

FOOD SECURITY AND VULNERABILITY PROFILE OF GUJARAT

REFLECTIONS FROM COMMUNITIES



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Foreword

The Food Insecurity and Vulnerability Profile (FIVP) of Gujarat provides critical information that would help in designing appropriate programmes for WFP's next Country Programme (2003-2007). The study highlights the regional variation within the state for designing short, mid and long-term intervention strategies to address issues related to food insecurity. The design and approach of the study were guided by Rajasthan FIVP, which was undertaken in 2000-2001.

FIVP in Gujarat was initiated in Kachchh district after the devastating earthquake in January 2001. A separate report was prepared for Kachchh, which highlighted the impacts of earthquake.

We are most grateful to the District and Taluka Administrations of Kachchh, Surendranagar, Banskatha, Dahod and Surat districts for sharing information and views. The data and documents provided by the Department of Economics and Statistics, Ministry of Agriculture, Department of Food and Civil Supplies, Directorate of Relief of Government of Gujarat, SEWA, Gujarat Ecology Commission also helped us in developing a perspective of the districts vis-à-vis the state. The overall guidance and assistance provided by Ms. Patrice Engle (Unicef) and Mr. Kenneth Maclean (CRS) for Kachchh and Mr. Shyam Khadka (IFAD) for Surendranagar were critical for the study. We are grateful to WFP Programme Officers and other senior staff for their valuable inputs in the report. Professor Amitabh Kundu, Centre for the Studies of Regional Development, Jawaharlal Nehru University, New Delhi, has been the Technical Adviser for all our VAM documents and his guidance was especially useful regarding analysis and chapter orientation of this report. We are grateful to Mr. Jeffrey Marzilli, WFP Rome, for his assistance and the Canadian Impact Grant for Financial Assistance.

Last but not the least, we share our deep respect for the children, women and men of the 54 villages who spared their valuable times to share their perception on various aspects of food security.

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FOOD INSECURITY AND VULNERABILITY PROFILE IN GUJARAT EXECUTIVE SUMMARY

1 Objectives of the Report

The Food Insecurity and Vulnerability Profile (FIVP) aims to capture the qualitative dimensions of food insecurity of the vulnerable communities for identifying programme opportunities where food can be used as an enabler in eradicating chronic and transitory food insecurity. The objectives of FIVP of Gujarat are three folds: beneficiary targeting, problem assessment, and baseline information for programming food assistance programmes.

The exercise is a part of a comprehensive strategy of India Country Office to understand the various facets of food insecurity for designing appropriate food based interventions. First, the food insecure districts within Gujarat were identified using secondary data analysis. Indicators on Food Availability, Vulnerability to Natural Disasters, Food Access, Food Utilization etc. were used to arrive at a Composite Food Insecurity Map of Gujarat, highlighting the hotspots within the state. 5 districts were then chosen from different Agro-ecological Zones of the state to capture the perception of the communities on food insecurity (FIVP). The study was designed to capture similarities and diversities on issues related to food insecurity that would help build a state/country level profile in a cost-effective manner. Secondly, effort was made to supplement the primary information collected from this survey the available secondary data and literature on the state of Gujarat, its economy, natural resource base and people. Furthermore, in depth knowledge of WFP program officers and staff from other organizations (CRS, IFAD, SEWA, UNICEF, ORG) working to alleviate food insecurity in the region was drawn upon through interviews and their participation in the FIVP process.

The study was initiated in Kachchh after the district was devastated by the earthquake in January 2001. Because of the overwhelming importance of understanding the situation in the context of a large-scale disaster, the study in Kachchh was undertaken in collaboration with CRS, Unicef and IFAD. In the overall sampling, Kachchh is over represented and hence the analysis should be seen as reflections from vulnerable communities, instead of interpreting the data as representative of the surveyed districts.

The study was undertaken in 30 villages spread over 5 talukas in Kachchh district. The selected villages are among the most affected as a consequence of the earthquake. In addition, 2 urban areas were covered to exclusively capture Health and Nutrition Knowledge and Practice. In the urban areas, focus group discussions were undertaken to provide qualitative information for the Nutritional Survey undertaken jointly by WFP, IFRC, SCF-UK, SEWA, CRS and OXFAM. In Surendranagar district four villages each were selected in 3 taluka while in Banaskantha, Dahod and Surat 2 talukas were selected with 2 sample villages in each taluka. In each taluka, half the sample villages were of the poorest of the poor and half of them were average or ideal villages.

2 Food Insecurity and Vulnerability in Gujarat

Gujarat is geographically variegated, with a diverse cultural heritage, heterogeneous caste composition and is a region rich in manpower and technical resource is one of the food insecure states of India as documented by the study of M S Swaminathan Foundation. Food insecurity and vulnerability are high in Gujarat because natural hazards such as droughts and cyclones are frequent, a larger percentage of the population is excluded from full participation in the society because of caste and tribe status, rural infrastructure is poor and the health and nutritional status of women and children are unacceptable. Gujarat has unstable agricultural production, as water availability is a severe problem. Many development experts even opine that if the problem of water availability is solved in the state, the state can reach the status of food sufficiency.

3 Characteristics of Vulnerable Groups

The major characteristics that differentiate food secure and insecure households as defined by the community members themselves are uniform across different communities in Gujarat. Of the ten most important indicators that determine food insecurity, high indebtedness, lack of access to land, poor quality of land, lack of irrigation infrastructure, high dependence on livestock, and lack of labour resources (able bodied persons) within the household, emerged as the four most important.

Although vulnerable groups across all regions have similar characteristics, the degree of vulnerability varies from region to region. While the concentration of food insecure households is very high in Dahod, Surat, and in some of the communities in Surendranagar, it is lower in Banaskantha and Kutchh, not only in numbers, but also in the degree of vulnerability. The village level statistics confirm that Scheduled Tribe areas such as Dahod, and those areas which are remote and have more limited resource bases (Surendranagar), have the highest prevalence of poor and food insecure households.

Caste and tribe are important determinants of vulnerability. In general, both Scheduled Tribes (STs) and Scheduled Castes (SCs) have traditionally been excluded from many of the resources and services. This situation persists in Gujarat, as is seen in the survey, although clearly some aspects have improved.

The following household types were found to be vulnerable in the studied areas:

- a) Remotely located households
- b) Landless households and those with marginal land holdings and few assets
- c) Scheduled Castes (SCs)
- d) Scheduled Tribes (STs)
- e) Disadvantaged Heads of Household
- f) Women and Children
- g) Households engaged in hazardous occupations

4 Livelihoods: Assets, Consumption, and Income

Most households in rural Gujarat are partially dependent either on agriculture or agriculture-related activities or on livestock for their livelihoods. However, agriculture meets only about 50 per cent of the needs of the most vulnerable households. Vulnerable groups in different regions have found alternative means to supplement agricultural activities. In Dahod and Banaskantha, households rely more on forestry products and there are public works linked to the maintenance of forests. In the arid areas of Kutchh, sheep and goats are herded to other areas for sale or used to produce wool and associated products. In Surendranagar and some part of Kutchh district activities in salt pan provides the major employment. In all regions (except for Surat), the most vulnerable households with limited land holdings migrate after the primary agriculture season to earn additional income.

5 Natural Hazards and Coping Patterns

Natural hazards are a prominent feature of the environment of Gujarat. An important factor in food insecurity in Gujarat is the high frequency of drought. Gujarat is a drought-prone state as large parts of the State are arid and semi-arid. Gujarat experienced serious drought conditions in 1998, and rainfall has been very poor for the past three years. In addition to this there was the devastating earthquake, which further weakened the livelihood of the people.

Consumption of the people varies significantly between a normal year and a crisis year. Respondents mentioned five main short-term, food-based coping strategies: eating less preferred foods, limited portion size, borrowing food or money to buy food, maternal buffering, and reducing or skipping meals. During a crisis more members from vulnerable households migrate. Vulnerable households are also forced to sell livestock and other valuable items.

Migration is both a long-term coping strategy with regular, seasonal trips to known sites; it is also a crisis coping strategy, with entire families moving for short and long periods. Migration hinders a community's access to services such as schooling, Anganwadi services, and other food safety nets. This implies that developmental activities, which reduce migration, may be an important precondition for the effective delivery of services.

6 Community Perspective on Local Institutions and Food Programmes

In a 'problem and opportunities' analysis conducted in the villages, most identified the deteriorating natural resource base and **access to water as the most serious constraints to development**. Declining access to water is a major concern for villagers, as is the lack of fodder for livestock. Some of these assets can be improved through 'food for work' programmes combined with good technical information.

In addition, villagers made it clear that their lack of access to services and institutions is also a major constraint to their food security. The PDS are located at long distances, the hours are not convenient and are unpredictable, and the food supplied are of inferior quality and the quantity supplied is not adequate. Although the ICDS centres are accessible to the beneficiaries, people in majority cases complained against the quality and quantity of the

nutrient supply as well as the irregularity in opening and supply. School facilities are in poor condition and the quality of services varies considerably. In majority cases the communities complaint against the functioning of the MDM scheme, especially in terms of irregularity in supply, quality and the quantity of the food supplied.

Food programmes play an important role in many villages. Various foods for work activities are sponsored by the *panchayat* under different Central & State Government schemes. People are interested in working closer to their villages, but the programmes do not provide sufficient number of days of work to ensure that there is broader participation. The women preferred grains to cash as it would reduce the cost of buying food grains from the market, which is normally very high. They were particularly vocal about the advantages of receiving partial payment in the form of food, as they see it not only contributing directly to food security but also preventing men from 'wasting' the wages. This in turn would reduce the debts incurred on food and address the food needs at the household level. The men on the other hand opined for more cash as it will increase savings and give them money in hand, which can be used for repayment of debts, buying other household necessities and during illness. Many recognized the problems of distribution of supplies either through the market or the PDS. Women, by and large, said that with food payment it was more likely that consumption would increase in the household, and that cash would be spent on other goods.

The demand for health services is high, but the understanding of nutrition is weak. In many villages, women indicated that they wanted to access the services of the ICDS for their children, but that there were many economic and social constraints including poor services of the centres such as limited hours, irregular supply of food for the children, and irregular attendance by the *Anganwadi* Worker. Increasing attendance in the existing centers and improving the level of nutrition education will be challenging, but successes have been achieved where there are motivated workers, NGOs, or other organizations that provide nutrition information and equipment and where food assistance programs are consistent. The districts covered had facilities at sub-center and PHC but the services provided by them are not satisfactory as per the opinion of the people. It was observed during the study that sometimes the health facilities are located far off from the main habitation of the village, which poses a problem for pregnant women if any complications arise during pregnancy. The transport facilities are also irregular which is a set back in the accessibility of health institutions. Secondly, it was seen that the villagers don't spend much on health expenses. It was observed that the health and hygiene practice is poor among the vulnerable groups.

Primary schools exist in almost all villages, but the dropout rate of girls is very high largely because they are needed at home to attend to children or to livestock. Parents indicated that the quality of education was poor because the attendance of teachers and the preparation of mid-day meals are very irregular. These will be difficult constraints to overcome, however, recommendations have been made on potential approaches.

7 Recommendations on Sector Priorities and the Appropriate Role for Food Programmes

Sector Priorities

In the long run, the livelihoods of vulnerable groups must be strengthened and stabilized. The over-arching need is to address the shortage of water (for drinking and irrigation) and shortage of grass/fodder for the animals. Agencies should work to identify the means to support village development of water harvesting facilities. For development of water harvesting facilities, watersheds should be the basis for targeting instead of villages. In the shorter run, however, interventions, which affect the well-being of women, have an opportunity to break the cycle of vulnerability for a large proportion of children and the future generation. Targeting girls' and women's education levels and nutritional knowledge will create a basis for improved health and welfare.

Creation of Assets for Sustainable Livelihoods

WFP should work to identify means to support development of water harvesting facilities in villages. In addition, WFP should support programmes that can help in skills training and market development.

