00	-	13.19	-	13.79	-	8.33	-	7.89
Female	28.57	13.04	28.57	44.44	-	25.93	-	8.33	4.17	25.00	-	10.30
Total	25.00	8.16	18.06	42.10	-	19.19	-	11.32	2.44	15.00	-	9.03
Total												
Male	18 (100)	26 (100)	37 (100)	10 (100)	-	91 (100)	6 (100)	29 (100)	17 (100)	24 (100)	-	76 (100)
Female	14 (100)	23 (100)	35 (100)	9 (100)	-	81 (100)	4 (100)	24 (100)	24 (100)	16 (100)	-	68 (100)
Total	32 (100)	49 (100)	72 (100)	19 (100)	-	172 (100)	10 (100)	53 (100)	41 (100)	40 (100)	-	144 (100)

Table. 4. 4: Contd..

Particulars	SHIMLA											
	Chirgaon						Nerwa					
	BPL	AAY	APL	APDS	Anna-	Total	BPL	AAY	APL	APDS	Anna-	Total
Illiterate												
Male	16.13	23.81	5.00	8.33	100.0	15.29	20.00	7.02	-	-	-	7.32
Female	31.25	36.84	33.33	25.00	-	32.00	28.57	27.78	7.14	-	-	23.38
Total	23.81	30.00	15.62	16.67	100.0	23.13	23.53	17.12	3.70	-	-	15.10
Literate												
Male	64.52	71.43	85.00	75.00	-	71.77	70.00	82.46	84.62	100.0	-	81.70
Female	59.37	36.84	86.67	33.33	-	50.67	71.43	62.96	85.72	100.0	-	68.83
Total	61.90	55.00	78.13	54.17	-	61.87	70.59	72.97	85.19	100.0	-	75.47
Primary												
Male	16.13	19.05	10.00	8.33	-	14.12	20.00	36.84	-	-	-	28.05
Female	15.63	10.53	25.00	8.33	-	14.67	14.29	31.48	21.43	-	-	27.27
Total	15.87	15.00	15.62	8.33	-	14.38	17.65	34.23	11.11	-	-	27.67
Middle												
Male	29.03	19.05	30.00	25.00	-	25.88	30.00	24.56	53.85	-	-	29.27
Female	18.75	15.79	25.00	8.33	-	17.33	42.85	14.81	57.15	50.00	-	25.97
Total	23.81	17.50	28.13	16.67	-	21.87	35.29	19.82	55.56	25.00	-	27.67
Matric												
Male	9.68	14.28	10.00	8.33	-	10.59	20.00	14.04	23.08	-	-	15.85
Female	18.75	5.26	8.33	8.33	-	12.00	14.29	11.11	7.14	50.00	-	11.69
Total	14.29	10.00	9.38	8.33	-	11.25	17.65	12.61	14.82	25.00	-	13.84
10+2												
Male	9.68	14.28	30.00	25.00	-	17.65	-	5.26	7.69	50.00	-	6.09
Female	6.25	5.26	8.33	8.33	-	6.67	-	5.55	-	-	-	3.90
Total	7.94	10.00	21.88	16.67	-	12.50	-	5.40	3.70	25.00	-	5.03
Above+2												
Male	-	4.76	5.00	8.33	-	3.53	-	1.75	-	50.00	-	2.44
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	2.50	3.12	4.17	-	1.88	-	0.90	-	25.00	-	1.26
N.S.G.												
Male	19.35	4.76	10.00	16.67	-	12.94	10.00	10.52	15.38	-	-	10.98
Female	9.38	26.32	-	41.67	-	17.33	-	9.26	7.14	-	-	7.79
Total	14.29	15.00	6.25	29.16	-	15.00	5.88	9.91	11.11	-	-	9.43
Total												
Male	31 (100)	21 (100)	20 (100)	12 (100)	1 (100)	85 (100)	10 (100)	57 (100)	13 (100)	2 (100)	-	82 (100)
Female	32 (100)	19 (100)	12 (100)	12 (100)	-	75 (100)	7 (100)	54 (100)	14 (100)	2 (100)	-	77 (100)
Total	63 (100)	40 (100)	32 (100)	24 (100)	1 (100)	160 (100)	17 (100)	111 (100)	27 (100)	4 (100)	-	159 (100)

Govt. Assistance Provided to Children:

The government has an important role in alleviating poverty and many of its action/programs are instrumental in ensuring food security, may be in an indirect manner. The program of providing mid day meals to young students is one such program. This not only reduces the food grain and other food requirements of families, the additional provision of text books and stationary etc reduces the financial needs and the accrued savings can be conveniently diverted to purchase of food items, if the family circumstances warrant so. The strategy of this program implementation appears to be two-fold. In the short run it directly takes care of ensuring food security and, and most importantly, in the long run it aims at strengthening the population and making them capable to take care of food insecurity sat their own. The capacity built will definitely ensure it.

Govt. of Himachal Pradesh is providing assistance in the shape of mid day meals and provision of free books up to primary classes. This system is helping children in both ways i.e. encouragement in getting education as well as financial assistance. Percentage of Children (male and female) benefited under the scheme has been presented in table 4.5. This table shows that in Tissa block percentage of males and females in Anganwari and primary sections was higher 42 and 29 percent respectively as compared to Salooni block. However, in case of matriculation the Salooni block has the highest 69 percent as compared to 29 percent in Tissa block..

This indicate that in Tissa block 42 percent of the children have been benefited in Anganwari section of children as compared to only 2 percent in Salooni block. Further the table indicates that in Anganwari and primary classes, BPL families are enjoying more benefits in both of the districts. Almost similar picture of assistance is present in Shimla district. The only difference between districts is that instead of BPL families in Chamba district the AAY had enjoyed more benefits of assistance in district Shimla.



Pic-6: Children are the worst sufferers of poverty

Table. 4. 5: Category wise government Assistance provided to the Children of Sample Household.
 (Percentage)

Particulars	CHAMBA											
	Tissa						Salooni					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Anganwari												
Male	37.50	16.67	40.00	-	-	31.58	-	-	-	16.67	-	4.35
Female	66.67	-	71.43	-	-	58.33	-	-	-	-	-	-
Total	45.45	12.50	58.33	-	-	41.94	-	-	-	10.00	-	2.22
Primary												
Male	50.00	-	40.00	-	-	31.58	100.0	25.00	-	-	-	17.39
Female	33.33	-	28.57	-	-	25.00	100.0	50.00	36.36	25.00	-	40.91
Total	45.45	-	33.33	-	-	29.03	100.0	35.71	22.22	10.00	-	28.89
Matric												
Male	12.50	83.33	20.00	-	-	36.84	-	75.00	100.0	83.33	-	78.26
Female	-	100.00	-	-	-	16.67	-	50.00	63.64	75.00	-	59.09
Total	9.10	87.50	8.34	-	-	29.03	-	64.29	77.78	80.00	-	68.89
10+2												
Male	-	-	-	-	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-
Total												
Male	8 (100)	6 (100)	5 (100)	-	-	19 (100)	2 (100)	8 (100)	7 (100)	6 (100)	-	23 (100)
Female	3 (100)	2 (100)	7 (100)	-	-	12 (100)	1 (100)	6 (100)	11 (100)	4 (100)	-	22 (100)
Total	11 (100)	8 (100)	12 (100)	-	-	31 (100)	3 (100)	14 (100)	18 (100)	10 (100)	-	45 (100)

Table.4.5: Contd..

Particular	Chirgaon						SHIMLA Nerwa					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Anganwari												
Male	28.57	-	-	100.0	-	20.00	-	4.76	-	-	-	3.70
Female	-	40.00	-	100.0	-	16.67	-	5.00	-	-	-	3.70
Total	12.50	25.00	-	100.0	-	18.18	-	4.88	-	-	-	3.70
Primary												
Male	42.86	66.67	75.00	-	-	53.33	-	42.86	-	-	-	33.33
Female	66.67	40.00	66.67	-	-	55.55	-	50.00	42.86	-	-	48.15
Total	56.25	50.00	71.43	-	-	54.54	-	46.34	27.27	-	-	40.74
Matric												
Male	28.57	33.33	25.00	-	-	26.67	50.00	52.38	100.0	-	-	59.26
Female	33.33	20.00	33.33	-	-	27.78	-	45.00	57.14	-	-	48.15
Total	31.25	25.00	28.57	-	-	27.28	50.00	48.78	72.73	-	-	53.70
10+2												
Male	-	-	-	-	-	-	50.00	-	-	-	-	3.71
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	50.00	-	-	-	-	1.86
Total												
Male	7 (100)	3 (100)	4 (100)	1 (100)	-	15 (100)	2 (100)	21 (100)	4 (100)	-	-	27 (100)
Female	9 (100)	5 (100)	3 (100)	1 (100)	-	18 (100)	-	20 (100)	7 (100)	-	-	27 (100)
Total	16 (100)	8 (100)	7 (100)	2 (100)	-	33 (100)	2 (100)	41 (100)	11 (100)	-	-	54 (100)

Occupation of sampled household

Occupation structure is an indicator which plays an important role in determining the status of food security. The sections of society gainfully employed in secure occupations have hardly any chance to be vulnerable to food insecurity. It is with this fact in mind that the occupational pattern of the sampled persons has been analyzed. In table 4.6 a detailed distribution of occupations in four blocks of district Chamba and Shimla has been presented. This table shows that 60 and 58 percent of the households have agriculture as their main occupation in Tissa and Salooni block respectively. It has been observed that subsistence farming, as is the case in majority of cases, on marginal and small holdings is a dangerous mix making the involved families to be prone to food insecurity. Service is the second major occupation under which 10 and 19 percent of the households have been involved in Tissa and Salooni blocks respectfully. In case of male and female participation in agriculture it is about 96 percent in Tissa block and 92 percent in Salooni block. The percentage of female participation is higher in agriculture and non agriculture labour in Salooni as compared to Tissa block. Category wise participation in this occupation is higher among AAY households as compared to other categories.

In case of occupation distribution in district Shimla table 4.6 revels that at overall level 35 and 68 percent of the households have agriculture as their main occupation. The low level of percentage in agriculture among all the categories at Chirgaon block is compensated by adoption of non agricultural based occupation in Chirgaon. This may be due to the reason of traditional cropping pattern in Chirgaon block when compared to Nerwa where dominance of cash crops especially apple cultivation has encouraged farmers to stay in farm production.



Pic-7 : Non-farm occupation is strategy for alleviating poverty by many families

Table.4.6: Occupation of Sampled Household.

(Percentage)

Particulars	CHAMBA											
	Tissa						Salooni					
	BPL	AAY	APL	APDS	An-na-pur-na	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Agriculture												
Male	12.50	45.45	17.64	-	-	26.42	25.00	15.79	53.33	8.33	-	26.00
Female	100.0	87.50	100.0	100.0	-	95.91	66.67	90.00	100.0	90.91	-	91.67
Total	53.33	63.16	63.15	45.45	-	59.80	42.85	53.85	75.86	47.83	-	58.16
Agri-Labour												
Male	37.50	13.64	-	-	-	11.32	-	21.05	-	8.33	-	10.00
Female	-	6.25	-	-	-	2.04	-	5.00	-	9.09	-	4.17
Total	20.00	10.53	-	-	-	6.87	-	12.82	-	8.69	-	7.14
Non-Agri-Labour												
Male	50.00	13.64	35.29	50.00	-	30.19	50.00	31.58	-	16.67	-	20.00
Female	-	-	-	-	-	-	33.33	-	-	-	-	2.08
Total	26.67	7.89	15.78	27.27	-	15.68	42.86	15.38	-	8.69	-	11.22
Service												
Male	-	9.10	29.41	33.33	-	16.98	25.00	21.05	40.00	58.33	-	36.00
Female	-	6.25	-	-	-	2.04	-	5.00	-	-	-	2.08
Total	-	7.89	13.15	18.18	-	9.80	14.29	12.82	20.69	30.43	-	19.39
Business												
Male	-	18.18	11.76	16.67	-	13.20	-	5.26	-	-	-	20.00
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	10.53	5.26	9.09	-	6.87	-	2.56	-	-	-	1.02
Rural Artisan												
Male	-	-	-	-	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-
Others												
Male	-	-	5.88	-	-	1.89	-	5.26	6.67	8.33	-	6.00
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	2.63	-	-	0.98	-	2.56	3.45	4.35	-	3.06
Total												
Male	8 (100)	22 (100)	17 (100)	6 (100)	-	53 (100)	4 (100)	19 (100)	15 (100)	12 (100)	-	50 (100)
Female	7 (100)	16 (100)	21 (100)	5 (100)	-	49 (100)	3 (100)	20 (100)	14 (100)	11 (100)	-	48 (100)
Total	15 (100)	38 (100)	38 (100)	11 (100)	-	102 (100)	7 (100)	39 (100)	29 (100)	23 (100)	-	98 (100)

Table.4. 6: Contd...