Priorities for the villages are concentrated in three primary areas:

Water harvesting structure and management

Soil conservation and management

Livestock productivity including increased fodder availability through development of grasslands/pasture and grazing lands

Women and Children's Health and Nutrition

The most promising entry point for the promotion of better health and nutrition messages and providing supportive services are the ICDS centres. However, the survey indicates that although ICDS centres do exist in most of the village, the bottleneck lies in the way they are functioning. Access to the centres in many places are restricted due to distance, social barriers, and ignorance on the part of the beneficiaries, therefore, programmes that focus on the centres will omit a considerable number of very vulnerable women. Several other approaches could be explored to broaden coverage:

A focus on improving the services of ICDS centres with the aim of demonstrating their effectiveness to promote wider coverage of the centre is one approach.

Working with appropriate government and other organizations to expand the network of ICDS centres.

Alternative approaches to meeting women in areas without centres need to be attempted.

Investing in human capital through women and girls' education

In general, primary schools exist in almost all the villages surveyed. Constraints to increasing the attendance of young girls were identified in the survey. Some of these constraints are very great (e.g., high cost of education, opportunity cost of girl's labour in childcare, and considerations related to eligibility for marriage etc.). It is worth noting that any programme aimed at the improvement of women's status cannot be successful without an accompanying plan to sensitize the other half, i.e., men, the decision makers. In other words, programmes on women's empowerment should always have an IEC component to sensitize the community on gender issues. Some programmes for women's income generating activities and enhancement of their knowledge for more active participation in community decision making activities could be explored through food for work activities.

Addressing Vulnerabilities in Hazard Prone Areas

The natural hazard of drought is less likely to turn into a national or even statewide disaster in India because of the extensive social safety net systems, which are in place. However, surveys have clearly shown that consecutive years of drought with other hazards like earthquake and cyclone have severely affected the resource base of households in Gujarat and many of the vulnerable households are using extreme coping strategies such as abandoning cattle, moving into bonded labour arrangements, mortgaging land, and full family migration including utilizing the labour of children.

8 Appropriate Role for Food Programmes

A. Improving food security through asset creation

Food is clearly an incentive in public works programmes. The demand for employment is high in the villages, and many respondents indicate that they welcome receiving wages partially (though usually not wholly) in terms of food. Most of the discussants expressed a proportion of 50-50 between food and cash. However, it needs to be seen how much food is necessary for an average household in order to get sufficient calories that can be derived from cereals and pulses.

Recommendations on Type, Quality, and Location of Asset Development

One priority for villages is water-harvesting structures. With improved technical information on precise technologies and locations, WFP can target villages in priority watersheds. For development of water harvesting facilities, watersheds should be the basis for targeting instead of villages. Watershed development should be taken up as food for work activity. Food Aid agencies can provide food grains as a component of the labour work required for the constructions. The cash and material components can be provided by DRDA under their watershed programmes. If directly implemented through the NGOs, the cash and material components will have to be arranged by them from other funding sources. Other priority areas include:

Soil conservation measures (e.g. gully plugging, contour bunding etc.).

Roof rain water harvesting structure (SEWA model)

Development of wastelands

A continuation of food for work activities in the forestry sector.

Horticulture development activities.

Improvements in pastureland that will increase fodder supply.

Construction of roads, and development of other community assets such as community halls, ICDS centres, schools, and market places.

B. Improving the Nutritional Status of Women and Children

WFP should continue the approach of providing supplementary nutrition to pregnant and lactating women and children less than 6 years through ICDS centres.

WFP should continue to work with the Department for Development of Women and Children (DWCD), UNICEF, and other nutrition working groups to deliver simple and consistent nutrition and health education messages.

Motivated AWWs make a critical difference in attendance at the ICDS and women cite problems with the AWWs as important disincentives. WFP should consider means of motivating the AWWs by providing regular training.

The uncovered areas/Anganwadis could be handed over to NGOs who have experience in running childcare centres (e.g., SEWA).

In those villages where the Anganwadi Workers had resigned efforts should be made to immediately appoint new workers, preferably from the same village. In many villages, the communities were found to be passive about reopening centres, as they had never received good services from the AWWs. Re-motivating the community in these villages is going to involve some effort, for which local NGOs could be used.

Organizing training for the AWWs and provision of pre-school materials to the centres would be useful in improving the pre-school service. Food incentive to the AWWs and the helpers could also be explored to improve/expand the services.

In Surendranagar district, SEWA has opened several Crèches and Childcare centres for the children of the salt pan workers. This effort should be replicated in other districts where men and women migrate for labour work during crisis months/years.

In almost all the villages, women have handicraft skills in Kutchh. In other districts the women show their interest to start alternative income generating activities after getting training. Forming thrift cum income generating groups and linking them with AWC could improve the functioning of the centres.

To lessen the problem of inaccessibility, adolescent girls registered under the AWC can also be trained and given responsibilities to provide selected ICDS services, especially nutrition, to beneficiaries in their communities. They can be given food as an incentive for service.

Caste problems do exist and hamper optimal utilization of ICDS services in some villages. This is a sensitive issue, and has to be considered on a case by case basis. In general, the problem seems to be the non-utilization of the service by the upper caste community as a result of SC staff (the reverse also occurs). Service of the registered adolescent girl from the same community could be explored to increase coverage.

Migration is a constraint for many women to use ICDS services consistently. Cards can be issued to the women and children so that they can access services where they migrate. A more challenging solution might be the provision of seasonally mobile ICDS centres functioning especially in the most important places of migration.

Mothers' meetings should be held regularly on a fortnightly or preferably monthly basis to generate awareness on the benefit of the use of IFA tablets, consumption of nutritious foods and on mother and childcare. Additional food grains can be provided to the women as an incentive to attend the meetings for some time.

Greater emphasis needs to be given to empower the women's groups like Mahila Mandals for their active participation in Anganwadi activities

One approach that has been effective in promoting health and nutrition has been improved coordination between the AWW and ANM. For example, the AWW invites the ANM to the village to speak on medication on health days. WFP can provide food support to the AWC during the training period and maybe some incentive to the AWW and helper for giving time on social integration activities.

C. Investing in Human Capital through Girls' Education

The opportunity cost of educating girls is extremely high wherever girls are given the primary responsibilities of household tasks such as fetching water and childcare. Lack of community participation in schools is another constraint to increased enrolment. There is considerable evidence that parents have little confidence in schools. Teachers are absent, discrimination exists, and basic inputs such as food, paper, and uniforms, etc. are not supplied regularly. To the extent that WFP can work with schools to promote village ownership or increase the reliability of services, this will contribute to increased enrolment.

An effort should be made to provide cooked food regularly in schools. Any interruption in the service adversely affects the objective of the scheme. As there is demand for dry ration in many villages, the decision for the service type might/should be flexible and be left to the village community to decide.

Special hostel based education system should be explored for the ST children (Rabari and Koli) families who generally migrate for livelihood.

Supplying fortified food to the school children might/should be actively considered. It is worthy to mention that the Govt. of the neighbouring state (Madhya Pradesh) is actively considering passing an order for the fortification of wheat flour with Soya flour for the whole state. To start with this can be tried out in two talukas on experimental basis.

In order to increase the participation of the community in the education process, motivator groups should be formed at the village level for girl's education. The teacher of the village can be the leader of the group. Village Education Committee should be formulated to monitor the Mid Day Meal distribution and regularity of functioning of the school.

To facilitate the MDM scheme, many schools do not have adequate storage facilities. A good supply would facilitate continuity in distribution. Some of these structures could be provided through food for work.

A systematic approach is needed to identify the cost associated with the household activities that young girls perform. Some approaches to substituting for these labour activities include either developing alternative services to meet the needs such as village crèches (located near primary schools) or providing sufficient compensation for girls' labour. Special incentives to girls, such as 8-10 kgs of cereals for 80 percent of days of attendance should be provided to serve as an incentive to send the girls to school on a regular basis. This approach already had been tested in IIP districts (Jhabua and Banswara) and the results are very encouraging.

To improve the enrolment and the attendance of the girl child with the added responsibilities of taking care of the younger siblings, crèche facilities should be provided in the village. To run these crèches the services of the older disadvantaged women in the village, who at present are not engaged in any gainful employment, could be utilized with the provision of incentives in terms of food grains.

Non-formal education centres can be used as an alternative to the formal education system, especially for those children who are either engaged in gainful employment or looking after the household chores. The instructors in these centers could be supported by food incentives.

D. Recommendations on Women's Training

Some programmes for women's income generating activities could be conducted through food for work activities. However, education programmes might entail a different type of programme such as a ration and, therefore, different partners. Recommendations were generated from the surveys on how to support these groups and the areas in which women are most likely to be involved.

The women, who are engaged in income generating activities, have expressed their willingness to pursue functional literacy. Literate Anganwadi Workers could be motivated to undertake literacy classes for the women and food grains can be given to her as incentive. This initiative will also help the Anganwadi Worker in getting a forum for imparting Nutrition and Health Messages.

Self Help Groups (SHGs) should be encouraged to enable the women to engage themselves in alternative economic activities, and get training related to health, nutrition. SHGs can also be utilized to provide short term financial assistance to needy members to help them avoid traders and moneylenders. Existing and newly formed SHG could be supported with food at

the initial stage of formation and a linkage could be established for the formation of the grain/fodder bank at the village.

The women in these areas have skills in embroidery, tie-dye, beads work etc., which can be strengthened by suitable market support for the products.

By virtue of the 73rd Constitutional Amendment, the Gram Panchayats of all the villages of India now officially should have one-third women members. In Gujarat, the five-year term of the Gram Panchayats ended in 2000 and fresh elections are pending. Most of the elected women members are actually a proxy for their male counterparts and hardly get any opportunity to actively participate in community development. Recognizing this as a bottleneck, agencies should design comprehensive plans to increase the capacity of women so that they can be fully engaged in the development process. This should start with literacy classes that aim to impart functional literacy on management issues related to ICDS, Mid-Day Meal, and special programmes on income generation for women etc.

The next step could be handing over the supervisory responsibilities of these programmes through government orders. CRS/WFP can use food as the leveraging agent for training and orientation of these women Panchayat Members. A collaborative effort between WFP/CRS/UNICEF and the Ministry of Rural Development in evolving a replicable model will definitely assist government and UN commitment towards creating efficient democratic institutions for local governance.

E. Recommendations for Grain / Seed / Fodder Banks

Grain banks can provide food security to these households, especially the vulnerable groups, during times of crisis. In some of the villages that were studied, members of the self-help groups showed an interest in forming grain banks. Women also expressed their interest and willingness to run these grain banks, if they are trained to do so.

WFP should also explore the possibility of supporting seed banks as a sub-component of grain banks. Building the capacity of the community to store and preserve the best suitable seed varieties would help the community to continue its cultivation activities without relying heavily on market forces.

The concept of fodder banks can be promoted to address the fodder crisis. A well-planned and executed fodder bank will generate maximum response from the communities in the villages where dependence on livestock is very high. Linking the fodder bank with the development of pasture/grazing land can bring a sustainable solution for families whose livelihoods depend primarily on livestock.

SHGs can be encouraged and trained to start the grain/seed/fodder bank, and manage it for the members who are interested.

There may be need to create awareness on the advantages of this concept among the community members.

Agencies should contribute at the initial stage of formulation of the bank. The contribution should be according to the preference of grains by the local people and also be based on the capability of the people to contribute the type of grains.

Grain banks could be successful in the villages from where the Fair Price Shop is at some distance and bringing food is a problem.

F. Recommendations for disaster preparedness

Without disaster preparedness, development itself is at risk. This is specifically important for a state like Gujarat, which has seen several disasters over the last few years. More attention is needed for finding ways to mitigate the effects of these natural disasters so that a single calamity does not push some people over the edge.

Existing food assistance channels can be used to make relief more timely and effective. Asset building through food for work can create physical and institutional structures that enable communities to weather the storm more effectively.

More food assistance should be targeted towards disaster-prone areas that are home to many food insecure people. It should strengthen the ability of these households to cope better with short-term shocks. Food assistance programmes can contribute to the process of transforming insecure, fragile conditions into more durable, stable situations. Linking relief, recovery, and development is the challenge in disaster mitigation.

Vulnerable communities, because of a lack of preparedness and absence of adequate planned institutional support resort to harmful coping strategies, such as, over exploitation of natural resources, reducing the meal size, entering into harmful occupations etc. The capacity of the community to face the crisis should be enhanced in a planned manner.

CHAPTER I INTRODUCTION

It would be unfair not to mention the recent calamity when we talk of Kutch district of Gujarat. The district was hit by an earthquake on January 26, 2001 registering 6.9 on the Richter scale which itself speaks volumes about the possible damages in the area.

Laliben lost her husband and children ... Yunusbhai lost his wife and parents ... little Nilesb lost both his parents ... and the entire family of Rupabhai Ramjibhai was no more ... a common sight across the district.

Gujarat has been the target of nature's wrath for many years now. Time and again the nature's fury strikes this State either in the guise of drought, cyclone or an earthquake that leaves the state shattered and battered.

1.0 Rationale for Food Insecurity and Vulnerability Profile (FIVP)

The Food Insecurity and Vulnerability Profile has been designed as one component of a comprehensive strategy of support by WFP's VAM offices throughout countries and regions where WFP operates. The reason for selecting Gujarat stems from a study undertaken by M. S. Swaminathan Research Foundation in which Gujarat was identified as one of the six most food insecure states in India. This finding made WFP to initiate an in-depth investigation about the dynamics of food insecurity within the region. The FIVP's main contribution is improvement of programme development. The objectives of the FIVP in Gujarat are three-fold:

- 1) Beneficiary targeting. To identify who the most vulnerable groups and to compare levels of vulnerability across groups.
- 2) General problem assessment. To identify the most binding constraints to improved access and utilization of food; identify priority sectors/sub-sectors for intervention; and to identify the appropriate role of food aid in each of those priority sectors/sub-sectors.
- 3) Participatory Evaluation Baseline. Providing "baseline" information that will allow for meaningful ex-poste participatory evaluation of the pilot activities being conducted in Gujarat.

1.1 Conceptual Framework

The conceptual approach guiding the FIVP is very much in keeping the conceptual framework developed by VAM:

$$\text{Vulnerability} = \text{Exposure to Hazards} + \text{Ability to Cope.}$$

In this framework, exposure to hazards is seen as a community-level issue, experienced by all households, whereas coping ability varies from household to household. The determinants of coping capacity include levels of assets, income and consumption and the ability to diversify sources of income and consumption to mitigate the effects of the risk that household's face. Basic access to resources and infrastructure are important determinants of

coping capacity. The ability to diversify incomes and consumption depends largely on access to labour markets, markets for food, efficient credit markets and as access to community and public support (safety net) services. Understanding household strategies towards coping with the unfriendly circumstances includes an assessment of both the negative and positive strategies adopted by the households.

The concept of vulnerability varies relatively with the change in place and change in the time. There are numerous determinants of vulnerability and food insecurity. The food security base of those who are vulnerable is mainly dependent on their access to natural, physical and human resources as well as their production, income and consumption level. The concept of food security can be viewed as four-dimensional: availability of food, access to food, the proper utilisation of food and its nutrients, *and the vulnerability associated with risks that threaten food supply*. Risk factors, which create food insecurity, can be numerous depending on the geographical location, socio-cultural environment, economic environment etc. The main risk factors can be identified with environmental/natural resources, economic, political, social, health etc.

1.2 The Approach

Based on the above concept of food insecurity the basic objective of this analytical agenda is to provide WFP, India, with a factual basis for its programme development process, including the identification of the:

1. Critical constraints and risks that determine household level food insecurity and vulnerability;
2. Specific socio-economic groups most likely to be food insecure and vulnerable;
3. Identification of the food insecure and vulnerable groups and an understanding of their relative levels of food insecurity and vulnerability;
4. Relative resource capabilities within these vulnerable groups particular in the areas of: (a) level and availability of human resources; (b) access to physical resources; (c) access to social infrastructures and (d) access to economic and social services.

The FIVP is based on multiple sources of information on food insecurity in Gujarat. First and foremost, an extensive survey, a Participatory Vulnerability Profile (PVP), was undertaken across the state in 54 villages in five districts, based on participatory research analysis methods. The study was designed in such a way so as to capture similarities and diversities on issues related to food insecurity that would help build a state/country level profile in a cost-effective manner. The study methodology is discussed below. Secondly, effort was made to supplement the primary information collected from this survey with the available secondary data and literature on the state of Gujarat, its economy, natural resource base and people. Third, the in-depth knowledge of WFP program officers and staff from other organizations (CARE, SCF [UK], CRS, IFAD, SEWA, ORG and the local NGOs) working to alleviate food insecurity in the region was drawn upon through interviews and their participation in the FIVP process.

The FIVP Participatory Vulnerability Profile assessed levels and trends in natural resource endowment, income levels and livelihood patterns as part of its problem assessment. It also included an assessment of the environmental and man-made risks households faced problems of market access indebtedness and other issues relating to food insecurity. Gender and intra-household food distribution issues were given special attention, addressing women's role within the household, their economic activities and control over income as well as types of food consumed, etc. The PVP also included an assessment of knowledge and practices in health and nutrition. The study through its Participatory Baseline Evaluation exercise attempted to evaluate the existing development activities in each of the studied communities as well as the level of utilization of these programmes by the community (only those activities that are relevant to WFP).

The role of the food aid in the livelihood pattern of these households was also studied, especially through inquiries about access to markets, income levels, the proportion of food consumption from food aid or from ration shops, assessment of food diets and food frequencies and other women related issues. All of these findings have important implications when determining the type and quantity of food aid that might be required by different vulnerable groups.

1.3 Methodology and Process

1.3.1 Identification of districts for the study

A mapping exercise was carried out to first identify the food insecure districts. The hotspots of hunger, thus identified, were then selected for FIVP, based on Agro-Ecological diversities in the state.

The indicators used for this exercise were –

Percentage of SC and ST

Percentage of people illiterate in the total population

Percentage of people below poverty line

Percentage of stunted children

The areas which are vulnerable - more prone to natural disasters

No. of people supported per unit of cereal production

Percentage of child labourers

Infant Mortality Rate

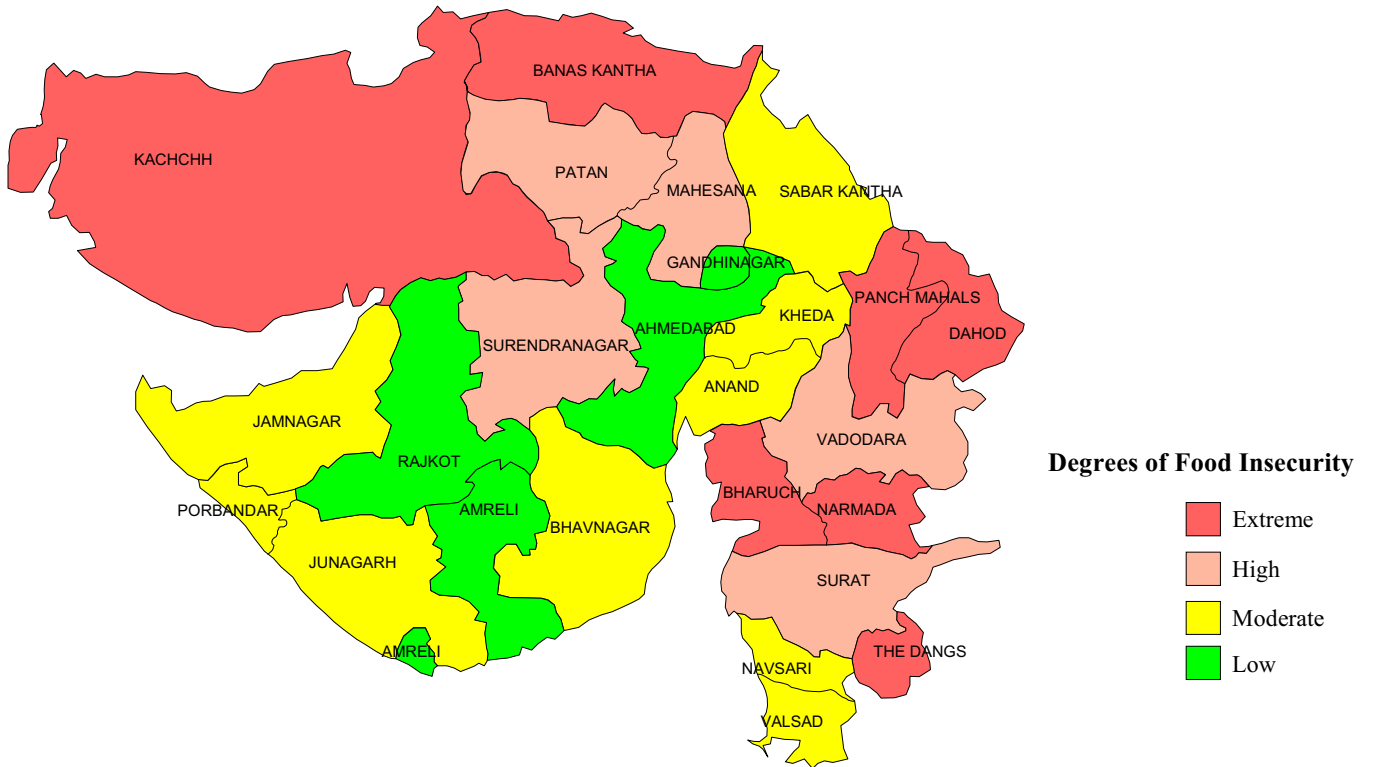
Percentage of Agricultural Labourers among the total workers

Sex ratio in the age group of 0-9 years of age

Percentage of HHs not having access to safe drinking water

Impact of January 2001 earthquake – no. of people dead and injured; houses (pucca, kutcha, huts) destroyed and damaged

Degrees of Food Insecurity in Gujrat



The process began with the objective of identifying communities for inclusion in the assessment that were “representative” of their respective district clusters, reflecting the diversity of environmental and socio-economic conditions, and then focussing on the “poorest of the poor” households within each of these communities. Using this approach, the assessment sought to capture intra-community dynamics related to poverty, caste and gender and to develop a clear understanding of the germane issues that affect the well being of the most vulnerable communities.

The FIVP is based on multiple sources of information on food insecurity. First and foremost, an extensive survey based on participatory research methods has been undertaken. As has already been mentioned in the foregone passages, the study has been conducted in 5 districts of Gujarat--Kachchh, Surendranagar, Banaskantha, Dahod and Surat.

In Kachchh, 30 villages spread over 5 *talukas* were covered. The selected villages are among those most affected as a consequence of the earthquake. This is in addition to the already existing vulnerable situation due to the persistent drought and the other natural hazards such as the cyclone. This district is also faced with a unique trouble---the wildly spreading babul trees that obstruct the growth of other productive vegetation referred to as the *ganda bawad* in this region. In addition, two urban areas were covered. However, the information areas were limited to health and nutrition knowledge and practice. In the urban areas, the focus group discussions were undertaken to provide qualitative information for the Nutritional Survey undertaken jointly by WFP, IFRC, SCF-UK, SEWA, CRS and OXFAM.

In Surendranagar district, four villages were selected in each of the three talukas while in Banaskantha, Dahod and Surat two talukas were selected with two sample villages in each taluka. In each taluka, half the sample villages were poorest of the poor and half were average or ideal villages. The process of the assessment was carried out in four stages:

- The villages were selected with the active participation of SEWA in Surendranagar district.
- The organization was involved in the selection and assessment of the ongoing programmes in the villages as per its organizational objectives i.e. SEWA was involved in evaluating the status of salt workers in Surendranagar district.
- In Surendranagar district a comparative study of SEWA and non-SEWA villages was undertaken.
- For selecting the talukas and sample villages of Banaskantha, Dahod and Surat district, district and taluka level information was utilised.