Particulars	SHIMLA											
	Chirgaon						Nerwa					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Agriculture												
Male	23.81	33.33	16.67	66.67	-	33.33	20.00	29.63	16.67	100.0	-	30.00
Female	26.32	42.86	18.18	100.0	-	36.73	100.0	100.0	90.00	100.0	-	98.08
Total	25.00	38.46	17.39	76.47	-	34.91	66.67	68.33	62.50	100.0	-	68.48
Agri-Labour												
Male	-	-	-	25.00	-	5.26	-	11.11	-	-	-	7.50
Female	10.53	-	-	-	-	4.08	-	-	-	-	-	-
Total	5.00	-	-	17.65	-	4.72	-	5.00	-	-	-	3.26
Non-Agri-Labour												
Male	9.52	-	-	8.33	-	5.26	-	48.15	-	-	-	32.50
Female	31.58	50.00	9.09	-	-	28.57	-	-	-	-	-	-
Total	20.00	26.92	4.35	5.88	-	16.04	-	21.67	-	-	-	14.13
Service												
Male	38.09	58.33	8.33	-	-	28.07	80.00	3.70	66.67	-	-	22.50
Female	21.05	7.14	45.45	-	-	20.41	-	-	10.00	-	-	1.92
Total	30.00	30.77	26.09	-	-	24.53	33.33	1.67	31.25	-	-	10.87
Business												
Male	19.05	8.33	50.00	-	-	19.30	-	3.70	16.67	-	-	5.00
Female	10.53	-	27.27	-	-	10.20	-	-	-	-	-	-
Total	15.00	3.85	39.13	-	-	15.09	-	1.67	6.25	-	-	2.17
Rural Artisan												
Male	9.52	-	25.00	-	-	8.77	-	3.70	-	-	-	2.50
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	5.00	-	13.04	-	-	4.72	-	1.67	-	-	-	1.09
Others												
Male	-	-	-	-	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-	-	-	-
Total												
Male	21 (100)	12 (100)	12 (100)	12 (100)	-	57 (100)	5 (100)	27 (100)	6 (100)	2 (100)	-	40 (100)
Female	19 (100)	14 (100)	11 (100)	5 (100)	-	49 (100)	7 (100)	33 (100)	10 (100)	2 (100)	-	52 (100)
Total	40 (100)	26 (100)	23 (100)	17 (100)	-	106 (100)	12 (100)	60 (100)	16 (100)	4 (100)	-	92 (100)

Land Resources of Sample Households

The extant of land resource of households has direct relationship with food security.

The land resources presented in table 4.7 reveal that per farm area under agriculture accounts 0.23 and 0.39 hectare in Tissa and Salooni block of district Chamba. Both the blocks have additional benefit of horticultural crops under which 0.09 and 0.10 hectare area per farm has been utilized. In case of grass land the total area was 0.20 hectare per farm in Salooni block whereas it was only 0.01 hectare in Tissa. This shows there is a large scope for tending milch cattle in Salooni block and this

can be a useful strategy for improving the food security status of the population. Further table shows that both agricultural and horticultural crops are grown under un-irrigated conditions in both the blocks. The distribution of land resources indicates (table 4.7) that major share of the area under agriculture and horticulture was with APL category of households. The per farm area under horticulture was less than 0.03 hectare with BPL and AAY categories in both the blocks, whereas, in APL households it varied between 0.24 and 0.40 hectare in Tissa and Salooni blocks respectively.

In Shimla district also all the crops are grown under un-irrigated conditions like Chamba. At overall level the 'per farm' area was 0.41 and 0.52 hectare in Chirgaon and Nerwa blocks. In both the blocks horticultural crops have dominated the cropping pattern and per farm area was 0.20 and 0.14 hectare but again major portion was in the hands of APL category of households. It is indicated that in all the blocks horticulture is the main cash generating activity of the farms but low level of per farm area in the category of BPL and AAY indicates prevalence of poverty among these categories as compared to APL households (table 4.7).



Pic-8: Small and fragmented holdings add to food insecurity

Table. 4.7 : Land Resources of Sampled Household.

(Ha./Farm)

CHAMBA												
Particulars	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
1. Agriculture Land												
Irri.	-	-	-	-	-	-	-	-	-	-	-	-
Un-Irri.	0.16	0.16	0.34	0.29	-	0.23	0.36	0.26	0.71	0.32	-	0.39
Total	0.16	0.16	0.34	0.29	-	0.23	0.36	0.26	0.71	0.32	-	0.39
2. Horticulture land												
Irri.	-	-	-	-	-	-	-	-	-	-	-	-
Un-Irri.	0.02	0.03	0.24	-	-	0.09	-	0.02	0.40	-	-	0.10
Total	0.02	0.03	0.24	-	-	0.09	-	0.02	0.40	-	-	0.10
3. Grass land												
	-9	0.03	Neg.	-	-	0.01	-	0.01	0.85	Neg.	-	0.20
4. Waste land												
	-	-	-	-	-	-	-	-	-	-	-	-
Total Land												
Irri.	-	-	-	-	-	-	-	-	-	-	-	-
Un-Irri.	0.18	0.22	0.59	0.29	-	0.33	0.36	0.30	1.96	0.32	-	0.70
Total	0.18	0.22	0.59	0.29	-	0.33	0.36	0.30	1.96	0.32	-	0.70
SHIMLA												
	CHIRGAON						NERWA					
1. Agriculture Land												
Irri.	0.02	-	-	-	-	Neg.	-	-	-	-	-	-
Un-Irri.	0.14	0.35	0.14	0.08	-	0.16	0.24	0.23	0.45	0.24	-	0.25
Total	0.16	0.35	0.14	0.08	-	0.17	0.24	0.23	0.45	0.24	-	0.25
2. Horticulture land												
Irri.	-	-	-	-	-	-	-	-	-	-	-	-
Un-Irri.	0.10	0.07	0.20	0.64	-	0.20	0.06	0.14	0.32	0.12	-	0.14
Total	0.10	0.07	0.20	0.64	-	0.20	0.06	0.14	0.32	0.12	-	0.14
3. Grass land												
	-	0.02	-	0.24	-	0.04	0.02	0.07	0.21	0.16	-	0.09
4. Waste land												
	-	-	-	-	0.004	Neg.	-	0.05	-	-	-	0.04
Total Land												
Irri.	0.02	-	-	-	-	Neg.	-	-	-	-	-	-
Un-Irri.	0.24	0.44	0.34	0.96	0.004	0.41	0.32	0.49	0.98	0.52	-	0.52
Total	0.26	0.44	9.34	0.96	0.004	0.41	0.32	0.49	0.98	0.52	-	0.52

Cropping Pattern of Sample Household:

Cropping pattern is perhaps more important than the amount of land. Highly commercial cropping pattern can significantly off-set the ill effects of small holdings. This is amply demonstrated in district Solan where the holding are predominantly small but farmers have no fear of food insecurity, thanks to substantial income levels generated from vegetable cultivation. Thus, this is an important determinant having bearing on food security of farming households.. Crop wise detail of the pattern is presented in table 4.8. This table reveals that per farm area was 0.23 and 0.37 hectare in Tissa and Salooni blocks respectively. Further table reveals that apple is contributing cash income of rupees 3450 and 3766 in Tissa and Salooni blocks respectively. Out of total value of produce at farm level, about 86 percent was from apple (Rs. 3450) and Maize (Rs. 2886) in Tissa block whereas, Rs. 4706, 3766 and 2326 (98 percent) were from maize, apple and wheat in Salooni block. Out of total values of produce, 47 and 34 percent was from apple production and proving helpful to the households' economy. However, it was observed that benefits from apple production was concentrated in the hands of APL category of farms and accounted 78 and 92 percent in Tissa and Salooni blocks respectively.

Cropping pattern of Shimla district in table 4.8 reveals that, at per farm level, GCA was 0.51 and 0.58 hectare in Chirgaon and Nerwa blocks respectively. Out of total gross cropped area the highest; 0.20 hectare per farm was in apple followed by wheat 0.12and maize 0.10 hectares in Chirgaon block. But in case of Nerwa block per farm area under wheat was highest 0.18 hectare followed by maize 0.15 ha and apple 0.14 hectares. Paddy, pulses, tomato were the other supporting crops in the block. This table shows that in both blocks, more than 90 percent of the produce value was from apple production. At the same time major cash value of the produce remained in the hands of APL category. These facts again indicate that APL category households should be deleted from the list subsidized distribution of food items.



Pic-9: Maize is important crop and is staple diet of poverty stricken families

Table. 4.8: Cropping Pattern of Sampled Households in Chamba and Shimla district of H.P.

(Production: Qtls/Farm, Value: Rs./Farm, Land: Ha./Farm)

Particulars	CHAMBA (TISSA)								
	BPL			AAY			APL		
	Area	Prod.	Value	Area	Prod	Value	Area	Prod	Value
Kharif									
Maize	0.16	3.16	1750	0.16	4.25	2191	0.34	7.55	4088
Paddy	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	-	-	-
Tomato	-	-	-	-	-	-	-	-	-
Chauli	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	0.02	-	1000	0.03	-	1458	0.24	-	8888
Total	0.18	3.16	2750	0.19	4.25	3650	0.59	7.55	12977
Rabi									
Wheat	0.04	0.50	408	0.07	0.87	700	0.15	1.77	1422
Barley	-	-	-	Neg.	0.02	1200	-	-	-
Total	0.04	0.50	408	0.07	0.89	712	0.15	1.77	1422
Gross cropped area	0.22	3.66	3158	0.26	5.14	4362	0.74	9.33	14400

Cont....

Particulars	CHAMBA (TISSA)								
	APDS			Annapurna			Total		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.29	8.66	4333	-	-	-	0.23	5.46	2886
Paddy	-	-	-	-	-	-	-	-	-
Pulses	-	-	-	-	-	-	-	-	-
Tomato	-	-	-	-	-	-	-	-	-
Chauli	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	-	-	-	-	-	-	0.09	-	3450
Total	0.29	8.66	4333	-	-	-	0.32	5.46	6336
Rabi									
Wheat	0.26	3.33	2333	-	-	-	0.10	1.31	1021
Barley	-	-	-	-	-	-	Neg.	Neg.	5
Total	0.26	3.33	2333	-	-	-	0.11	1.32	1026
Gross cropped area	0.56	12.00	6666	-	-	-	0.43	6.79	7363

Contd..

Particulars	CHAMBA (SALOONI)								
	BPL			AAY			APL		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.12	3.00	1800	0.26	5.95	3686	0.71	10.57	6342
Paddy	-	-	-	-	-	-	-	-	-
Pulses	0.24	0.75	2900	-	-	-	-	-	-
Tomato	-	-	-	-	-	-	-	-	-
Chulai	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	-	-	-	0.02	-	1181	0.40	-	14285
Total	0.36	3.75	4700	0.28	5.95	4868	1.11	10.57	20628
Rabi									
Wheat	0.36	4.25	2900	0.14	1.63	1309	0.36	4.57	3200
Barley	-	-	-	-	-	-	-	-	-
Total	0.36	4.25	2900	0.14	1.63	1309	0.36	4.57	3200
Gross cropped area	0.72	8.00	7600	0.43	7.59	6177	1.47	15.14	23828

Particulars	CHAMBA (SALOONI)								
	APDS			Annapurna			Total		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.31	6.85	5265	-	-	-	0.37	7.13	4706
Paddy	-	-	-	-	-	-	-	-	-
Pulses	Neg.	0.02	80	-	-	-	0.01	0.05	220
Tomato	-	-	-	-	-	-	-	-	-
Chulai	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	-	-	-	-	-	-	0.10	-	3766
Total	0.32	6.87	5345	-	-	-	0.49	7.19	8693
Rabi									
Wheat	0.28	3.40	2720	-	-	-	0.25	3.08	2326
Barley	-	-	-	-	-	-	-	-	-
Total	0.28	3.40	2720	-	-	-	0.25	3.08	2326
Gross cropped area	0.60	10.27	8065	-	-	-	0.75	10.27	11020

Contd..