In all the districts covered under the study, most food insecure villages and “*representative*” or average or ideal villages were selected according to the following criteria:

- First, moderately sized communities (of roughly 30--100 households in size) were selected in order to gain as broad an understanding of the communities as possible. Wherever large communities were selected, a transect walk and social mapping activities were used to identify a cluster within the village which was roughly representative of the village as a whole.
- There was a deliberate overlapping of selected districts and WFP programme areas wherever the WFP was already present.
- Importance was also given to the presence of ICDS centres in the village in the village selection process.
- Communities were also selected to: 1) be representative of general conditions in the district cluster and 2) reflect the diversity of vulnerable groups as identified in the state-level

workshop. Highly diverse and representative communities were selected over those that were relatively homogeneous.

The study was designed in a way to capture similarities and diversities on issues related to food insecurity, which would help to build a state/country level profile in a cost-effective manner. In order to do so, nine instruments/schedules were used during the study, which are listed below:

Schedule 1 - Village Information Part A: Village overview

Schedule 2 - Village Information Part B: Resources and Livelihood overview

Schedule 3 - Participatory Baseline 1: Institutional presence

Schedule 4 - Participatory Baseline 2: perception of importance of the institution

Schedule 5 - Household Information and Vulnerable Focus Group: livelihood pattern across seasons

Schedule 6 - Gender and Intra-household Information

Schedule 7 - Health and Nutrition Knowledge and Practice

Schedule 8 - District Level Guideline

Schedule 9 - Taluka Level Guideline

Selection of Household Groups within Settlements for a Detailed Assessment

The vulnerability profiling assessment employed focus group discussions at the community level to identify community level characteristics, common hazards faced by households in the community, and the general characteristics of vulnerable households. These discussions were used to identify vulnerable household groups, which share relatively similar characteristics. Focus discussions were also held with representatives of the identified vulnerable groups in order to obtain greater details of their characteristics and coping mechanisms during the crisis years. Separate discussions were held with the women from a sub-sample of communities to better understand gender and intra-household issues. These women were representatives of the broader village community and thus, belonged to households from various economic strata and were not confined exclusively to vulnerable households or communities. However, the thrust was on the women from vulnerable communities or households to be specific. The discussions revolved around the various measures adopted by the women to cope during the crisis years. This helped in gauging the extent of adjustments that women undertake in all the spheres concerning the household--- the savings, the work participation and the consumption pattern during normal and crisis periods.

1.4 Coverage of the study

Among the 10 talukas in Kutch, these five talukas were selected as they were most affected during the earthquake, CRS's relief operation was concentrated in these (CRS was a project partner). Moreover, the village selection was also based on similar criteria such as most affected and a higher concentration of vulnerable population. The taluka and village selection was done in consultation with WFPVAM, India office in this district.

In the other four districts, besides the WFPVAM, the talukas were selected after meetings with the government officials of the respective districts. Among the two talukas selected for the study, an attempt was made to gauge the extent of vulnerability. This was done by selecting one poorest of the poor taluka and the other taluka was comparatively of average stature.

The following table (Table 1) presents the geographical coverage in this study.

The villages studied in Kutch and the other four districts have been presented in separate tables. This has been done for a better insight, as the number of villages in Kutch is substantially higher than the other districts. Moreover, the damage and the aftermath of the earthquake can be looked at in depth under this segregation.

Table 1: Villages Covered under FIVP in Kutch District, Gujarat

Taluka	Villages		
Bhuj	Simri	Paiya	Kotay
	Khari	Nana Varnora	Dhori
Anjar	Senugra	Bitra Valadiya (West)	Amrapar
	Bitra Valadiya East	Kumbhariya	Kotda
Bhachau	Kalyanpar	Janan	Amlipar
	Ganeshpar	Amrapar	Jangi
Mandvi	Kotdi	Ratadia	Nani Mahu
	Nagrecha	Dhokda	Nani Bhadai
Nakhatrana	Ugedi	Moti Aral	Vehar
	Dhora	Bhimsar	Narainpar

Table 2: Area covered under the study (District/Taluka/Village)

Districts	Talukas	Villages					Organisations involved in data collection
Surendranagar							
	Dhrangadhra	Navi-Kuda	Sultanpur	Jesada	Sarval	-	WFP, SEWA, CRS, IFAD
	Patdi	Degam	Jarvala	Fatehpur	Surel	-	
	Halwad	Ajitgadh	Khod	Enjar	Juna Malaniya d	-	
Banaskantha							
	Danta	Pansa	Khermal			-	CRS, District and Taluka level discussions
	Dhanera	Jadia	Nanuda			-	
Dahod							
	Dhanpur	Dudhambli	Pipero			-	District and Taluka level discussions
	Devgadh-Baria	Bamroli	Fangia			-	
Surat							
	Uchchhal	Kamlapur	Haripur				District and Taluka level discussions
	Mahuva	Kadaiyya	Sevasan				

Table 3: Village, Taluka and District level discussions

Discussions/ Districts	Concerned groups	Kutch	Surendranagar	Banaskantha	Dahod	Surat
Village level discussion	Transcet walk	30	12	4	4	4
	No. of FGD/ Average participation No.	313/20	62/15	28/12	28/10	28/15
	No. of HHs listed in VG/ No. of participation	Not used the houselisting schedule	Not used the houselisting schedule	418/60	475/40	360/50
	No. of women FGD/ Average participation No.	161/15	30/6	12/5	16/10	10/7
	In-depth interview at District level	5	5	4	4	4
	In-depth interview at Block level	4	3	2	2	2

* The district and block level discussions were done with the collector, DRDA, PDS, ICDS, MDM, agricultural extension officer.

Table 4: Schedules canvassed in the study

Schedules/ Districts	Kutch	Surendranagar	Banaskantha	Dahod	Surat
Village Information part A: village over view	30	12	4	4	4
Village Information part B:	30	12	4	4	4
Participatory Base Line: Part 1	15	12	4	4	4
Participatory Base Line : Part 2	15	12	4	4	4
Vulnerable Group Focus	30	12	8	8	8
Gender and Intra- Household Information	15	12	4	4	4
Health and Nutrition Knowledge and Practice	10	12	4	4	4
District level guideline	1	1	1	1	1
Taluka level guideline	2	2	2	2	2

Note: In Kutch, all the schedules were canvassed in all the talukas. However, except for the vulnerable group focus and the village schedule the rest were canvassed in one village of each taluka. The health and nutrition guideline or schedule was introduced at a latter stage of this study in the Kutch district. Hence, the number of schedules canvassed in the villages is lesser in comparison to others

CHAPTER II

CHARACTERISTICS AND DETERMINANTS OF VULNERABILITY

2.0 Food Insecurity in Gujarat

The rich land of Gujarat geographically variegated, having a diverse cultural heritage, heterogeneous caste composition and a region rich in manpower and technical resource is one of the food insecure states of India as brought forward by the study of M S Swaminathan Foundation. Moreover, the WFP document reveals that there is a very high population pressure on the cereal production in the state as can be substantiated by the norm given by Indian Council of Medical Research (ICMR). According to this, 100 quintals of cereal should ideally support 49 persons in a year whereas in Gujarat, in all the districts 100 quintals support more than 49 people per annum.

In Gujarat, one of the main reasons of vulnerability is its disaster proneness. It is characterised by vulnerability due to drought, flood and other natural calamities. This has a direct impact on production and productivity of crops; and loss of livestock, human life and tangible loss that affect the economy of the region (National Atlas Map of India on Natural Hazards, WFP Study on Food Insecurity Analysis of Gujarat).

One of the objectives of the food insecurity and vulnerability analysis is to identify the districts, which are highly vulnerable in terms of food insecurity in Gujarat. The districts, which were identified as hunger spots in the study in the State of Gujarat, were Kutchh, Surendranagar, Banaskantha, Dahod and Surat. This chapter describes the factors and manifestation of vulnerability as emerged from village surveys conducted in the five districts of Gujarat State. Their whereabouts become inferior because of the low buying capacity of people and increasing grain stocks with the government due to improper food distribution channels. This is one of the reasons responsible for increasing food insecurity. Other determinant which contributes for food insecurity level is the frequent disaster – proneness i.e. the region is facing perennial drought conditions which leads to lack or reduction in livelihood generation activities and makes the coping strategies very fragile. Most of the districts covered under the study support their livelihood by working as farm labourers, from forestry, livestock, fishing or casual labour within the village and in the nearby towns which shows severe loss during the drought period. With the persistent drought, which existed, the people have started migrating to cities in search of sustenance but finding an alternative employment is enigmatic.

India accounts for one-quarter of the chronically food insecure people in the world. This insecurity is experienced severely by infants, girl children and women. However, entire households are affected in many areas - those belonging to scheduled tribes and castes, landless and marginal farm households, and agricultural labourers.

2.1 Resource Levels, Food Production and the Economic Base

The State of Gujarat has Semi- arid climate. Climate brings together the essential elements of weather conditions that affect people, their work and their comfort: temperature, the amount, duration and incidence of rainfall. More importantly, climates bring together those elements, which are of greatest concern to the cultivators of the land.

During the agricultural year 1998-99, the monsoon started with cyclonic rainfall at the Western coast of the State. Thereafter, there was adequate rainfall in almost all the parts of the State. The last spell of rainfall was received during the second fortnight of November 1998, which eased problems of irrigation to Rabi crops. The production of rice during the year 1998-99 is estimated as 9.16 lakh tons as against 10.42 lakh tons estimated for the year 1997-98. The production of Kharif groundnut in 1998-99 is estimated at 22.66 lakh tons as against 24.54 lakh tons estimated for the year 1997-98. The type of soil across the state of Gujarat is alluvial, gray and brown, black and Red and sandy soil which is good for the growth of both Rabi and Kharif crop.

In Gujarat State forest cover extends over an area 19639 square kilometers and constitutes 10.02 per cent of total geographical area of the State with per capita forest area coming to only 0.05 hectare against the national average of 0.11 hectare. Most of the forests are of dry deciduous type, which has low productivity. Out of the total land of Gujarat State 19.6 thousand hectares is under culturable wasteland. The land affected by salt is 2060.1, gullied or ravenous land is 316, undulating upland with or without scrub is 837.8, sandy area (coastal/desert) is 38 and non-culturable wasteland is 58.7 (all in thousand hectres).

The most precious among all resource that is water is also a scarce resource of the State. Hence, the government has accorded a high priority to the development and expansion of irrigation potential due to low, uneven and highly variable rainfall and high irrigation needs of State's large area. Actual rainfall in the State of Gujarat is 877.8 mm annually whereas in Kutchh it is 525.1 mm annually which is insufficient for the growth of crops. So ground water is used for irrigating purposes.

Gujarat State constitutes nearly 5% of the population of the country. Gujarat ranks tenth in respect of population and seventh in respect of area amongst the States of India. The decadal growth of population in Gujarat has increased from 21.2 percent in 1981-91 to 22.48 percent in 1991-2001. The estimated proportion of scheduled caste and scheduled tribe population as per 2001 census in the State were 7.4 percent and 14.9 per cent respectively. About 62.1 per cent of the scheduled caste population resides in rural areas and the remaining 37.9 per cent in urban areas. The corresponding proportions for scheduled tribes are 91.2per cent and 8.1 per cent respectively. In Gujarat State it is observed that men contribute the maximum in the labour sector showing the percentage of main worker as 51.25 % as compared with females. However, the women work as marginal workers in higher proportion i.e. 13.5% as compared with men (source: census 2001). The classification of population by economic activity according to 2001 census reveals the following data presented in the table below.