Particulars	SHIMLA (CHIRGAON)								
	BPL			AAY			APL		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.13	2.86	1718	0.17	2.50	1500	0.06	1.28	771
Paddy	0.01	0.45	318	0.09	1.83	1283	0.03	0.71	500
Pulses	0.01	0.06	204	0.01	0.04	125	0.03	0.14	542
Tomato	-	-	-	0.06	-	12500	-	-	-
Chulai	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	0.10	-	56818	0.06	-	33333	0.20	-	137142
Total	0.26	3.38	59059	0.41	4.37	48741	0.34	2.14	138957
Rabi									
Wheat	0.15	1.86	1490	0.18	2.00	1600	0.09	1.07	857
Barley	-	-	-	-	-	-	0.01	0.14	100
Total	0.15	1.86	1490	0.18	2.00	1600	0.10	1.21	957
Gross cropped area	0.42	5.25	60550	0.60	6.37	50341	0.44	3.35	139914

Cont....

Particulars	SHIMLA (CHIRGAON)								
	APDS			Annapurna			Total		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.01	0.40	240	-	-	-	0.10	1.91	1150
Paddy	0.03	1.20	840	-	-	-	0.03	0.90	630
Pulses	0.03	0.16	608	-	-	-	0.02	0.90	328
Tomato	-	-	-	-	-	-	0.01	-	2500
Chulai	-	-	-	-	-	-	-	-	-
Mustard	-	-	-	-	-	-	-	-	-
Apple	0.64	-	180000	-	-	-	0.20	-	8950
Total	0.72	1.76	181688	-	-	-	0.38	2.91	13558
Rabi									
Wheat	0.08	1.40	1120	-	-	-	0.12	1.56	1253
Barley	Neg.	0.20	140	-	-	-	Neg.	0.06	46
Total	0.08	1.60	1260	-	-	-	0.13	1.63	1300
Gross cropped area	0.80	3.36	182948	-	-	-	0.51	4.54	14858

Contd..

Particulars	SHIMLA (NERWA)								
	BPL			AAY			APL		
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value
Kharif									
Maize	0.16	2.00	1400	0.15	3.10	1924	0.19	4.66	3000
Paddy	0.07	2.33	1633	0.05	1.36	954	0.11	3.66	2566
Pulses	-	-	-	0.01	0.12	381	0.13	0.42	1120
Tomato	-	-	-	-	-	-	-	-	-
Chulai	Neg.	0.08	166	-	-	-	0.20	0.23	466
Mustard	-	-	-	-	-	-	-	-	-
Apple	0.05	-	33333	0.13	-	160000	0.32	-	43333
Total	0.29	4.41	36533	0.36	4.60	163260	0.78	8.99	50486
Rabi									
Wheat	0.19	2.33	1866	0.15	1.90	1527	0.40	7.33	5866
Barley	-	-	-	-	-	-	-	-	-
Total	0.19	2.33	1866	0.15	1.90	1527	0.40	733	5866
Gross cropped area	0.48	6.75	38400	0.52	6.50	164787	1.18	1632	56353

Cont....

Particulars	SHIMLA (NERWA)									
	APDS			Annapurna			Total			
	Area	Prod.	Value	Area	Prod.	Value	Area	Prod.	Value	
Kharif										
Maize	0.12	3.50	2400	-	-	-	0.15	3.18	1991	
Paddy	0.12	3.00	2100	-	-	-	0.06	1.80	1260	
Pulses	-	-	-	-	-	-	0.02	0.13	392	
Tomato	-	-	-	-	-	-	-	-	-	
Chulai	-	-	-	-	-	-	Neg.	0.02	63	
Mustard	-	-	-	-	-	-	-	-	-	
Apple	0.12	-	1250000	-	-	-	0.14	-	133333	
Total	0.36	6.50	129200	-	-	-	0.39	5.14	137039	
Rabi							2.46			
Wheat	0.12	1.50	1200	-	-	-	0.18		1973	
Barley	-	-	-	-	-	-	-	-	-	
Total	0.12	1.50	1200	-	-	-	0.18	2.46	1973	
Gross cropped area	0.48	8.00	130400	-	-	-	0.58	7.60	139012	

Livestock Profile of Sample Households:

The per farm possession of draught and milch animal along with number of young stock and sheep and goat presented in table 4.9. This table shows that per farm number of sheep and goats are higher 1.56 in Tissa block as compared to Salooni whereas, such stock was only 0.36 percent. This may be due to the situation of Tissa block at high hill zone of the state where this is traditional occupation of farmers since ancient times. The draught and milch animal the per farm was higher in Salooni block. Regarding value of milk production it was rupees 4049 and 6688 in Tissa and Salooni Blocks respectively. Category wise picture reveals that among poor categories like BPL, AAY and APDS the share of produce value was higher among BPL followed by AAY and APDS category of households in both the blocks.

The Chirgaon block of district Shimla is situated at high elevation hence, per farm possession of sheep and goat was highest 4.33 as compared Nerwa where it accounted only 0.13 per farm. In case of difference in possession of milch and draught animals table shows that per farm possession of milch animal was 1.20 and

1.13 in Chirgaon and Nerwa blocks respectively, which was higher when compared to draught animals. Per farm low rate of draught animal in both the block indicate low size of holdings where generally farmers are sharing bullock labour for ploughing and sowing and tending only single bullock.



Pic-10: Livestock provides not only the drought power but is an important source of providing nutritional security and income generation

Table. 4.9: Livestock Profile of Sampled Household.

(Per Farm)

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna - purna	Total	BPL	AAY	APL	APDS	Anna - purna	Total
Drought Animal												
No	1.33	0.75	1.88	1.00	-	1.23	2.00	1.27	1.42	1.60	-	1.46
Value (Rs.)	2800	1687.50	52.88	2600	-	3081	4500	3054	3571	4240	-	3666
Production (Qtls)	-	-	-	-	-	-	-	-	-	-	-	-
Value (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Milch animal												
No	1.16	1.50	1.33	0.66	-	1.30	1.50	1.27	1.57	1.60	-	1.46
Value	4667	7500	5600	2733	-	5886	4875	4327	5732	6320	-	5355
Production(Qtls.)	486	344.00	493	219	-	404	2007	402	1022	446	-	668
Value (Rs.)	4866	3443	4930	2190	-	4049	20075	4028	10220	4465	-	6688
Youngstock	-				-							-
No	1.00	0.33	0.33	0.66	-	0.46	-	0.27	0.57	1.00	-	0.56
Value(Rs.)	1033	300	350	733	-	505	-	245	571.42	1100	-	590
Production(Qtls.)	-	-	-	-	-	-	-	-	-	-	-	-
Value (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Sheep and Goat	-				-							-
No	0.33	2.25	1.77	0.66	-	1.56	-	0.81	0.28	-	-	0.36
Value (Rs.)	333	3037.50	2645	800	-	2155	-	1022	371	-	-	461
Production (Kg.)	-	1.58	0.77	0.33	-	0.90	-	0.36	0.14	-	-	0.16
Value (Rs.)	-	97.50	46.67	23.33	-	55.33	-	23.63	9.28	-	-	10.83
SHIMLA												
CHIRGAON							NERWA					
Drought Animal												
No	0.63	0.66	0.57	1.40	-	0.73	0.66	0.95	1.00	1.50	-	0.96
Value (Rs.)	1145	1300	1187	3007	-	1458	1266	1886	2033	2775	-	1898
Production (Qtls)	-	-	-	-	-	-	-	-	-	-	-	-
Value (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Milch animal	-				-							-
No	1.45	1.00	1.00	1.40	-	1.20	0.66	1.22	1.00	1.00	-	1.13
Value	5184	3800	4100	7439	-	4857	2666	5215	4375	4100	-	4802
Production(Qtls.)	776	438	928	992	-	754	243	630	1606	310	-	667
Value (Rs.)	7764	4380	9281	9928	-	7543	2433	6304	16060	3100	-	6679
Youngstock	-				-							-
No	0.27	0.33	0.42	0.40	-	0.33	0.66	0.27	0.66	0.50	-	0.36
Value(Rs.)	327	303	535	510	-	406	800	381	866	450	-	476
Production(Qtls.)	-	-	-	-	-	-	-	-	-	-	-	-
Value (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Sheep and Goat	-				-							-
No	-	8.33	0.71	15	-	4.33	-	0.18	-	-	-	0.13
Value (Rs.)	-	15000	857	24750	-	7325	-	272	-	-	-	200
Production (Kg.)	-	4.16	0.28	8.00	-	2.23	-	0.09	-	-	-	0.06
Value (Rs.)	-	250	20.00	520	-	141.00	-	6.36	-	-	-	4.66

Identification of Food Secure Categories in Production

Production of major crops and production of milk is the very important indicator for measuring food security of different economic categories. In this regard average production of all the categories including APL has been recorded and the categories those were below the average production of milk and main crops have been considered as insecure category. Similarly those who were producing above the average have been marked as food secured categories. Category wise detail of the food secure and insecure households has been presented in table 4.10. Table shows that in production of maize and wheat only BPL and AAY categories may be seen as secure in Chirgaon block of district Shimla. Generally the BPL category may be seen secure in production of milk except Chirgaon block. Further table shows that in production of apple only AAY has shown very impressive role by and standing in secure position in chirgaon Block. Major share of apple production remained in the hands of APL category hence, this category may be seen more secure.

Table. 4.10: Identification of Food Secure and Unsecured categories of selected Blocks in Chamba and Shimla District of HP.

Districts/Categories	Security in Production of Main crops and milk.			
Chamba				
Tissa:	Maize	Wheat	Apple	Milk
BPL	INSECURE	INSECURE	INSECURE	SECURE
AAY	INSECURE	INSECURE	INSECURE	INSECURE
APL	SECURE	SECURE	SECURE	SECURE
APDS	SECURE	SECURE	INSECURE
Annapurna	----	----	----
Salooni				
BPL	INSECURE	SECURE	SECURE
AAY	INSECURE	INSECURE	INSECURE	INSECURE
APL	SECURE	SECURE	SECURE	SECURE
APDS	INSECURE	SECURE	INSECURE
Annapurna	----	----	----
Shimla				
Chirgaon:				
BPL	SECURE	SECURE	INSECURE	SECURE
AAY	SECURE	SECURE	SECURE	INSECURE
APL	INSECURE	INSECURE	SECURE	SECURE
APDS	INSECURE	INSECURE	SECURE	SECURE
Annapurna	----	----	----	----
Nerwa:				
BPL	INSECURE	INSECURE	INSECURE	UNSECURE
AAY	INSECURE	INSECURE	SECURE	INSECURE
APL	SECURE	SECURE	INSECURE	SECURE
APDS	SECURE	INSECURE	INSECURE	INECURE
Annapurna	----	----	----	----

Categories Wise Income from Different Sources of Sample Households

In table 4.11 incomes from different sources has been presented. This table shows that agriculture, Horticulture, Animal Husbandry, Labour, Govt. Services, and Business were the major sources from where the rural household were drawing income for their livelihood. In agriculture maize and wheat and in horticulture apple were the main crops grown by the farmers in study districts. The distribution of income from different sources indicates that at per farm level the households were drawing highest income 17816 and 46440 rupees from govt. services in Tissa and Salooni blocks of Chamba district. Whereas, in Shimla district the main source of income was horticulture from where the total income generated by the farmers was rupees 89500 and 46440 in Chirgaon and Nerwa Blocks.