Table 2.1: Classification of population by economic activity

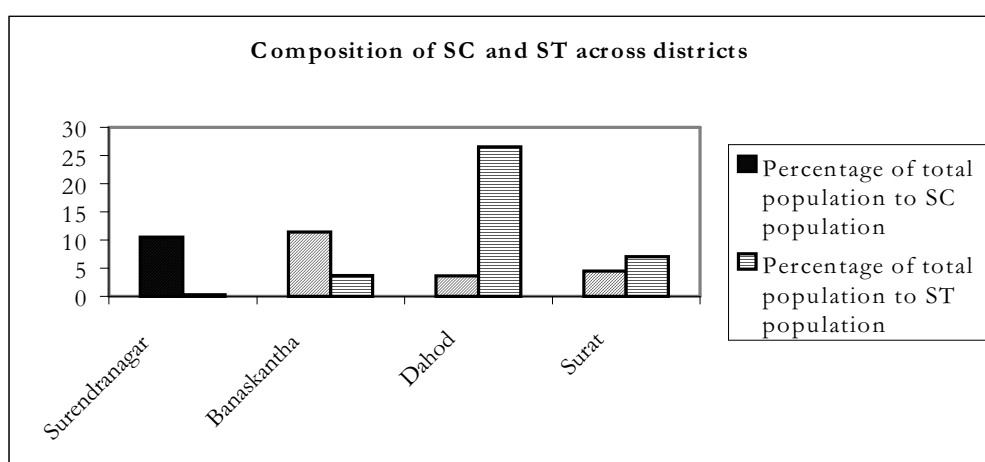
District	% main worker		% marginal worker		% cultivator	% agriculture	Worker in HHs in industry
	Male	Female	Male	Female			
Kutch	Data Not Available						
Surendranagar	50.58	15.64	3.5	14.8	29.82	32.34	2.05
Banaskantha	47.8	17.4	3.45	17.98	44.22	22.25	1.69
Dahod	42.7	17.8	9	30.1	60.77	21.96	.95
Surat	58.89	16.66	1.88	6.55	12.01	21.87	2.17

Gujarat is emerging as a major fish-producing centre in the region. The National Commission on agriculture has reported that the State with 3.57 lakh hectares of coastal fallow lands has the immense potential for brackish water fisheries (source: Socio-Economic review of Gujarat State –1998-99)

2.2 Socio-economic Diversity

The analysis of the census displays that the composition of SC and ST across studied talukas show variance. Higher proportion of SC and ST across the district reveals the vulnerability of one district over other. The reason, which can be accounted for this, is since generations these castes and tribes have been discriminated and deprived of the community resources. Across the districts it can be observed that Dahod is a vulnerable district as it has high percentage of ST population to total population which is about 26.6% while the SC population to total population is 11.4% and 10.5% in Banaskantha and Surendranagar districts respectively making it vulnerable. The percentage of SC and ST population delineates the extent of vulnerability.

Chart 1: Composition of SC and ST across districts



2.3 Hazard Analysis

Natural hazards are a prominent feature of the environment of Gujarat. An important factor in food insecurity in Gujarat is the high frequency of drought. Gujarat is accounted to be a drought-prone area as larger parts of the States are arid and semi-arid. Gujarat experienced serious drought conditions in 1998, and rainfall has been very poor for the past three years. In addition to this there was the devastating earthquake, which further jolted the livelihood of the people.

In the study the participants recorded drought as the greatest destructive hazard they face. In fact, given the arid and semi-arid ecological base of a large proportion of the land area, many households face drought on a regular basis, which is reflected in choice of livelihoods and coping strategies. Population growth, however, puts pressure on the fragile resource base in much of the area of the state, with increased demand for water and grazing lands threatening the sustainability of these strategies. As a result of annual and inter-annual fluctuations in the potential of agriculture, migration forms an important component of household coping strategies. Other types of hazards in the state are less significant but can affect a large number of households given the population levels.

2.4 Infrastructure and Facilities

Infrastructure, a backbone for the development of economic activities. In the State of Gujarat there is a presence of government institutions and programmes but these are not disseminated well to the people. The study provides information on the institutions and facilities at the local level.

Water

A very important resource of the community is drinking water. It was seen that the sources of drinking water in the village were well, handpump, pipeline and borewell but the level of water in all the community water resources has depleted due to drought. In some districts it was seen that drinking water was not easily accessible due to hilly terrain and the scattered dwelling of the people. The only available water source in such communities is tanker, which comes once a day, but as the houses are located far off it becomes difficult to fetch the water from the place where the tanker comes to the place where the house is located. Potable water was acute problem in some of the studied districts as ground water has depleted due to drought. In some districts the land is saline which increases the salinity of ground water which in turn makes the water in the well and handpump saline.

Rural Infrastructure

The villages canvassed in the study lack rural infrastructures like proper roads, transport, availability of institutional credit, and institutional marketing infrastructure. Due to lack of road links the movement of production is inhibited and thus market development becomes difficult. It was seen that if the infrastructure are present then also people don't access it viz. the institutional credit facility or the banks due to the cumbersome procedures involved in accessing credits from the institution. Due to the technicalities involved in the accessibility of institutional credit system the economic development of people suffers. Though not included in this index, irrigation infrastructure is also limited in the districts covered under the study.

Health Infrastructure

In the studied villages it was seen that the accessibility and services provided by CHC, PHC and subcentre was not upto the mark. This can be supported with a fact that some studied districts lack PHC and to access the services of it villagers have to travel 10-12 kms which poses a problem for the pregnant women during the time of delivery. Secondly the lack of transport facility further worsen the problem.

The health of children is also a very important issue. As studied in the villages covered across all the districts ANM visits village irregularly so the children are not immunized at right time. The villages covered across all the blocks reveal that parent's awareness regarding child's health is minimum.

Table 2.2: Infrastructures Facilities - Proportion of Population served by Percentage

Districts	Medical	Drinking water	Post & Telegraph	Approach by pucca road
Kutch				
Surendranagar	75.62	100	52.93	46.76
Banaskantha	76.12	99.98	67.93	63.15
Dahod				
Surat	90.21	99.97	78.31	76.82

Education Infrastructure and literacy

Most of the villages covered across the districts had Primary Schools, which lack proper governance from the school authorities. Some of the schools have limited number of teachers, which restricts them to give attention to all the students in a class. In addition to this irregularity on the part of teachers lowers the attendance of children in school. It was a common observation that in the villages of Gujarat female literacy is very low because of the cultural construct prevalent among the caste and tribes. They drop out of school and are engaged in household chores and taking care of the siblings. Although the registration of boys in school is more than girls but due to the location of middle and higher secondary schools in other towns and villages the accessibility of educational institutions become difficult. It was also observed as the schools are located far off indirect expenses on education increase which the poor parents are unable to afford leading to increase in drop out rate among boys. The boys after dropping out from school are involved as farm or casual laborers contributing in the family income. All the reasons described above weaken the accessibility of educational institution and lowering the literacy levels among children.

Table 2.3: Educational Facilities per lakh population

District	Primary schools	Middle/Higher secondary schools
Kutch	21.21	79.15
Surendranagar	24.41	45.42
Banaskantha	36.76	42.46
Panchmahals	58.31	41.96
Surat	28.20	33.22

(Source: CMIE, Profiles of District October 2000)

* Data of Dahod not available

Number of primary schools available per lakh population is highest in Panchmahal district (58.31) and lowest in Surendranagar district (24.41). Availability of middle/higher secondary schools is the highest in Kutch district (79.15) and lowest in Surat district (33.22). Although the availability of health facilities is higher for this State and particularly in these districts in comparison to some of the major states but in terms of the services provided by them the people seemed unsatisfied.

2.5 Identification of vulnerable groups

The Food Insecurity Atlas of Gujarat defines several important and known characteristics of vulnerability of households in Gujarat by district and block. These characteristics include food availability and consumption, nutrition and health indicators, gender specific aspects, and prevalence of Scheduled Tribe and Scheduled Caste households' etc. These indicators were useful in the process of selecting vulnerable and representative districts for sampling. They also provide a context for understanding household vulnerability.

To measure the characteristics and prevalence of vulnerability of households in the sample district of Gujarat, various means of accessing food and strategies adopted to expand or diversify access to food have been examined. A systematic methodology is adopted to identify the vulnerable groups within villages. First, households have been grouped (by the community) in accordance with their food self-sufficiency and their dependence on external sources for food. Second, their economic base has been measured by factors such as land holding, dependency ratio, livestock ownership, quality of land holding etc. Third, their social status has been ascertained through factors such as caste, tribe and gender.

The identification of vulnerable groups was based on three modules:

- A house listing to collect information on socio-economic characteristics of the households in the sampled communities. (Not applied in case of Kutchh and Surendranagar)
- Focus group discussion with the community members to collect information on socio-economic characteristics of the households in the sampled communities, and
- Vulnerability ranking to distribute the entire community across four groups according to their food security base.

The vulnerable households were selected on the basis of the following criteria:

Group 1: Households that could acquire sufficient food for themselves during normal times without assistance and were able to assist others;

Group 2: Households that could acquire sufficient food for themselves during normal times without assistance of others but who couldn't assist others;

Group 3: Households that could obtain sufficient food for themselves during normal times with or without assistance from others;

Group 4: Households unable to afford two square meals a day as compared to normal income groups and have excessive dependence on debts even during the normal year. They also have a large family size; and

Group 5: Households opting for hazardous occupation due to lack of employment opportunities in the village as it was seen in Surendranagar district.

The vulnerability profiling assessment employed focus group discussions at the community level to identify community level characteristics, common hazards or risks faced by households in the community and the general characteristics of the vulnerable groups. These discussions along with the information obtained through the house listing were used to identify vulnerable household clusters, which shared relatively similar characteristics. Focus discussions were conducted with representatives of those locally defined vulnerable groups to obtain greater details on their characteristics.

2.5.1 Qualitative characteristics

The major characteristics that differentiate food secure and insecure households as defined by the community members themselves are similar to some extent across different communities in Gujarat. The indicators used by community members to distinguish food secure from food insecure households suggest that lack of access to natural and human resources are the primary determinants of food insecurity in Gujarat. Of the twelve most important indicators that determine food insecurity, indebtedness, poor quality of land, female headed households and livestock dependence emerged as most important determinants of food insecurity in the state. As all these parameters dominate high dependency ratio is also seen across the communities covered in the study. Few skills and lack of employment opportunities compel the people to procure income from migration or remittance.

Table 2.4: Main indicators identifying Food insecure household

Indicators of food insecurity	No. of villages identifying this as an important indicator
High indebtedness	50
Widow and no earning member in the family	27
Landless and depend on labour work only	27
Livestock dependence	22
Large family size/high dependency ratio	21
Diseased/ handicapped	20
Old age	20
Marginal/small land holding	19
Scheduled Tribe	15
Households engaged in hazardous occupation	13
Scheduled Caste	10

The importance of access to productive assets is clearly seen as Food insecure and vulnerable households in Gujarat invariably include those who are landless, tenants/sharecroppers or those who have a small piece of unproductive or non-irrigated land or have dependence on livestock. This is true of all the communities studied in the state. In addition, most food insecure households include those with less number of able-bodied workers, female headed households, permanent indebtedness and permanent migration.

Landlessness is a very important indicator of vulnerability. Since the quantity and quality of land in these regions is insufficient to sustain a family for the entire year, discussions showed that dependence on labour activities either farm or non-farm is very high, and hence households not having enough persons to earn remain poor and food insecure. However, indicators such as higher indebtedness, lack of employment opportunities, and lower agriculture productivity was seen across the districts covered. Table 2.4 supports that most of the food insecure households are characterised by lower productive assets.

Other than the characteristics identified by households, there are certain characteristics, which are not identified but are known to be highly correlated with food insecurity and vulnerability (WFP, Food Insecurity Atlas of Gujarat 2000). These characteristics relate to caste and gender. Each of these characteristics was given importance during the selection of vulnerable groups in specific locality/community across all the districts covered, but they are not cited directly by respondents. These factors are discussed below as:

2.5.2 Geographical Location of Vulnerability

The present analysis is confined to rural areas. As the nature of occupation in rural areas is predominantly agriculture, the primary attributes are related to land holding, quality of land, access to irrigation facility, productivity etc. which determine the extent of vulnerability.