As per sources of income the detail of different secure and unsecured economic categories has been presented in self explanatory table 4.12. In this table it may be observed that the category generating low income from average income of all the categories has been identified as insecure category.

Table 4.11: Source-wise Income of Sampled Household.

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Ann a-pur na	Total
1. Agriculture	2158	2904	5511	6667	-	3913	7600	4995	9542	15585	-	9760
2. Horticulture	1000	1458	8888	-	-	3450	-	1181	14286	-	-	3767
3. Animal Husbandry	4867	3541	4977	2213	-	4104	2007 5	4052	10229	4465	-	6699
4. Labour	1463 3	8281	8222	11000	-	9805	6750	1654 5	-	5550	-	8367
5. Govt Service	-	12700	33066	28167	-	17816	-	8290	90000	67200	-	46440
6. Pvt. Service	-	-	10000	-	-	3000	3000 0	1909 0	-	6000	-	11000
7. Business	-	7250	24555	6000	-	10867	-	1363	-	-	-	500
8. Rural Artisan	-	-	-	-	-	-	-	-	-	-	-	-
9 Others.	-		12667	-	-	3800	9000	-	10285	4920	-	4640
	SHIMLA											
	CHIRGAON						NERWA					
1. Agriculture	3731	17008	2771	2948	-	86450	5067	4787	13020	5400	-	5679
2. Horticulture	5681 8	33333	13714 3	180000	-	8950	3333 3	1600 00	43333	125000	-	13333 3
3. Animal Husbandry	7764	4630	9301	10448	-	7684	2433	6310	16060	3100	-	6683
4. Labour	8324	20000	2571	16800	-	10452	-	1030	-	-	-	7555
5. Govt Service	1614 5	-	71828	-	-	22680	7520 0	2727	15947	-	-	25467
6. Pvt. Service	3273	-	8571	-	-	3200	1100 0	-	12000	-	-	2300
7. Business	1890 9	-	15428	-	-	10533	-	3818	12000	-	-	4000
8. Rural Artisan	-	-	-	-	-	-	-	1636	-	-	-	1200
9 Others.	-	-	-	-	-	-	-	1636	-	-	-	1200

Table. 4.12: Identification of Food Security among Different Sources of income.

District/ Categories	Agriculture	Horticulture	Animal Husbandry	Labour	Govt. Service	Business
Chamba						
Tissa						
BPL	INSECURE	INSECURE	SECURE	SECURE	INSECURE	INSECURE
AAY	INSECURE	INSECURE	INSECURE	INSECURE	INSECURE	INSECURE
APL	SECURE	SECURE	SECURE	SECURE	SECURE	SECURE
APDS	SECURE	---	INSECURE	INSECURE	SECURE	INSECURE
Annap.	---	---	---	---	---	---
Salooni						
BPL	INSECURE	INSECURE	SECURE	INSECURE	INSECURE	INSECURE
AAY	INSECURE	INSECURE	INSECURE	SECURE	INSECURE	SECURE
APL	INSECURE	SECURE	SECURE	INSECURE	SECURE	INSECURE
APDS	SECURE	INSECURE	INSECURE	INSECURE	SECURE	INSECURE
Annap.	---	---	---	---	---	---
Shimla						
Chirgaon						
BPL	INSECURE	INSECURE	INSECURE	INSECURE	INSECURE	SECURE
AAY	SECURE	INSECURE	INSECURE	SECURE	INSECURE	INSECURE
APL	INSECURE	SECURE	SECURE	INSECURE	SECURE	SECURE
APDS	INSECURE	SECURE	SECURE	SECURE	INSECURE	INSECURE
Annap.	---	---	---	---	---	---
Nerwa						
BPL	INSECURE	INSECURE	INSECURE	INSECURE	SECURE	INSECURE
AAY	INSECURE	SECURE	INSECURE	INSECURE	INSECURE	INSECURE
APL	SECURE	INSECURE	SECURE	INSECURE	INSECURE	SECURE
APDS	INSECURE	INSECURE	INSECURE	INSECURE	INSECURE	INSECURE
Annap.	---	---	---	---	---	---

Chapter-5

AVAILABILITY OF BASIC AMENITIES

The availability of basic amenities is directly correlated to status of food security. These facilities, if available, like clean drinking water, sanitation and health care, create an environment conducive for healthy production on farms. Simultaneously, it saves the households from excessive spending on health care, veterinary expenses etc, adding to funds which can come in handy in the eventuality of food insecurity. The following text provides details of some of important basic amenities available to sampled household.

Dwelling Houses

Structure of dwelling house is an important factor of food security as it provides clean living environment. The structural details of different categories of households is presented in table 5.1. This table shows that 33 and 30 percent of the households in Tissa and Salooni blocks of Chamba district are living in pucca houses. But at the same time almost all the households of BPL category are living in kutcha houses. Only AAY category has made some progress in developing pucca and semi-pucca houses. This may be due to the reasons of government assistance provided for construction of houses to AAY households. Further table shows that every household has about three rooms in Tissa and Salooni blocks. About 56 and 53 percent of the households have separate toilet , constructed of wood and stones. In hill topography tending of cattle essential farm activity and hence, each of the household has separate animal shed in both the blocks of district Chamba.

In Shimla district (table 5.1) majority, 86 and 90 percent of the households are living in kutcha houses in Chirgaon and Nerwa blocks respectively. This indicates comparatively higher incidence of poverty and hence these households may be prone to food insecurity as compared to Chamba. In this district majority of the households have their separate kitchen, toilets and animal shed in all the category of households.



Pic-11: Under the extreme poverty bed room has to be shared with livestock

Availability of Drinking Water:

The State Government has made all efforts to provide water and electricity even in remote corners of hilly state. It was found that piped drinking water is in every study blocks of district Chamba and Shimla, despite to the fact these blocks are situated at the height ranging from 1600 to 2000 meters above MSL. In table 5.2 it may be seen that more than 70 percent of the households have public tap for drinking of water, in each of the study blocks. The distance for fetching of water is very short and it was less than 100 meters in all the cases. Majority of the households depended on water supply from public tap as well as natural sources. This scenario was present in all the blocks. This was reported to be due to erratic and inadequate water supply from public taps. The BPL and AAY families have been enjoyed the facility of drinking water in a better way as they are living compactly and coverage of these households for drinking water is the major concern of the department of IPH of state government.

Table. 5.1: Structure of Dwelling Houses and other Amenities.

(Percentages)

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Type of house												
Kaccha	0.83	0.50	0.56	0.67	-	0.60	1.00	0.91	0.29	0.50	-	0.64
Pucca	0.17	0.33	0.44	0.33	-	0.33	-	-	0.57	0.50	-	0.30
Semi-Pucca	-	0.17	-	-	-	0.07	-	0.09	0.14	-	-	0.06
Total	100	100	100	100	-	100	100	100	100	100	-	100
No.of rooms	2.33	2.75	3.89	2.33	-	2.97	1.50	1.91	4.71	3.60	-	3.10
Kitchen	-	-	-	-	-						-	
Yes	0.83	0.75	1.00	0.33	-	0.80	1.00	0.36	0.86	1.00	-	0.73
No	0.17	0.25	-	0.67	-	0.20	-	0.64	0.14	-	-	0.27
Separate toilet					-						-	
Yes	0.33	0.42	0.89	0.67	-	0.56	0.50	0.18	0.43	1.00	-	0.53
No	0.67	0.58	0.11	0.33	-	0.44	0.50	0.82	0.57	-	-	0.47
Animal shed					-						-	
Yes	0.83	0.92	1.00	1.00	-	0.93	0.50	0.73	1.00	0.90	-	0.83
No	0.17	0.08	-	-	-	0.07	0.50	0.27	-	0.10	-	0.17
Sample size	6	12	9	3	-	30	2	11	7	10	-	30
	SHIMLA											
	CHIRGAON						NERWA					
Type of house												
Kaccha	1.00	1.00	0.42	1.00	1.00	0.86	0.67	0.95	0.67	1.00	-	0.90
Pucca	-	-	0.29	-	-	0.07	-	0.05	-	-	-	0.03
Semi-Pucca	-	-	0.29	-	-	0.07	0.33	-	0.33	-	-	0.07
Total	100	100	100	100	-	100	100	100	100	100	-	100
No.of rooms	2.82	2.17	4.14	3.00	1.00	2.97	3.67	2.36	5.33	1.00	-	2.70
Kitchen											-	
Yes	1.00	0.83	0.86	0.80	-	0.87	1.00	0.77	1.00	1.00	-	0.77
No	-	0.17	0.14	0.20	1.00	0.13	-	0.23	-	-	-	0.23
Separate toilet	-	-									-	
Yes	0.63	0.33	0.71	0.40	-	0.53	1.00	0.55	1.00	1.00	-	0.67
No	0.37	0.67	0.29	0.60	1.00	0.47	-	0.45	-	-	-	0.33
Animal shed	-	-					-				-	
Yes	1.00	0.83	0.86	1.00	-	0.90	-	0.55	0.67	1.00	-	0.53
No	-	0.17	0.14	-	1.00	0.10	1.00	0.45	0.33	-	-	0.47
Sample size	11	6	7	5	1	30	3	22	3	2	-	30



Pic-12: Piped drinking water is a scarce resource

Table 5.2: Availability of Drinking Water

Particulars	(Distance in K.M./ Percentage)											
	CHAMBA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Public tap	50.00	58.33	66.67	33.33	-	56.67	100.00	72.72	71.42	80.00	-	76.67
Distance in K.M.	-	-	-	-	-	-	-	-	-	-	-	-
Natural source	50.00	41.67	33.33	66.67	-	43.33	-	27.28	28.58	20.00	-	23.33
Distance in K.M.	0.08	0.05	0.08	0.06	-	0.07	-	0.03	0.02	0.03	-	0.03
Hand Pump	-	-	-	-	-	-	-	-	-	-	-	-
Distance in K.M.	-	-	-	-	-	-	-	-	-	-	-	-
SHIMLA												
CHIRGAON							NERWA					
Public tap	54.54	83.33	85.71	60.00	100.00	70.00	100.00	90.90	66.67	50.00	-	86.67
Distance in K.M.	-	-	-	-	-	-	-	Neg.	-	-	-	Neg.
Natural source	27.27	16.67	14.29	40.00	-	23.33	-	9.09	33.33	50.00	-	13.33
Distance in K.M.	0.02	0.02	0.02	0.04	-	0.01	-	Neg.	0.03	0.05	-	0.01
Hand Pump	18.19	-	-	-	-	6.67	-	-	-	-	-	-
Distance in K.M.	0.02	-	-	-	-	0.01	-	-	-	-	-	-

Quality of Drinking Water

Mountain water is usually considered to be pure but, because of increasing pollution; non-treatment of water and low level of maintenance of water sources, some of the respondents have doubts about its suitability for health. The detail of the quality of water, presented in table 5.3 reveals that pollution and non-purification of water is the general complaint of different categories of households. Along with this it was pointed out by some of the respondents that supply of water is not adequate. However, majority of the households have shown suitability of water in all respects.

Table 5.3: Suitability of Water for Health.
(Multiple Response %)

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APD S	Anna-purna	Total
Suitability												
Yes	50.00	58.33	66.67	33.33	-	56.66	100.00	72.72	71.42	80.00	-	76.67
No	50.00	41.67	33.33	66.67	-	43.33	-	27.27	28.58	20.00	-	23.33
Reason for Non-suitability												
1. Polluted water	33.33	41.67	11.11	33.33	-	30.00	-	18.18	28.58	20.00	-	20.00
2. Non-purification	33.33	50.00	22.22	33.33	-	36.67	-	9.09	14.28	10.00	-	10.00
3. Low level of maintenance	16.67	58.33	22.22	66.67	-	40.00	-	9.09	14.28	10.00	-	10.00
4. Less Supply	50.00	33.33	22.22	33.33	-	33.33	-	27.27	42.85	20.00	-	23.33
	SHIMLA											
	CHIRGAON						NERWA					
Suitability												
Yes	54.54	83.33	85.71	60.00	100.00	70.00	100.00	90.90	66.62	50.00	-	86.67
No	45.45	16.67	14.29	40.00	-	30.00	-	9.09	33.33	50.00	-	13.33
Reason for Non-suitability												
1. Polluted water	18.18	16.67	14.28	40.00	-	20.00	-	9.09	33.33	50.00	-	13.33
2. Non-purification	27.27	16.67	14.28	40.00	-	23.33	-	9.09	33.33	50.00	-	13.33
3. Now level of maintenance	9.09	16.67	14.28	20.00	-	13.33	-	4.54	33.33	50.00	-	10.00
4. Less Supply	27.27	16.67	14.28	40.00	-	23.33	-	9.09	33.33	50.00	-	13.33

Availability of Medical Facilities

Availability of medical facility is a pre requisite for ensuring health and hence the availability and quality of work force. This in turn ensures farm production environment in proving the status of food security. The medical institutions like ayurvedic dispensaries, primary health center and private clinics are the major sources of medical facilities to the rural households. Generally, people rely on ayurvedic dispensaries and primary health centers established by State Government. However, 60 to 67 percent of the sampled households of Tissa and Salooni blocks respectively are not satisfied with the facilities available to them (Table 5.4). There are complaints about absence of doctors, lack of medicines and inability to purchase medicines and are the main reasons of dissatisfaction about available medical facilities. The said complaint was made by about 40 to 60 percent respondents in Tissa and Salooni blocks of district Chamba.

Due to non- availability of medicines in medical institutions , people had to spend from their own pockets and per household expenditure on this account varied between Rs. 425 to 655 annually for minor diseases. Availability of Sanitation facilities is another factor from health point of view which has indirect impact on food security. In this concern table 5.4 reveals that 56 and 43 percent of the households in Tissa and Salooni blocks respectively have their own private latrine and remaining reported to open defecation.

In Shimla district PHC is the most important source of medical facilities to the rural people because of easy location. In Tissa and Salooni blocks of district Chamba 100 percent of households availing medical assistance from PHC (table 5.4). Multiple responses on appropriateness of medical facilities reveals that 50 and 53 percent of the respondents of Chirgaon and Nerwa blocks are not satisfied from these facilities. It is because of the reasons of absence of doctors, lack of medicine and inability to purchase the prescribed medicines. From this table it may be observed that per household expenditure on medicines is more in both the blocks of Shimla district as compared to Chamba. The facility of private latrine was present in 53 and 67 percent households in Chirgaon and Nerwa blocks. District Shimla appears to be placed at better position as compared to Chamba district as for as sanitation facilities are concerned. Discussion concluded that Shimla district is advancing in medical as

well as sanitation facilities as compared to Chamba. It is indicated on the basis of this indication that district Shimla has better medical and sanitary facilities as compared with district Chamba.

Table.5.4: Availability of Medical Facilities.

(Multiple Response %)

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Ayurvedic dispensary	100.00	100.00	100.00	100.00	-	100.00	50.00	90.90	100.00	60.00	-	80.00
P.H.C.	83.33	75.00	66.67	66.67	-	73.33	50.00	72.72	100.00	80.00	-	80.00
Pvt. Clinic	33.33	58.33	44.44	33.33	-	46.67	50.00	36.36	42.85	40.00	-	40.00
Appropriate facilities	-	-			-						-	
Yes	33.33	41.67	33.33	33.33	-	36.67	50.00	36.36	42.85	40.00	-	40.00
No	66.67	58.33	66.67	66.67	-	63.33	50.00	63.64	57.15	60.00	-	60.00
If No. reasons	-	-			-						-	
(i) Absence of doctor's	33.33	41.67	33.33	66.67	-	40.00	50.00	63.64	28.57	50.00	-	50.00
ii) Lack of medicines	66.67	25.00	55.55	66.67	-	46.67	50.00	45.45	57.14	30.00	-	43.33
iii)Inability to purchase	50.00	33.33	22.22	66.67	-	36.67	50.00	36.36	42.85	60.00	-	46.66
iv)Annual expenditure	200.00	400.00	550.00	600.00	-	425.00	250.00	650.00	750.00	675.00	-	655.00
Sanitation Facilities	-	-	-		-					-	-	
1. Open defecation	66.67	58.33	11.11	33.33	-	43.33	50.00	81.82	57.14	-	-	46.67
2. Group latrine with irregular water	-	-	-	-	-	-	-	-	-	-	-	-
3. Regular water	-	-	-	-	-	-	-	-	-	-	-	-
4. Regular Water & Sweeper	-	-	-	-	-	-	-	-	-	-	-	-
Private latrine	33.33	41.67	88.89	66.67	-	56.67	50.00	18.18	42.86	100.00	-	53.33

Contd..

Particulars	SHIMLA										
	CHIRGAON						NERWA				
Ayurvedic dispensary	45.45	50.00	57.14	60.00	-	50.00	66.67	50.00	66.66	50.00	-
P.H.C.	63.63	100.00	100.00	100.00	100.00	86.67	100.00	100.0	100.00	100.0	-
Pvt. Clinic	18.18	50.00	57.14	40.00	-	36.67	-	-	-	-	-
Appropriate facilities	-					-				-	
Yes	45.45	50.00	57.14	40.00	100.00	50.00	33.33	50.00	33.33	50.00	-
No	54.55	50.00	42.86	60.00	-	50.00	66.67	50.00	66.67	50.00	-
If No. reasons	-				-					-	
(i) Absence of doctor's	54.55	50.00	42.86	40.00	-	46.67	66.67	50.00	66.67	50.00	-
ii) Lack of medicines	45.45	50.00	42.86	60.00	-	46.67	66.67	45.45	66.67	50.00	-
iii) Inability to purchase	45.45	33.33	42.86	40.00	-	40.00	33.33	27.27	33.33	50.00	-
iv) Annual expenditure	350.00	475.00	850.00	650.00	250.00	538.00	550.00	800.00	1100.0	900.0	-
Sanitation Facilities	-									-	
1. Open defecation	36.36	66.67	28.57	60.00	100.00	46.67	-	45.45	-	-	-
2. Group latrine with irregular water	-	-	-	-	-	-	-	-	-	-	-
3. Regular water	-	-	-	-	-	-	-	-	-	-	-
4. Regular Water & Sweeper	-	-	-	-	-	-	-	-	-	-	-
Private latrine	63.64	33.33	71.43	40.00	-	53.33	100.0	54.55	100.0	100.0	-
											66.67

Income from Natural Resources:

In hilly society people generate some cash income from natural resources like forests in the shape of wood, herbs and grass. Grass collected from forests and CPRS does not generate any cash earnings but is used by majority of the sample households for tending livestock. The detail of cash income from wood and herbs is presented in table 5.5. This table shows that only BPL and AAY category of households are involved in this collection in all the study blocks of Chamba and Shimla. Poor households used to sell wood in towns and collect some money as an additional income in household life. The annual income derived from selling wood ranges between rupees 680 to 1500 whereas, it varied between rupees 1737 to 5500 from collecting and selling herbs. There are number of herbs in the forest but trade of 'Guchhi' (Morcella) is very popular due to higher demand and easy marketing facilities available. Utilization of wood for household requirements is the general practice and it saves them from purchasing fuel and timber from the market.

Credit Facilities

Availability of credit is an important instrument to allay the incidence of food insecurity. In table 5.6 availability of credit from Co-operative society, banks, money lender and relatives has been presented. This table shows that banks are the major source of credit in district Chamba district whereas, in Shimla Co-operative Societies play an important role for making out the credit requirement of the sample households. The average per farm off take of credit form banks was Rs.5000 in Tissa block as compared to Rs. 2300 in Salooni of district Chamba

The average credit availed was rupees 43132 and 4732 in Chirgaon and Nerwa blocks of district Shimla. The quantum of credit taken from cooperatives was highest and accounted for 73 percent of total credit in Chirgaon as compared to only 35 percent in Nerwa. The quantum of credit drawn by APL category was higher but the BPL households were also not lagging far behind. During field survey it was observed that importance of money lender has been declining and needy households generally depend upon their relatives for emergent but small credit requirements.

Table: 5.5 Annual Income from Natural Resource Like Forest.

(Rs./Farm year)

Particulars	CHAMBA										
	TISSA						SALOONI				
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna
Resources											
1. Public forest											
Wood	1000	1200	-	-	-	680	1500	1727	-	-	733
Grass	-	-	-	-	-	-	-	-	-	-	-
Herbs	5500	4800	-	-	-	3020	3500	4100	-	-	1737
Wild fruits	-	-	-	-	-	-	-	-	-	-	-
Wild vegetables	-	-	-	-	-	-	-	-	-	-	-
II. Private	-	-	-	-	-	-	-	-	-	-	-
Forest	-	-	-	-	-	-	-	-	-	-	-
Wood	-	-	-	-	-	-	-	-	-	-	-
Grass	-	-	-	-	-	-	-	-	-	-	-
Herbs	-	-	-	-	-	-	-	-	-	-	-
Wild fruits	-	-	-	-	-	-	-	-	-	-	-
Wild vegetables	-	-	-	-	-	-	-	-	-	-	-
SHIMLA											
	CHIRGAON					NERWA					
Resources											
1. Public forest											
Wood	-	-	-	-	-	-	1500	1100	-	-	957
Grass	-	-	-	-	-	-	-	-	-	-	-
Herbs	4800	5110	-	-	-	2782	-	-	-	-	-
Wild fruits	-	-	-	-	-	-	-	-	-	-	-
Wild vegetables	-	-	-	-	-	-	-	-	-	-	-
II. Private	-	-	-	-	-	-	-	-	-	-	-
Forest	-	-	-	-	-	-	-	-	-	-	-
Wood	-	-	-	-	-	-	-	-	-	-	-
Grass	-	-	-	-	-	-	-	-	-	-	-
Herbs	-	-	-	-	-	-	-	-	-	-	-
Wild fruits	-	-	-	-	-	-	-	-	-	-	-
Wild vegetables	-	-	-	-	-	-	-	-	-	-	-

Table: 5.6 Status of Indebtedness (Chamba).

(Rs./Farm)

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
1. Co-operative society												
Loan (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Rate of Interest %	-	-	-	-	-	-	-	-	-	-	-	-
Repaid (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Out standing (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
2. Banks												
Loan (Rs.)	-	10417	-	8333	-	5000	-	-	8428	10000	-	2300
Rate of interest %	-	14%	-	14%	-	14%	-	-	14%	14%	-	14%
Repaid (Rs.)	-	8333	-	333	-	3666	-	-	4571	770	-	1323
Out standing (Rs.)	-	2083	-	5000	-	1334	-	-	3857	230	-	977
3. Money Lenders												
Loan (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Rate of interest %	-	-	-	-	-	-	-	-	-	-	-	-
Repaid (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Out standing (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
4. Relatives												
Loan (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Rate of interest %	-	-	-	-	-	-	-	-	-	-	-	-
Repaid (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-
Out standing (Rs.)	-	-	-	-	-	-	-	-	-	-	-	-

Table: 5.6 Status of Indebtedness (Shimla).