Table 2.5: Features of Vulnerable Group

Kutch	Surendranagar	Banaskantha	Dahod	Surat
<ul style="list-style-type: none"> ◆ Casual labourers ◆ Livestock dependants ◆ High dependency ratio ◆ Minorities ◆ Landless/marginal farmers ◆ Scheduled population ◆ Widow, diseased, old aged ◆ High indebtedness 	<ul style="list-style-type: none"> ◆ SC(koli, Nadia) ◆ ST(Rabari) ◆ OBC(Bajania, Vagari) ◆ Hazardous occupation(salt workers) ◆ Landless ◆ Aged ◆ Widow ◆ Disabled ◆ Marginal land holders(1-5 acres) ◆ Forest dependence. ◆ Livestock dependents. ◆ Occupational health hazards ◆ Highly indebted ◆ Uncertain income ◆ Live in the harsh climatic conditions like extreme temperatures for earning their livelihood. ◆ Occupational shift seen in case of Nadia (SC). They were involved in playing drums in the marriage but now as the income from the occupation has reduced they are engaged more in salt work in order to earn their livelihood. 	<ul style="list-style-type: none"> ◆ Scheduled tribe(Adiwasi-Garasia, Dungri Bhil's, Maji Rana, Mackwana, Lud Gadar) ◆ Scheduled Caste(Harijan) ◆ Small land holders(1-2 acres) ◆ Aged ◆ Widow ◆ Disabled (T.B. and Asthma) ◆ Farm labourers and casual labourers ◆ Dependence of livelihood on forests ◆ Livestock dependence. ◆ Caste discrimination by high caste people is severe ◆ Landless 	<ul style="list-style-type: none"> ◆ Scheduled tribe(Nayak, koli Baria, Rathwa) ◆ Marginal land holders(1-5 acres) ◆ Farm labourers and casual labourers ◆ Less employment opportunities within the village ◆ High rate of migration ◆ Agricultural income reduced due to drought. ◆ Dependence of livelihood on forests ◆ Livestock dependence ◆ Landless ◆ Highly indebted also reported selling food grains from the household stock in order to meet ongoing food insecurities. ◆ High dependency ratio ◆ Widow, lack support of family ◆ Handicapped ◆ Old ◆ Dietary intake reduced in the crisis year. 	<ul style="list-style-type: none"> ◆ ST(Hadpati, Gamit, Vadvi, Vasava, Konkana, Kathud, Kotwalia) ◆ Landless ◆ Marginal land holders (1-5 acres) ◆ Highly indebted ◆ Uncertain income ◆ Widow and aged lacking familial support ◆ livestock income reduced ◆ farm labourers

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The common and well-known indicators of vulnerability can be witnessed across all the districts covered under the study. These include ownership of land, size of the livestock, women headed household (widow), caste (SC and ST) and high indebtedness. Since these indicators vary across talukas, the indicator representing the vulnerable groups also varies. The land ownership pattern and fertility across talukas varies.

Considering all types of differences and disasters people face; and coping responses they adopt agricultural production was not sufficient to identify the vulnerable groups. This can be corroborated by the fact that the natives of Surendranagar district work as salt worker which is a hazardous occupation. The entire village covered as sample is migrating to salt pans in order to earn their livelihoods, as the region lacks employment opportunity. In addition to this the people also lack skills for doing any other work. Child and adolescent labour is on the rise in the salt pans as children also migrate with their parents and are engaged as salt labourers. The district is marked by vicious cycle of credits, lack of labour opportunities and high rate of migration.

Rann of Kutch, which is adjacent to Surendranagar district, which is destroyed due to human interference and increased salt pans. The government is not giving fresh lease land to the agaria since 15-20 years. However, in violation of this law leases have been issued to powerful and large salt manufactures. So the exploitation rate of the traders in salt business against the agaria and salt workers have increased. In Banskantha and Dahod district though the people have agricultural land but as its located on the hilly terrain it's rendered unfit for cultivation and reduces their dependence on this activity. This increases the dependence on casual labour activities resulting into migration. The rate of migration is reported more in Dahod district.

In Surat district the sampled villages were dominated by ST population who were largely landless i.e. 79.8% refer table 2.7. They depend on farm labour available in neighboring villages for livelihood sustenance. As the farm labour is easily available the dependency ratio is lower as compared to the other districts under study.

With reference to Kutch district the land is highly disaster prone which inhibits agriculture in becoming major source of livelihood support. The livestock dependence is restricted due to the unavailability of fodder lowering the livestock income. The region is dominated by minority population and also inhabited by SC and ST population strengthening the indicators of vulnerability. The district lacks irrigation facility except in Mandvi and Nakhatrana blocks reducing income from farm labour. So the people have to migrate temporarily in order to earn a livelihood from casual labour.

2.5.3 Comparative levels of vulnerability

The relative poverty/vulnerability across the region is evident from Chart 2 and Table 2.6. The concentration of food insecure households is more prominent in Dahod and Surat district in comparison to other regions. The variation across the communities is the maximum in Surendranagar district.

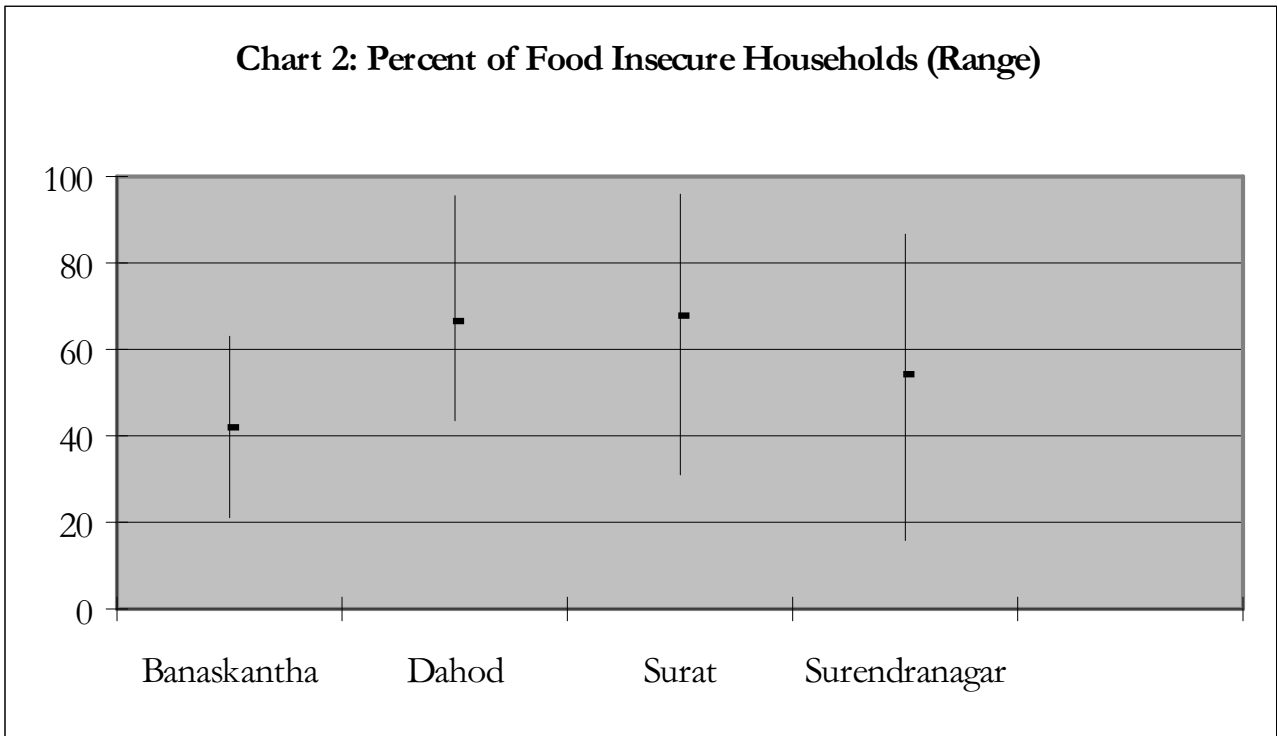


Table 2.6: Geographical variation in the Village Estimation of Prevalence of Vulnerable Households.(*)**

Geographical Area	% of households in villages categorized as food insecure*
Banaskantha	47
Dahod	67
Surat	68
Surendranagar	54

*Households in categories III & IV as identified during the VG identification exercise
 *** Due to destruction caused by earthquake this exercise couldn't be conducted in Kutch district

The community-wise comparison within a cluster shows that communities in Surat and Dahod were very vulnerable. Table 2.7 presents various socio-economic characteristics of the vulnerable groups in different regions. Overall the vulnerable households in Surat are more disadvantaged than other regions in terms of ownership of livestock assets, income earning, social seclusion in terms of caste, and manpower. In Dahod, the proportion of households owning agricultural land is highest but the land is unproductive due to hilly terrain. Lack of adequate irrigation facility, restricts agriculture to become a viable source of income generation.

Table 2.7: Food insecurity characteristics of vulnerable groups across regions (*)

Indicators	Banaskantha	Dahod	Surat
% landless	31.7	1.9	79.8
% marginal farmers(up to 2.5 acres)	59.5	76.2	18.0
% small farmers (2.5 - 5.0 acres)	8.7	18.4	2.2
Average land holding size (in acres)	1.4	1.87	1.19
% Scheduled HHs	62	99.5	100.0
Dependency ratio	115.8	118.5	110.1
% HHs having livestock (Milch)	80.9	56.5	54.9
% HHs having livestock (Draft)	35.9	72.1	21.5

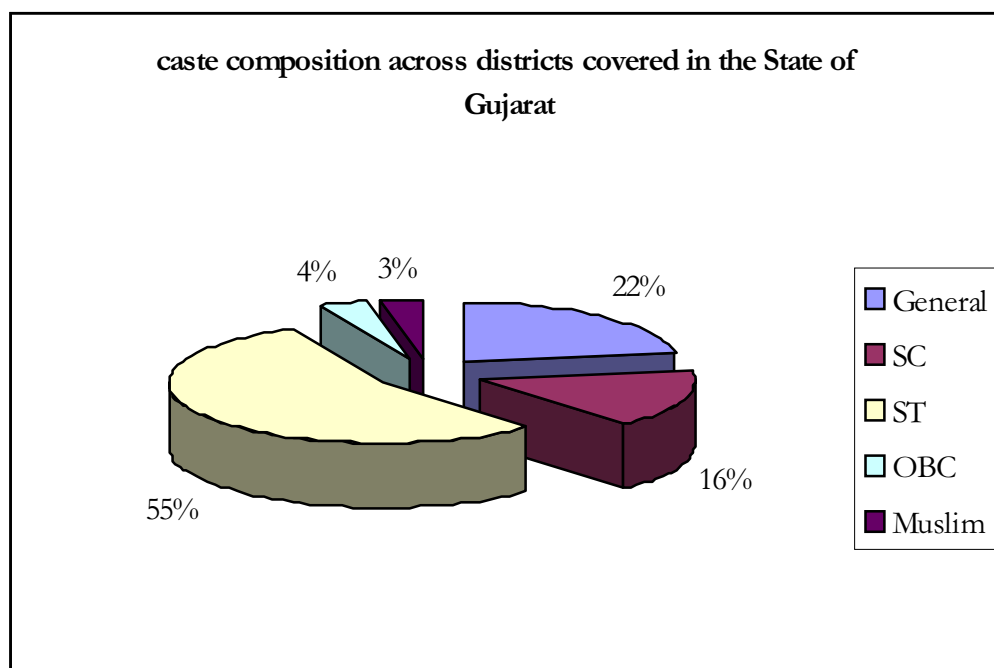
Note: HH – Households

* These are the results derived from listing schedule. In Kutch and Surendranagar district house- listing schedule was not administered

2.5.4 Caste, Social Exclusion and Vulnerability

It is well known that both ST and SC groups have been disadvantaged over time. Areas having SC/ST concentration are debarred from use of most of the infrastructure facilities and productive activities and are inhibited by unfriendly terrain (undulating land). SC households have been traditionally relegated to specific occupation groups and prevented from accumulating resources or controlling power. On the other hand, the poorer Muslim households are mostly landless and earn their living from casual labour and livestock rearing.

Chart 3: caste composition across districts covered in the state of Gujarat



The Scheduled Caste and Scheduled Tribe composition as obtained through house listing schedule across the five districts covered in the study is given in Table 2.8. The results of Kutch and Surendranagar are based on the FGDs done while in Banaskantha, Dahod and Surat house listing exercise undertaken.