(Rs./Farm)

Particulars	SHIMLA									
	CHIRGAON					NERWA				
1. Co-operative society										
Loan (Rs.)	45454	-	64285	-	-	31666	16666	-	-	-
Rate of Interest %	12	-	12	-	-	12	12	-	-	-
Repaid (Rs.)	10909	-	5000	-	-	5166	5000	-	-	-
Out standing (Rs.)	34544	-	59285	-	-	26500	11666	-	-	-
2. Banks										
Loan (Rs.)	13636	15666	14285	-	-	11466	-	4181	-	-
Rate of interest %	14	14	14	-	-	14	-	14	-	-
Repaid (Rs.)	3636	11666	5714	-	-	5000	-	1727	-	-
Out standing (Rs.)	10000	4000	8571	-	-	6466	-	2454	-	-
3. Money Lenders										
Loan (Rs.)	-	-	-	-	-	-	-	-	-	-
Rate of interest %	-	-	-	-	-	-	-	-	-	-
Repaid (Rs.)	-	-	-	-	-	-	-	-	-	-
Out standing (Rs.)	-	-	-	-	-	-	-	-	-	-
4. Relatives										
Loan (Rs.)	-	-	-	-	-	-	-	-	-	-
Rate of interest %	-	-	-	-	-	-	-	-	-	-
Repaid (Rs.)	-	-	-	-	-	-	-	-	-	-
Out standing (Rs.)	-	-	-	-	-	-	-	-	-	-

Satisfaction from Credit Facilities:

Results of multiple response analysis about on reasons for non-satisfaction from credit facilities are presented in table 5.7 indicating that in Chamba district, 60 to 100 households were dissatisfied on reasons for non- satisfaction with credit facilities on one or another account. Among these reasons majority of the households felt that the high rate of interests followed by endless formalities for availing credit and uncertainty of repayment of credit were the main reasons of dissatisfaction with credit facilities. Further table shows that majority of the respondents prefer bank in both the blocks of Chamba district. The response pattern has been observed to be almost identical for different categories of households belonging to Chirgaon and Nerwa blocks of district Shimla.

CONSUMPTION BEHAVIOR

Consumption behavior of sampled households is the main indicator of food security and this is true other way sound also. In this chapter consumption pattern along with net availability of food grains from home produce and supply of PDS has been discussed. Further this chapter also includes per capita calorie intake among different categories of households in study districts.

Annual Consumption and Net Availability of Cereals

In table 6.1 the detail of total consumption and net availability of food grains from home produce and supply through PDS to different economic categories in district Chamba and Shimla has been presented. In district Chamba on an average total annual requirement of cereal was recorded 234 Qtls among BPL, AAY, APL and APDS category of household whereas, it was 198 qtls in Salooni block per annum. Geographically block Tissa and Salooni situated between 1800 to 2000 meters above MSL and agriculture is the mainstay of the rural households and the respondents were cultivating only maize and wheat under rainfed conditions. Though rice was the major food in their consumption pattern, it was cultivated only in Shimla district and the supply of rice from PDS was the only source of its availability for the selected respondents. Production of vegetables in kitchen garden was the general practice of sample households of selected blocks.

Further, out of total consumption of cereals, the net availability from home produce was 53.00 and 63.00 per cent in Tissa and Salooni blocks respectively indicating a deficit of 47 and 37 percent in these blocks. The BPL and AAY category of households suffered most as these had lowest net availability of cereals from home produce when compared to APL and APDS in Tissa block. The gap between average annual consumption and net availability of home produce was lower in Salooni as compared to the Tissa block.

Shimla district, average annual consumption of cereals was 231 and 241 qtls in chirgaon and Nerwa blocks respectively. On an average the net availability of home produce was 38 and 61 per cent in these blocks which has indicated a deficit of 62 and 39 percent respectively. This reflects availability of home produce was higher in Nerwa block as compared to Chirgaon. Above discussion concludes that block Tissa in Chamba and Nerwa in Shimla district were comparatively poor in respect of net availability when compared to Salooni and Nerwa blocks of district Chamba and Shimla respectively. There was only a one respondent belonging to poorest of poor category (Annapurna) and dependent on PDS and hence has not been considered for discussion due to exceptional case.



Pic-13: Home production of cereals is not always sufficient for family consumption

Table: 6.1 : Annual Cereal Consumption and Net Availability from Home Produce in District Chamba and Shimla.

Blocks	Annual cereal consumption	Home Produce			Surplus /Deficit	Deficit percent age	(Qtls.)
		Maize	Wheat	Total			
Chamba							
Tissa:							
BPL	43.54	16.63	2.63	19.26	-24.28	56.22	
AAY	77.38	23.62	9.19	32.18	-44.57	57.60	
APL	88.30	39.37	14.00	53.37	-34.93	39.56	
APDS	24.35	10.50	8.75	19.25	-5.10	20.94	
Annapurna	-	-	-	-	-	-	
Total	233.57	90.12	34.57	124.69	-108.88	46.61	
Salooni:							
BPL	13.26	4.37	7.44	11.81	-1.45	10.93	
AAY	83.31	25.82	15.75	41.57	-41.74	50.10	
APL	51.16	11.37	23.62	34.99	-16.17	31.60	
APDS	50.68	16.19	21.00	37.19	-13.49	26.42	
Annapurna	-	-	-	-	-	-	
Total	198.41	57.75	67.81	125.56	-72.85	36.72	

Table: 6.1 Continued.....

Blocks	Annual Cereal Consumption	Home Produce			Total	Surplus/ Deficit	Deficit percent age
		Maize	Wheat	Rice			
Shimla							
Chirgaon							
BPL	89.96	12.68	16.19	4.77	37.64	-52.32	58.15
AAY	65.38	9.62	8.75	6.12	24.49	-40.89	62.54
APL	41.62	6.13	6.56	4.37	17.06	-24.56	59.01
APDS	32.54	1.75	6.12	5.25	13.12	-19.42	59.68
Annapurna	1.35	-	-	-	-	-1.35	100.00
Total	230.85	30.18	37.62	20.11	87.91	-142.94	61.92
Nerwa:							
BPL	22.72	5.25	6.12	4.37	15.74	-6.98	30.72
AAY	179.02	42.35	28.00	26.25	96.60	-82.42	46.03
APL	34.14	7.00	7.88	9.63	24.51	-9.63	28.20
APDS	5.32	2.63	2.63	5.25	10.51	+5.19	+97.55
Annapurna	-	-	-	-	-	-	-
Total	241.20	57.23	44.63	45.50	147.46	-93.74	38.86

Assistance of Cereals from PDS

As discussed earlier that at overall level per annum deficit of cereals for consumption varied between 37 to 63 percent among different categories of households. This indicates a need of government assistance poverty alleviation as well as ensuring food insecurity. In this concern public distribution system of state Government has made provisions for the supply of cereals on subsidized rates under certain norms to different categories of households. In table 6.2 it may be seen that in Tissa block annual quantity allowed to sampled categories was 126 qtls out of which 109 qtls was utilized being about 86 percent of the total sanctioned quantity. Similarly, in Salooni block the total authorized quota of cereals was 128 qtls out of which 57 percent was used for consumption. In this table it may also be observed that total quantity authorized and lifted was higher in rice as compared to wheat in district Chamba. This was due to the reason that paddy is not grown in the district hence; its requirement was more as compared to wheat. Further table shows that comparatively at overall level APDS category of households have lifted less quantity as compared to other categories of households.

Table 6.2: Cereals Authorized and Lifted for Consumption from PDS in District Chamba and Shimla.

Blocks	Cereals authorized from PDS annual			Cereals Lifted for consumption from PDS			Percentage of lifted cereals		
	Wheat	Rice	Total	Wheat	Rice	Total	Wheat	Rice	Total
Chamba									
Tissa									
BPL	10.80	14.40	52.20	9.88	14.40	24.80	91.48	100.00	47.51
AAY	21.60	28.80	50.40	15.77	28.80	44.57	73.01	100.00	88.43
APL	16.20	21.60	37.80	13.33	21.60	34.93	82.28	100.00	92.41
APDS	5.40	7.20	12.60	-	5.10	5.10	94.44	70.83	40.48
Annapurna	-	-	-	-	-	-	-	-	-
Total	54.00	72.00	126.00	38.98	69.90	108.88	72.18	97.08	86.41
Salooni									
BPL	3.60	4.80	8.40	-	1.45	1.45	-	30.21	17.26
AAY	19.80	26.40	46.20	15.34	26.40	41.74	77.47	100.00	90.35
APL	12.60	16.80	29.40	2.17	14.00	16.17	17.22	83.33	55.00
APDS	18.00	24.00	42.00	1.49	12.00	13.49	8.28	50.00	32.12
Annapurna	-	-	-	-	-	-	-	-	-
Total	54.00	74.00	128.00	19.00	53.85	72.85	35.18	72.77	56.91
Shimla									
Chirgaon:									
BPL	19.80	26.40	46.20	19.80	26.40	46.20	100.00	100.00	100.00
AAY	10.80	14.40	25.20	10.80	14.40	25.20	100.00	100.00	100.00
APL	12.60	16.80	29.40	12.60	16.80	29.40	100.00	100.00	100.00
APDS	9.00	12.00	21.00	9.00	12.00	21.00	100.00	100.00	100.00

Annapurna	-	1.20	1.20	-	1.20	1.20	-	100.00	100.00
Total	52.20	69.60	121.80	52.20	69.60	120.80	100.00	100.00	100.00
Nerwa:									
BPL	5.40	7.20	12.60	5.40	7.20	12.60	100.00	100.00	100.00
AAY	39.60	52.80	92.60	39.60	52.80	92.40	100.00	100.00	100.00
APL	5.40	7.20	12.60	5.40	7.20	12.60	100.00	100.00	100.00
APDS	3.60	4.80	8.40	-	-	-	-	-	-
Annapurna	-	-	-	-	-	-	-	-	-
Total	54.00	72.00	126.00	54.00	72.00	126.00	100.00	100.00	100.00

Annual purchase of Cereal to meet out Deficit:

After meeting out cereal needs from farm produce majority of the households have faced deficit in consumption requirements. It is heartening to note that PDS has been able to fulfill the cereal requirements as indicated by deficit. Table 6.4 reveals that in all categories deficit of cereal for consumption has been made up by purchases from PDS in Tissa and Salooni blocks of district Chamba. In Shimla district at overall level only 6.27 qtls. of cereals were purchased from market in Chirgaon whereas, in Nerwa block whole of the deficit was fulfilled by purchases from PDS on subsidized rates. Similar trends may be observed in per capita purchase of cereals from PDS and has been presented in table 6.5.

Table. 6.4: Annual Purchases of cereals to meet out deficit

Blocks	Total surplus/deficit	Purchase from PDS	Purchase from Market
		Chamba	
Tissa			
BPL	24.28	24.28	-
AAY	44.57	44.57	-
APL	34.93	34.93	-
APDS	5.10	5.10	-
Annapurna	-	-	-
Total	108.88	108.88	-
Salooni			
BPL	1.45	1.45	-
AAY	41.74	41.74	-
APL	16.17	16.17	-
APDS	13.49	13.49	-
Annapurna	-	-	-
Total	72.85	72.85	-

Shimla			
Chirgaon			
BPL	52.32	46.20	6.12
AAY	25.20	25.20	-
APL	29.40	29.40	-
APDS	21.00	21.00	-
Annapurna	1.35	1.20	0.15
Total	142.94	116.13	6.27
Nerwa			
BPL	12.60	12.60	-
AAY	92.40	92.40	-
APL	12.60	12.60	-
APDS	-	-	-
Annapurna	-	-	-
Total	117.60	117.60	-

Table. 6.5: Per Capita Purchase of cereals to meet out deficit

Blocks	Per capita consumption	Per capita surplus/deficit	Purchase from PDS	Purchase from Market
Chamba				
Tissa				
BPL	0.372	-0.208	-0.208	-
AAY	0.432	-0.249	-0.249	-
APL	0.335	-0.132	-0.132	-
APDS	0.351	-0.074	-0.074	-
Annapurna	-	-	-	-
Total	0.372	-0.174	-0.174	-
Salooni				
BPL	0.363	-0.040	-0.040	-
AAY	0.430	-0.215	-0.215	-
APL	0.342	-0.109	-0.109	-
APDS	0.347	-0.094	-0.094	-
Annapurna	-	-	-	-
Total	0.377	-0.138	-0.138	-
Shimla				
Chirgaon				
BPL	0.391	-0.228	-0.228	0.028
AAY	0.447	-0.406	-0.406	-
APL	0.356	-0.210	-0.210	-
APDS	0.371	-0.222	-0.222	-
Annapurna	0.360	-0.360	-0.360	0.040
Total	0.395	-0.245	-0.245	0.068
Nerwa				
BPL	0.365	-0.203	-0.203	-

AAY	0.441	-0.098	-0.098	-
APL	0.346	+0.355	+0.355	-
APDS	0.362	-0.162	-0.162	-
Annapurna	-	-	-	-
Total	0.415	-0.162	-0.162	-

Per Capita Consumption and Availability of Cereals

In table 6.6 per capita consumption of cereals indicates that on an average 0.372 and 0.377 gram of cereals were required for consumption in a day in Tissa and Salooni blocks respectively. Category wise picture indicates that in both blocks per capita consumption was highest 0.432 and 0.430 grams in the category of AAY and lowest 0.335 and 0.342 grams in APL category of farms in Tissa and Salooni blocks of district Chamba respectively. At overall level the total deficit was about 47 and 37 percent in Tissa and Salooni blocks of district Chamba respectively. This shows households that belonged to the category of APL were consuming less when compared to other categories. Analysis indicates that poor households have consumed higher quantities of cereals as compared to better economic category (APL).