Table 2.8: Distribution of Sampled Communities by Caste groups

District	Scheduled Caste	Scheduled Tribe
Kutch	17	15
Surendranagar	54	6
Banaskantha	9	53
Dahod	.07	99.4
Surat	-	100

It can be interpreted from table 2.8 (results of house listing in the sampled talukas) that Surat ranks highest with regards to the vulnerable ST population followed by Dahod and Banaskantha. On the other hand SC population is maximum in Surendranagar making the district vulnerable in terms of availability and access to resources followed by Kutch. During the study it was revealed that Caste discrimination is prevalent in Banaskantha district. Caste and Social exclusion are very important indicators of vulnerability. As the scheduled caste and tribes are deprived of basic amenities and opportunities of employment it increases the food insecurity at the household level. A detailed list of the Scheduled Caste and Scheduled tribes is summarised below:

OBCs (Bharwad, Bajania, Nadia, Suthar, Mistry, Mochi, Vadan, Luhar, Khumbar, Vaghri, Darji, Kawar, ode, Gachai, Prajapati, Nai, Bhat)

SCs (Koli, Harijan, Bangi, Vankar, Rawal, Saju, Bawa, Bhartari, Swami,)

STs (Rabari, Bhil, Gsamar, Parmar, Solanki, Nayak, Ratwa, Khat, Bhil, Jogi, Vasava, Gamit, Kathud, Vadvi, Katawadiya, Kathud, Dhodia, Chaudhary, Hadpati, Rathod, Koli, Patelia, Dhank, Baria)

General Castes (Brahmin, Darbar, Khatri, Vania, Lohana, Jain, Rajput, Ahir, Gadhvi, Patel, Thakkar)

Muslim (Gachai, Sipai, Khoja, Phakir)

2.5.5 Characteristics of SC/ST households

The position of scheduled Tribes and Scheduled Caste in a compounded community is very poor in terms of access to and use of resources available. Since these households lack resources base, which is usually owned by the upper castes, they usually depend on upper caste for their livelihood. Caste and class is not a limiting factor for being vulnerable or non-vulnerable. There are families from the upper castes who come under the food insecure and vulnerable category as well. Few Muslim families, the minorities, are also the most food insecure and vulnerable in Surendranagar and Kutch districts.

Scheduled Tribe: In the studied communities Scheduled tribes inhabit in large number in Surat, Dahod and Banskantha districts. The people belonging to this category (mostly Rabari, Bhil, Gamar, Parmar, Solanki, Nayak, Ratwa, Khat, Bhil, Jogi, Vasava, Gamit, Kathud, Vadvi, Katawadiya, Kathud, Dhodia, Chaudhary, Hadpati, Rathod, Koli, Patelia, Dhank, Baria) are mostly marginal landowners with unproductive lands. However, most of them depend on rain-fed agriculture. The land, which is possessed by them, is located on hilly terrain, which inhibits the water to percolate inside the ground weakening the ground water level. In addition to this shredding of land due to increase in nuclear families drastically changed their livelihood options. Being poor, they lack money to adopt modern farming techniques and are dependent on traditional practices, which makes it increasingly difficult for these households to sustain their living through agriculture. Apart from agriculture the major source of income is from dairy business and livestock selling.

Ownership of livestock varies across the tribes. In majority of the districts covered the number of milch cattle possessed by the community members is very less mostly they possess small ruminants. The breed of cattle does not meet the Standards of Dairy industry except in Surat district where dairy co-operatives exist and the tribals were given good breed of cattle (Surti, Mehsana) under the tribal sub-plan, which yield good quality milk. Among all the districts covered only in the Surat district it was seen that dairy co-operatives are functional while in the other districts it was seen that livestock (cow and buffalo) were sold during severe economic crisis. The he-goats were sold in the local weekly market. In the Dahod district it was seen that the price of cattle had gone down as the built of cattle was affected because of drought due to insufficient amount's of fodder. The villagers had to sell the cattle in low price also in order to face the ongoing crisis at home. It was seen in the Surat and Kutch districts that people depend to great extent on dairy income while in the other districts like Surendranagar, Banaskantha, Dahod and to some extent in Kutch it was seen that people depend on salt work, farm and casual labour respectively in order to meet their daily expenditures. So it can be interpreted that across regions there is diversity in occupation of these people. It is interesting to note that the sources of income have shown a drastic shift in the normal and crisis year. This was because of the decline of one or the other source of income like farm labour, forestry, livestock income or income from fishing in the crisis year due to scarcity of water. The economic loss incurred was balanced by occupational shift that is increase in casual labour and by sufficing the expenditures by taking debts. Migration is reported by the groups in order to meet the livelihood. Women, children and adolescent labour are on the rise in both normal and crisis year as the employment opportunities are very limited.

Scheduled caste: The majority of SCs are *barijans*. They are mostly landless or owning marginal lands, primarily unproductive, and without irrigation. Since income from agriculture is not enough to sustain the family, they depend on labour work. They are mainly involved as farm and casual labourers. They also migrate to earn their livelihood. The SC population of Banaskantha district is discriminated on the basis of caste with regards to availability and access to infrastructure and in terms of payment of wages. The Scheduled Caste population of Surendranagar district is engaged as salt workers due to unavailability of employment opportunities. They are trapped in the vicious cycle of debts and suffer from occupational health hazards.

It was observed in both the communities that women and children in these talukas are also employed in the agriculture sector as labourers and their major occupation being farm labour, which is irrespective of the Scheduled Caste and Scheduled tribes. The wages obtained in farm labour is Rs.20-30 while the wages earned by men and adolescent boys in casual labour is Rs. 30-50. There is no wage discrimination seen in the districts covered. The income earned by men is slightly more than women due to their involvement in casual labour.

Muslims: Farming, Casual labour and livestock rearing are major occupation of these households. Mostly the households are marginal farmers with unproductive patches of land without irrigation. Migration is low among them. The women are involved in household work, which restricts the income that could be generated from other sources. They don't go out of the house to earn because of the cultural construct so they are involved in income generation activities like embroidery. Some NGOs have tried to capture their skills and tried to empower them with income generation activities. The Muslim communities of Kutch undertake non-farm activities like mawa making (sweet made out of milk) and wool selling whereas the Muslims of Surendranagar district are engaged in prawn selling.

Social Exclusion:

The Scheduled Tribes (ST) and Scheduled Castes (SC) and Muslims are among the most vulnerable in the district. Position of Tribal, Schedule Castes and Muslims in a mixed community is very poor in terms of access to and use of resources. The vulnerability of the groups gets strengthened as they lack productive resources. The caste discrimination, which these people have to undergo, is immense and pathetic violating the norms of humanity. In Banaskantha district it was reported that the SCs have to face caste discrimination from the higher caste which comprises Patel, Darbar, Rajput, Brahmin, Khatri, Vania, Gadhvi community. Some 4-5 years back a villager belonging to SC community was burnt alive. The villagers are also discriminated in terms of payments made as farm labourers. In spite of the caste discrimination which is prevalent in the region there is no discrimination reported in terms of the opportunities of farm labour available within the village in the agricultural lands of higher caste although they are underpaid in farm work i.e. they get Rs. 15-20 per day. In Surendranagar and Banaskantha the SC population is not allowed to take water from the water sources from which Patels or Darbar take water.

The discrimination against these communities is intensified when they lack the decision-making capacity at community level and are not preferred in the government programmes because of the existing favouritism and nepotism which prevails in the village.

2.5.6 Female-headed Households

Female-headed households are one very important determinant of vulnerability. Out of 54 villages it was observed that 27 households were female-headed. The percentage of female-headed household was maximum in Surat district. They belong to the category of widow who lack overall familial support. They take all the decisions of household.

The widows are much more vulnerable as compared to other groups as they have to seek in-kind help from remittances and have no access to widow pension scheme. Widows or

abandoned women may be much more vulnerable than households where men live. They need immediate assistance for targeting the food insecurities existing at household level.

2.6 Household Livelihoods: Assets and other Resources, Income, Expenditures and Consumption pattern

The availability of natural resource base in the locality and non-farm activities in the surrounding areas significantly affects livelihood patterns of the people. This section describes the primary activities in which the people of all the districts covered are involved in order to survive.

Most of the households, especially the vulnerable (ownership of 1.2 – 1.8 acre/s of agricultural land) combine multiple activities to survive. In Dahod the average land holding is 1.87 acres followed by Banaskantha (1.4 acres) and Surat (1.19 acres) (refer table 2.7). Those who undertake sustenance agriculture, cultivate their own land by using household labour and if the land is large area wise then the help of farm labour who live within the village is utilised. However, due to continuous drought, marginal and the small landholders are not able to depend solely on cultivation as the main source of income and have resorted to alternate sources. The employment activities include working as wage labourer in agricultural land, casual labour, employment in public works programs, artisan activities etc. Apart from this the villagers are also dependent on salt work in Surendranagar district followed by farm labour and casual labour (involved in marble cutting) in Banaskantha district. In Dahod the villagers thrive on casual work (casual work, construction work, industrial labour), farm work and animal husbandry. In Surat the participants canvassed are landless but they thrive maximum on farm labour, casual work (construction work, industrial work) and dairy business. In Surat district the villagers are involved as farm labourers in the land of big farmers mainly Darbar of the nearby village. They also reported depending on fishing activities in monsoon months. In Kutch the major dependence of people is on casual labour work followed by livestock breeding and selling. Across all the districts covered it was seen that few villagers are involved in self-employment like they run a provision store, petty shop, flour mill and fishing.

2.6.1 Resource endowments: Land and Livestock

Out of 18 million hectare reported area in Gujarat, half the land is under cultivation. Nearly 10 percent is forest area, 6 percent under non-agricultural use, 15 percent is under cultivable wastes and fallow lands. Forest coverage in the state is very low (10% of the total land) in comparison to the All India figure (22-29%). However, a higher proportion of land in the state (15%) is under permanent pasture, barren and uncultivable categories. On the whole Gujarat's land use pattern seems to be inferior in terms of the environmental implications (Gujarat HDR, 1999).

In Banaskantha district most of the land is located on hilly terrain rendering it unfit for cultivation. In Surat district the land is plain and the region has good irrigation facility the agricultural production is higher making it least vulnerable in terms of food insecurity. In Surendranagar district the land is saline which makes it unfit for agriculture thus reducing income earned from own crop produce. There is high degree of disaster proneness (continuous drought) in the region of Kutch and Surendranagar districts, which decreases the ground water level making the land fragile and unfit for supporting

vegetation. This lowers the employment generation activity forcing the people to engage into arduous and hazardous income generation activity.

Economic resources are an important means of subsistence for the working people in the district. It can be observed that land under forest is highest in Dahod district (22.82%) providing the region with forest resources and strengthening the economic base. The region is blessed with seasmum wood and firewood as major product whereas gum, grass, bamboo's, madhuka-indica, hognut are minor produce of the forest

Table 2.8: Land Use Pattern (in percentage)

Talukas	Forest Land	Total Irrigated Land	Unirrigated Land	Culturable wasteland	Area available for cultivation	not for
Surendranagar	3.11	6.25	60.84	11.72	18.08	
Banaskantha	11.06	23.95	45.83	9.71	9.45	
Dahod	22.82	7.02	50.52	7.04	12.60	
Surat	15.35	21.74	33.83	8.34	20.74	

(Source: District Census 1991)

It can be seen that total irrigated land is highest in Banaskantha (23.95%) followed by Surat (21.74%) while it is lowest in Surendranagar district (6.25%). The crops grown in Banaskantha district are wheat, rice, sugarcane, cotton, and fodder crops. Wells are a major source of irrigation in the district. The agricultural produce is however low as the land is usually located on uneven surface due to hilly topography, which makes land difficult to till. The hilly terrain restricts the water to percolate inside the ground weakening the ground water table. In Surat district it was seen that sugarcane, which is a cash crop, is grown in the selected blocks and the blocks have good irrigation facility. Government canal, wells and tanks are the major source of irrigation in the district.

It can be interpreted from the table that total unirrigated land is highest in Surendranagar district (60.84%) which is directly proportional to maximum culturable wasteland. The land is saline which makes it unfit for agriculture. The area, which is not available for cultivation, is more in Surat (20.74%) followed by Surendranagar district (18.08%). In the absence of sufficient agriculture endowment the landless and the marginal farmers in these districts mostly depends on non farm activities as Surat has diamond cutting, textile industries and chemical industries whereas in Surendranagar district salt and cement industry is prevalent.