Similar pattern may be observed in Shimla district where per capita consumption in day was less in APL category of households. It is very interesting to note that quantity of cereals supplied through PDS was higher in many cases when compared to the quantity produced at home. This indicates efficiency of PDS in balancing demand and supply situations of cereals among all categories of households. It was also observed that higher dependency on public distribution system may prove harmful for households' production systems as, farmers were not putting their best efforts for achieving higher on farm production due to availability of cereals in cheap rates from PDS.

Status of Food Security

The cereals are the staple diet of sampled households and shortfall in its on-farm production indicator food insecure nature of these households. However, they have enough resources for purchasing the requisite quantities of cereals and as such, by definition, may not be food insecure. Presently, an attempt has been made to make a reflection of food security based on average production of cereals on farm. The

categories of farms/farmers groups having production less than their average farm production of different categories have been termed as food insecure groups. The results of this analysis have been presented in Table 6.7.

**Table: 6.6. Per capita Consumption and Net Availability of Cereals
(Per day)**

Blocks	Per day cereal consumption	Home Produce				Surplus/Deficit	Deficit percentage
		Maize	Wheat	Rice	Total		
Chamba							
Tissa							
BPL	0.372	0.142	0.022	-	0.164	-0.208	-55.91
AAY	0.432	0.132	0.051	-	0.183	-0.249	-57.63
APL	0.335	0.149	0.053	-	0.203	0.132	-39.40
APDS	0.351	0.157	0.126	-	0.277	-0.074	-21.08
Annapurna	-	-	-	-	-	-	-
Total	0.372	0.143	0.055	-	0.198	-0.174	46.77
Salooni							
BPL	0.363	0.119	0.203	-	0.323	-0.040	-11.02
AAY	0.430	0.133	0.081	-	0.215	-0.215	-50.00
APL	0.342	0.076	0.157	-	0.233	-0.109	-31.87
APDS	0.347	0.110	0.143	-	0.253	-0.094	-27.09
Annapurna	-	-	-	-	-	-	-
Total	0.377	0.109	0.128	-	0.239	0.138	-36.60
Shimla							
Chirgaon							
BPL	0.391	0.055	0.070	0.020	0.163	-0.228	-58.31
AAY	0.447	0.065	0.060	0.052	0.041	-0.406	-90.83
APL	0.356	0.052	0.056	0.037	0.146	-0.210	-59.84
APDS	0.371	0.019	0.069	0.060	0.149	-0.222	100.00
Annapurna	0.360	-	-	-	-	0.360	-62.02
Total	0.395	0.051	0.064	0.034	0.150	-0.245	-30.68
Nerwa							
BPL	0.365	0.084	0.098	0.070	0.253	-0.112	-30.68
AAY	0.441	0.104	0.069	0.065	0.238	-0.203	-46.03
APL	0.346	0.071	0.080	0.097	0.248	-0.098	-28.32
APDS	0.362	0.180	0.180	0.357	0.717	+ 0.355	+98.07
Annapurna	-	-	-	-	-	-	-
Total	0.415	0.098	0.076	0.078	0.253	-0.162	-39.03

It was assumed that the gap between the average production is the assessment of food secure and insecure categories of households. Similar gap in average consumption has also been worked out and presented in this table.

Table- 6.7: Food Secure and unsecured Categories of cereals in Study Districts.

Districts/Blocks	Net Availabilities of cereals			Total Consumption of cereals
	Maize	Wheat	Rice	
Tissa	Chamba			
BPL	insecure	insecure	-	Secure
AAY	insecure	insecure	-	Secure
APL	Secure	insecure	-	insecure
APDS	Secure	Secure	-	insecure
Salooni				
BPL	Secure	Secure	-	insecure
AAY	Secure	insecure	-	Secure
APL	insecure	Secure	-	insecure
APDS	Secure	Secure	-	insecure
Chirgaon	Shimla			
BPL	Secure	insecure	insecure	insecure
AAY	Secure	insecure	Secure	Secure
APL	Secure	insecure	Secure	insecure
APDS	insecure	Secure	Secure	insecure
Annapurna	insecure	insecure	insecure	insecure
Nerwa				
BPL	Secure	insecure	insecure	insecure
AAY	Secure	insecure	insecure	Secure
APL	insecure	insecure	Secure	Secure
APDS	insecure	Secure	Secure	insecure

Consumption and Availability of Pulses

Annual net availability and total requirement of pulses has been presented in table 6.8. This table shows that except Tissa the pulses crops were grown in all other blocks of district Chamba and Shimla. In pulses growing blocks the percentage of deficit after meeting out of net availability from farm produce was 84.00 72.00 and 60.00 percent in Salooni, Chirgaon and Nerwa blocks respectively.

In fact, pulses are the essential item in consumption pattern of the people but its production has been decreasing since last two decades. In such a scenario the highly subsidized pulses provided through PDS are proving very helpful in improving food security status of poor households. In table 6.9 the details of the authorized quota and quantity lifted from PDS has been presented. In this table it may be observed that out of total authorized quota of pulses about 85.00, 82.00., 73.00 and 62.00 percent has been lifted by Tissa and Salooni, blocks of Chamba and Chirgaon and Nerwa of district Shimla respectively. Further table shows that APDS was the only category in Nerwa block where authorized quota of pulses has not been lifted due to sufficient on-farm production.

In case of annual purchase of pulses from PDS and open market table 6.10 indicates that only APL of Tissa and Salooni and BPL category of Nerwa has purchased pulses from open market at the rate of 0.43, 0.76 and 0.07 qtls. per annum respectively.

Table: 6.8. Annual Consumption of Pulses and Net availability of farm Produce.

Blocks	Annual Consumption	Annual net availability	Surplus/Deficit	Deficit Percentage
Chamba				
Tissa				-
BPL	2.02	0.00	(-)2.02	-
AAY	3.02	-	-	-
APL	3.67	-	-	-
APDS	0.86	-	-	-
Annapurna	-	-	-	-
Total	9.57	-	-	-
Salooni				
BPL	0.72	1.50	+0.78	+108.33
AAY	3.17	-	-	-
APL	3.28	-	-	-
APDS	3.36	0.20	-3.16	-94.05
Annapurna	-	-	-	-
Total	10.53	1.70	-8.83	-83.85
Shimla				
Chirgaon				
BPL	3.30	0.75	-2.55	-77.27
AAY	1.87	0.25	-1.62	-86.63
APL	3.11	1.00	-2.11	-67.84
APDS	1.74	0.80	-0.94	-54.02
Annapurna	-	-	-	-
Total	10.02	2.80	-7.22	-72.05
Nerwa				
BPL	1.15	-	-	-
AAY	7.39	2.80	-4.59	62.11
APL	0.86	1.28	+0.42	+48.84
APDS	0.72	-	-	-
Annapurna	-	-	-	-
Total	10.12	4.08	-6.04	-59.68

Table. 6.9: Pulses Annually Authorized and Lifted from PDS.

Blocks	Pulses Authorized from PDS	Pulses Lifted from PDS	Percentage of Lifted Pulses
Chamba			
Tissa			
BPL	2.16	2.02	93.52
AAY	4.32	3.02	69.90
APL	3.24	3.24	100.00
APDS	1.08	0.86	79.62
Annapurna	-	-	-
Total	10.80	9.14	84.62
Salooni			
BPL	0.72	-	-
AAY	3.96	3.17	80.05
APL	2.52	2.52	100.00
APDS	3.60	3.18	88.33
Annapurna	-	-	-
Total	10.80	8.87	82.13
Shimla			
Chirgaon			
BPL	3.96	2.64	66.67
AAY	2.16	1.65	76.38
APL	2.52	2.24	88.89
APDS	1.80	1.04	57.78
Annapurna	-	-	-
Total	10.44	7.57	72.51
Nerwa			
BPL	1.08	1.08	100.00
AAY	7.92	4.94	62.37
APL	1.08	-	-
APDS	0.72	0.72	100.00
Annapurna	-	-	-
Total	10.80	6.74	62.41

**Table. 6.10: Annual Purchase of pulses to meet out Deficit
(Qtls)**

Blocks	Per capita surplus/deficit	Purchase from PDS	Purchase from Market
Chamba			
Tissa			
BPL	-2.02	2.02	-
AAY	-3.02	3.02	-
APL	-3.67	3.24	0.43
APDS	-0.86	0.86	-
Annapurna	-	-	-
Total	-9.57	9.14	0.43
Salooni			
BPL	-	-	-
AAY	-3.17	3.17	-
APL	-3.28	2.52	0.76
APDS	-3.18	3.18	-
Annapurna	-	-	-
Total	-9.63	8.87	0.76
Shimla			
Chirgaon			
BPL	-2.64	2.64	-
AAY	-1.65	1.65	-
APL	-2.24	2.24	-
APDS	-1.04	1.04	-
Annapurna	-	-	-
Total	-7.57	7.57	-
Nerwa			
BPL	-1.15	1.08	0.07
AAY	-4.94	4.94	-
APL	-	-	-
APDS	-0.72	0.72	-
Annapurna	-	-	-
Total	-6.81	6.74	0.07

Low Income and Consumption Pattern

It has been found that the sampled households have comparatively poor consumption pattern. This scenario has been attributed directly to low income levels. The low income lands intern have been a result of multiple factors. For present analysis four most important of these have been considered. The following provides results of multiple response analysis in this respect and the results have been summarized in Table 6.11.

Opinion recorded from the households reflects that unviable agriculture; unemployment in the family; poor level of health to work and burden of interests were the major reasons for non-fulfillment of daily expenditure in study districts of Chamba and Shimla. More than 70 percent of the household's complained that unviable nature of agriculture has created poverty in the study blocks of district Chamba and Shimla. Perhaps the coming era of herbal cultivation may prove helpful for increasing agricultural income and hence one may expect improvement in food security levels. .

The second major reason behind low income in the households was unemployment. The percentage of opinion confirming this reason among different blocks varied between 47 to 87 percent in Tissa, Salooni, Chirgaon and Nerwa of district Chamba and Shimla. Table indicated that the percentage of unemployment was lower in Chamba as compared to Shimla. This may be due to the reason of easy approach to plain areas of adjoining state (Punjab) for getting employment along with the construction of Electrical Hydle Project (Surgani) in Chamba district which provided employment for many people. Lastly the responses among the study blocks varied between 13 to 40 percent for factors of poor level of health to work and burden of interest payments to credit institutions.

Table. 6.11: Reason for non fulfillment of daily expenditure requirement of Sample household.

Particulars	(Multiple response %)											
	CHAMBA						SALOONI					
	BPL	AAY	APL	APDS	Anna-purna	Total	BPL	AAY	APL	APDS	Anna-purna	Total
Reason												
i) Unviable agriculture	66.67	83.33	44.44	100.00	-	70.00	100.0	100.0	57.14	60.00	-	76.67
ii) Unemployment in the family	33.33	25.00	66.67	100.00	-	46.67	100.0	72.73	71.42	80.00	-	76.67
iii) Poor level of health to work	16.67	8.33	22.22	-	-	13.33	50.00	18.18	28.57	30.00	-	26.67
iv) Burden of interests payment	-	8.33	22.22	33.33	-	13.33	-	9.09	14.28	20.00	-	13.33
	SHIMLA											
	CHIRGAON						NERWA					
Reason												
i) Unviable agriculture	90.91	100.0	71.42	80.00	100.0	86.67	100.0	90.90	66.67	50.00	-	86.67
ii) Unemployment in the family	81.82	50.00	57.14	40.00	-	60.00	100.0	81.82	66.67	100.0	-	86.67
iii) Poor level of health to work	18.18	16.67	-	-	100.0	13.33	33.33	18.18	-	-	-	16.67
iv) Burden of interests payment	27.27	33.33	-	20.00	-	20.00	33.33	45.45	33.33	-	-	40.00

Per Capita Calorie Intake from Food Items

Average calorie intake from different food articles¹ by different groups of family members has been presented in table 6.12. This table shows that on an average per capita calorie intake in Chamba district was 2141 and 2502 in Tissa and Salooni blocks respectively. In both blocks the average calorie intake was highest 2201 and 2602 in APL category of households respectively. The relationship between cereals, vegetables and meat in both blocks was very close to each other but in other consumable items block Salooni was leading and due to this reason per capita calorie intake per day was higher in this block. This analysis indicates that Salooni block is better in calorie intake as compared to Tissa of district Chamba. In fact, Tissa is situated at the height of more than 2000 meters above MSL and people were dependent on maize and wheat crops in rainfed conditions and the life was tough due to non-availability of required developmental facilities. In Tissa block, research team came across a family sharing the room with livestock, an example of stock poverty in the area.

In case of Shimla district table shows that on an average per capita calorie intake was 2482 and 2157 in Chirgaon and Nerwa blocks respectively. Among all category of household's calories intake was the highest 2601 and 2378 in APL category of households in Tissa and Salooni blocks respectively. The per capita calorie intake has shown highest increase especially in milk and oil in Chirgaon which resulted into high calorie intake in this block.

On the basis of this analysis, the food secure and insecure groups have been identified and results presented in Table 6.12. In this table the categories consuming less than the total average calorie intake of the block have been marked as insecure and those consuming equal or more than the average were categorized as secure categories.

¹ . The food articles include cereals, pulses, vegetables, roots and tubers, milk and milk foods, meat, fish etc.

Table. 6.12: Average Calories in take from different food articles by different group of family members.

Particulars	CHAMBA											
	TISSA						SALOONI					
	BPL	AAY	APL	APDS	ANNA PURNA	TOTAL	BPL	AAY	APL	APDS	ANNA PURNA	TOTAL
Cereal	1280	1486	1152	1207	-	1280	1248	1479	1176	1193	-	1297
Pulses	60	60	50	43	-	53	71	57	78	82	-	71
Vegetable	20	16	22	18	-	19	25	20	28	22	-	23
Roots & Tubers	22	18	24	20	-	21	28	23	30	26	-	26
Other Veg.	24	20	26	22	-	23	25	20	28	22	-	23
Milk & milk prod.	237	130	311	317	-	241	320	277	414	420	-	379
Meat fish and egg.	90	80	94	85	-	88	92	80	98	85	-	87
Oil and fats	325	182	414	311	-	312	416	387	624	530	-	489
Sugar and Jaggery	90	86	95	88	-	91	95	75	98	80	-	84
Fruits	13	12	13	12	-	13	25	21	28	23	-	23
Total calories (per capita)	2161	2090	2201	2123	-	2141	2545	2439	2602	2483	-	2502
No. of H.H.	6	12	9	3	-	30	2	11	7	10	-	30
No. of family member	32	49	72	19	-	172	10	53	41	40	-	144

Table 6.12 Conti....

Particulars	SHIMLA											
	CHIRGAON						NERWA					
	BPL	AAY	APL	APDS	ANNA PURNA	TOTAL	BPL	AAY	APL	APDS	ANNA PURNA	
Cereal	1345	1538	1224	1276	1238	1358	1255	1517	1190	1245	-	1427
Pulses	50	43	96	67	18	60	64	64	28	174	-	60
Vegetable	40	32	45	35	28	38	35	26	40	30	-	29
Roots & Tubes	45	38	50	40	40	43	38	30	45	35	-	33
Other Veg.	40	32	46	35	38	38	32	27	38	30	-	29
Milk & milk prod.	325	219	391	371	330	360	336	180	412	190	-	192
Meat fish and egg.	95	85	110	90	88	95	70	60	80	65	-	64
Oil and fats	310	270	423	436	289	299	250	230	370	221	-	138
Sugar and Jaggery	115	102	122	106	105	112	95	85	105	90	-	90
Fruits	80	70	94	75	75	79	60	50	70	55	-	55
Total calories (per capita)	2445	2429	2601	2531	2249	2482	2235	2269	2378	2135	-	2157
No. of H.H.	11	6	7	5	1	30	3	22	3	2	-	30
No. of family member	63	40	32	24	1	160	17	111	27	4	-	159

Table. 6.13: Secure and unsecured Household Categories in taking Calorie of study Districts.

Particulars	CHAMBA									
	Tissa					Salooni				
	BPL	AAY	APL	APDS	AN	BPL	AAY	APL	APDS	AN
Total calories	secure	insecure	secure	insecure	-	secure	insecure	secure	insecure	-
SHIMLA										
Total calories	insecure	insecure	secure	Secure	insecure	Secure	Secure	Secure	insecure	-

Chapter - 7

POLICY ISSUES

Food security is often considered at different levels such as global, regional, national, sub-regional, households and individuals. While the early concerns had been mainly confined to global and regional food security, during the last two decades the focus has shifted to food security concerns at national, household and individual levels, and this shift has modified and enlarged the concept itself.

Factors which help for diet diversification are monetization in the rural economy, changes in wage payment systems, commercialization of food economy, education and exposure to mass media are really lacking in study districts. There are large scope for cultivation of fruit and vegetables including off season vegetables in all the blocks but due lack of irrigation facilities especially in Tissa and Salooni blocks the farm families are unable to diversify cropping pattern at their desired extent.

Therefore, for elevating hunger and increasing poverty it is important to support more public investment in rain- fed and backward hilly areas. In hilly topography of the study districts, there are numbers of scope of lifting water flowing below the mark of cultivated land. In agriculture herbal cultivation is emerging in a very big way. Therefore, availability of irrigation facilities will not only become helpful for cultivation of fruit and vegetable but also generate big returns from herbal cultivation due to suitable agro-climatic conditions of hilly topography in Himachal Pradesh.

The geographical situation of both the study districts reflects that selected blocks situated in the boundary of Tribal districts of the state hence; life of the people is very tough in all respect. Agriculture followed by service was the mainstay of the people under which maize, wheat and pulses along with apple cultivation among big land holdings were the major crops grown in the study districts. In these two study districts paddy grown only in district Shimla. The poor base of Commercial agriculture needs diversification towards cash crops especially cultivation of vegetables.

Fragmentation of holdings and landlessness createdn of off-farm employment for the rural poor. In the absence of appropriate measures to encourage non-farm activities, a large segment of the rural population cannot be provided with opportunities for gainful employment and economic access to food. The human dimension of this problem is such that helping people to help themselves by capacity building can provide a lasting solution.

In order to be effective the food security policy must evolve as a basic element of a social security policy with proper coordination among the various government departments, private sector and non-government organizations. The direct food and nutrition support for the poor through a minimum safety net should be properly balanced with improvements in the quality of life of local people through investments in education, drinking water and sanitation, and health care.

Further, future food security programmes should have a broad objective of increased agricultural production and enhanced access to food through a participatory approach of local people with emphases on resources efficiency, social equity and preservation of the environment. Centralized anti-poverty programmes should give way to local initiative and local participation based on the principles of efficiency, equity and environmental conservation.

The management of forests deserves special mention because these provide not only fuel, fodder and several edible fruits, flowers and roots to nearby villagers, but also protect the agriculture of a much wider area through soil and water conservation as well as climate for better production of different crops. These benefits of forests should be accorded full importance and forests should be protected from the point of views of maximizing these benefits instead of being handed over to industrial – commercial vested interests for exploitation mainly from this pointed of view.

In Himachal Pradesh, rural farming households have usufruct rights for timber, fuel wood, grasses and grazing in the demarcated protected forests. These rights are also extended to the un-classed forests, which mainly include those areas which fall under nullahs/khuds/rivers and barren rocky hills. Un-classed forests have thin vegetation and commercial forestry is not possible in these areas. The proportion of

reserve forests in the state as well as in the selected areas has been declining over the last two decades. In the reserve forests people have no usufruct rights. However, in study area illegal tree felling, grass cutting and animal grazing is common. Mostly those forest areas which have good potential for commercial forestry are declared reserve forests for a period of 20 to 25 years.

Therefore, it is to be suggested that plantation of trees should be started on priority basis and a special provision of finance for plantation of forests should be managed.

It is very interesting to note that in some categories quantity of cereals supplied through PDS is more when compared to the quantity produced at home among all economic categories. This shows PDS has control over the demand of cereals consumption among all categories of households. In this concern it is suggested that more dependency on public distribution system is harming the production system as, farmers are not putting efforts for better production due to availability of cereals in cheap rates from PDS. Therefore, it is to be suggested that supply of PDS items should be restricted up to poor economic categories.

Considering the overwhelming importance of the rural sector additional emphasis has to be placed on rural development and non-farm activities to increase income and employment as demand for agricultural goods slows down. This addresses the domestic policy orientation aspect. This is especially valid in the case of study districts, where both the income and employment generating capacity of agriculture and the growth of the non-farm sector have slowed down considerably.

In this study it was observed that poor quality seeds lead to variation and low level in productivity. There are many sources from which farmers obtain seeds- retained crop produce, other farmers, traders , co-operatives, government departments, agricultural universities, public and private seed companies and since certification is not compulsion, it is difficult to monitor the quality of seeds from informal sources. Therefore it is suggested that extension services should educate farmers in the importance of using quality seed.

This study makes a strong case for a drastic change in the food management policy and, therefore, in the overall agricultural strategy. Apart from reforming procurement and price support policies, the government should seek to increase production of non-cereal foods, namely fruits, vegetables and animal products including milk, their storage facilities and the processing of agricultural produce. There are number of scope to increase production of mentioned products in study districts as well as hill agricultural of Himachal Pradesh.

The impact of changes in climatic factors on crop productivity raises several researchable issues. The need for short duration wheat variety is felt necessary to address the problem of shorter winter as well as growing period temperature rise, which affect the productivity adversely. Since the food security is the primary concern of the Government, the declining production and productivity has to be revered sooner than later. This is a challenge to agricultural research system, which also necessitate revamping of the crop breeding programme suitably to fit the regionally differentiated policy strategy. Technology policy needs to stress more on development of short duration variety to escape climatic aberrations.

BIBLIOGRAPHY

1. B.C. Barah August, (2007.) "Criticality of Rice and Wheat System in Sustainable Food Security in India: An Analysis", Agricultural Situation in India..
2. Arvind Panagariya, (2002), Stamping in Nutrition, Economic Times, 24.2.02, p-6.
3. K.K. Datta and S. Mandal et al. (2000), "Retrospect and Prospect of Food Security in North Eastern Hilly Region of India, Agricultural Situation in India , August 2000.
4. Mohommad Adil (2001), "Decline in Cereal consumption Varies across States, Economic Times, 19 Dec. 2001.
5. Chand, Ramesh (2000), Trends in Food consumption and nutrition- Food security concern (Reporter's Report), Indian Journal of Agriculture Economics, Vol 61 (3).
6. George, P.S., (1996), Public Distribution System, Food Subsidy and Production Incentives, Economic and Political Weekly, XXXI (39), September 28.
7. George, P.S. (1999), Some Reflections on Food Security, Presidential Address 59th Annual Conference of Indian Society of Agricultural Economics, Jawahar Lal Nenru Krishi Vishwa Vidyalaya Jabalpur Dec. 1-3.
8. Minhas, B.S. (1976), Towards National Food Security , Presidential Address, Indian Journal of Agricultural Economics; Vol. 31No. 4.
9. Ram, G.S. (1996) , Food Security System, Poverty Issue and Rural Development, Presidential Address, Agricultural Economics Research Review, Vol. 9, No. 2.