It has been observed that Surendranagar district is poorest in terms of resource endowments as it has maximum unirrigated land and cultivable wasteland, which can contribute as a factor for the causation of vulnerability. In Surendranagar district it was seen that most of the land area is desert making it less cultivable. The area under forest cover is also very less. Thus, hypothetically it can be said that resource-wise Surendranagar is the most vulnerable district.

Despite the presence of renewable and non-renewable resources manpower is a biggest resource of a region. The people fetch major part of their income in Surat district from farm and casual labour in the normal year but since two years because of the lag in diamond business casual labour has been affected and people are more involved in farm

related activities as the district has good irrigation facility. In Surendranagar the main thrust for the vulnerable households is work in the salt pan. In Dahod and Vanskantha the main activities of these households is agriculture labour and due to the prevailing drought in the area these people are more in to casual labour. In Kutchh the main activities are agriculture and livestock rearing. However, due to the drought both these sources of income had been reduced substantially.

All the districts covered under the study show dependence on livestock but due to drought the income from cattle selling has got affected due to scarcity of fodder. The tribals of Surat district were given good breeds of buffalo (Surti and Mehsana) under tribal sub-plan. The milk obtained from the cattle doesn't show a drastic change during the crisis year, as the dairy co-operatives had helped the tribals with fodder and "Sumul daan" because of which the milk yield has remained nearly unaffected in the crisis year.

2.6.2 Land – Quality and Quantity

Land is treated as non-liquid asset, not only because it provides food support to the people, but also because it is used as collateral for taking loans. The average land holding among the vulnerable groups varies between 1.2 acres to 1.8 acres whereas the higher caste possesses large amount of landholding i.e. from 6 acres to 25 acres, which represents an inequitable distribution of productive resource within the community. This clearly brings forth the skewed distribution of resources within the districts covered. Further to the uneven distribution of land holding in terms of size, the quality of land is also skewed. Most of the upper castes like Patel, Rajput, Darbar, Gadhvi, Jains, and Brahmins have fertile land. While a few villagers possess large areas of land and the most fertile land, the majority of the people possess smallholdings which are either saline or located on hilly terrain and less productive. The land distribution pattern clearly depicts the inequality and vulnerability in terms of distribution of land as a livelihood asset across the districts covered.

As per the quality of land all the districts covered were having bad quality land except Surat district where the land surface is plain and due to good irrigation facility the crop yield is high but in the sample villages covered in the district people are landless. In Surendranagar the land is highly saline while the land type in Dahod and Banaskantha was having uneven exterior as a result of which the land is unable to hold surface water depleting the ground water levels. The Dhanera block of Banaskantha district is exception as it has plain land and good irrigation facility. The block is dominated by higher caste mostly the Patels and Darbar. The situation becomes worse due to continuous drought which the region face decreasing the ground water further. These situations have antagonistic effect on crop cultivation. In both Banaskantha and Dahod district the tribals of the village did land encroachment on forestland for cultivation. It was seen that the tribals of Surat are mostly landless(79.8%, refer table 13) whereas in Dahod only 1.9% population is landless(but the land possessed by them is unproductive)

The scantiness of groundcover and low-density vegetation lead to severe soil erosion, which was reported in the Surendranagar district particularly in the Patdi block. The districts are characterised by both uplands and low lands. Major proportions of upland are found in Banaskantha and Dahod. In Surat district the land is located on lowland. Soil erosion is an acute problem only in Surendranagar district lowering the crop production in the region, which contributes to higher food insecurity levels. As the region lacks agricultural land and good employment opportunities people in the

Surendranagar district are engaged in hazardous occupation of salt manufacturing which contributes to occupational health hazards deteriorating the health status of the people in the District. In Kutch majority of villagers are engaged as casual labourers as they are mostly landless.

2.6.3 Agriculture and Farming Practices

Agriculture is the primary occupation and primarily rain-fed. Agriculture supplemented by livestock rearing is one of the primary sources of livelihood for the community, although it is increasingly unsustainable for many rural poor households.

Across the district it was seen that majority of the villagers had unproductive land so to sustain their livelihood sharecropping is prevalent in the Kutch and Banaskantha district. Under share cropping in Banaskantha people who do not have land or possess marginal land, generally take lands on lease to carry out agriculture and can be categorised as most vulnerable. The landowner provides all the inputs and the produce are distributed 25:75. This kind of sharing is more prevalent as an arrangement between lower and upper caste. In Kutch district three types of share cropping are there:

- 1) people who do not have land or possess marginal land, generally lease lands to carry out agriculture and can be categorised as most vulnerable. The landowner provides all the inputs and the produce are distributed 20:80;
- 2) people who do not have land and lease in lands from the landowner and produce crops with own inputs get half of the total harvest;
- 3) three parties were involved - one provides the land, second provides the labour and inputs and the third party provides the water. Under this kind of arrangement, each of the parties gets a third of the produce.

In the studied village, it has been observed that the first type of share cropping is more prevalent as an arrangement between lower and upper castes; and second and third arrangements are usually between upper castes. These cropping arrangements do not change during crisis years.

In the other districts it was seen that people don't practice share cropping but have alternative means of income generation that is casual labour ensued by dairy business, livestock selling, forestry and fishing. The reason for not getting engaged into share cropping is that majority of the households in the villages covered are so poor that they possess meagre land. It was also seen that due to drought the situation gets worsened and the land which they possess is also rendered unfit for agriculture due to the lack of irrigation facility. The irrigation facility in Surat district is good which provides farm labour to the poor villagers on the land of big farmers who belong to Darbar community.

There is no change observed in the cropping arrangements during crisis years as the higher caste has good irrigation facility. The agricultural income obtained is used in repaying previous debts and buying grains from the village farmer or from the local market. The grain stock suffices for a period of 4 months. The major crops produced in share cropping are cash crops like Arinda, Raido and Isabgol. The communities canvassed practice mixed to mono cropping

The quality of land, presence of irrigation facility has implication on the cropping pattern in the Talukas. In all the districts covered in the study the villagers are involved in producing kharif crop. In Surendranagar district in the winter months people are engaged in salt manufacturing in the rann. In Banaskantha and Dahod district during the normal year the villagers use to cultivate rabi crops but due to drought and inadequate irrigation facility they have stopped growing rabi crops. In Surat district it was seen that due to good irrigation facility the farmer took both kharif and rabi crop. The agricultural calendar of kharif crop shows that land ploughing, land preparation and sowing is done in June-July followed by sowing, weeding in August-September and finally harvesting in the October-November. The agricultural calendar shows that Rabi crop that ploughing, land preparation and sowing is done in November and weeding is done just once or twice as its dry cropping. The March-April months are finally marked by harvesting.

During normal times the crops produced were enough to suffice the requirements of the household but in crisis year the situation is quite antagonistic. In the crisis year more dependence for buying food is on market as their cultivation has suffered severe loss due to scarcity of water and lack of irrigation facility.

In the districts covered the main crops grown during the normal year were maize, jowar, bajra, til, castor, cotton, wheat, jeera, arinda, chana, guvar, paddy, raido, isabgol, tobacco, groundnut, math, tuvar, udad, chaula in the normal year which has decreased or totally declined in the crisis year.

It was seen across districts that men are involved in ploughing and land preparation, as it requires harsh physical labour whereas women are engaged in sowing, weeding and harvesting. The involvement of children (10-12yrs) and rise in adolescent labor in farm work clearly depicts the vulnerability of communities in the studied districts. The children are involved mainly in weeding and harvesting of crops.

Table 2.9: Agriculture Practices

	Kharif Season			Rabi Season		
	Major activities	Period	Worker participation	Major activities	Period	Worker participation
Surendranagar	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding ◆ Harvesting 	<ul style="list-style-type: none"> ◆ June –July ◆ August- September ◆ October -November 	<ul style="list-style-type: none"> ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 12 years in weeding and harvesting 	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding is done just once or twice as its dry cropping ◆ Harvesting 	<ul style="list-style-type: none"> ◆ November end ◆ March - April 	<ul style="list-style-type: none"> ◆ Patel farmers of Ajitgarh, Enjar and Surrel blocks reported doing Rabi cropping. Labour available within the village is employed in the farm work which comprise aged population of the village. ◆ Men are in land preparation, sowing, harvesting ◆ Women in weeding and harvesting
Banaskantha	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding ◆ Harvesting 	<ul style="list-style-type: none"> ◆ June –July ◆ August- September ◆ October -November 	<ul style="list-style-type: none"> ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 12 years in weeding and harvesting 	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding is done just once or twice as its dry cropping ◆ Harvesting 	<ul style="list-style-type: none"> ◆ November end ◆ March - April 	<ul style="list-style-type: none"> ◆ Patel and Darbar farmers of Dhanera block are engaged in Rabi cropping as they have good irrigation facility. ◆ The Harijan and Adiwasi are involved in share cropping. ◆ Land preparation and ploughing is done by tractors in the Dhanera block ◆ men,women and children are involved in sowing, weeding

						and harvesting
Dahod	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding ◆ Harvesting 	<ul style="list-style-type: none"> ◆ June –July ◆ August- September ◆ October -November 	<ul style="list-style-type: none"> ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 12 years in weeding and harvesting 	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding is done just once or twice as its dry cropping ◆ Harvesting 	<ul style="list-style-type: none"> ◆ November end ◆ March - April 	<ul style="list-style-type: none"> ◆ The villagers use to grow wheat and gram in the normal year but due to continuous drought since past 2 years they have terminated cultivating rabi crop
Surat	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding ◆ Harvesting 	<ul style="list-style-type: none"> ◆ June –July ◆ August- September ◆ October -November 	<ul style="list-style-type: none"> ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 12 years in weeding and harvesting 	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding is done just once or twice as its dry cropping ◆ Harvesting 	<ul style="list-style-type: none"> ◆ November end ◆ March - April 	<ul style="list-style-type: none"> ◆ The vulnerable groups i.e. tribal are involved in cultivation of rabi crops as due to good irrigation facility. ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 10 years in weeding and harvesting ◆ Aged are also involved in weeding and Harvesting of crops
Kutch(*)rabi season	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding ◆ Harvesting 	<ul style="list-style-type: none"> ◆ June –July ◆ August- September ◆ October -November 	<ul style="list-style-type: none"> ◆ Men in ploughing, land preparation, sowing, weeding and harvesting ◆ Women in weeding and harvesting 	<ul style="list-style-type: none"> ◆ Ploughing land, land preparation and sowing ◆ Weeding is done just once or twice as its dry cropping ◆ Harvesting 	<ul style="list-style-type: none"> ◆ November end ◆ March - April 	<ul style="list-style-type: none"> ◆ The vulnerable are involved in cultivation of rabi crops as due to good irrigation facility. ◆ Men in ploughing, land preparation,

			<ul style="list-style-type: none"> ◆ Children above 12 years in weeding and harvesting 			<ul style="list-style-type: none"> sowing, weeding and harvesting ◆ Women in weeding and harvesting ◆ Children above 10 years in weeding and harvesting
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* In Kutch during the rabi season it was observed that only the villagers of Mandvi and Nakhatrana talukas are involved in cultivation of rabi crop whereas the participants of other blocks reported being engaged in casual labour.

The table does not show a remarkable difference in the irrigated and unirrigated districts as the vulnerable groups are involved in all the agricultural workload in the farms of big farmers. Rabi is grown only by higher caste groups of the Ajitgarh village, Surendranagar district who are very few in numbers and have well for irrigating fields. One well is shared among two brothers limiting the irrigation facilities. In Banaskantha district, Dhanera block has adequate facilities of irrigation increasing the agricultural income. There is rise in crop production in the Dhanera block as the village farmer are using hybrid seeds and fertilizers.

In Dahod the vulnerable groups reported having rain-fed agriculture and avail the water for irrigation purposes from village well, check dam (constructed by an NGO) which have dried up due to persistent drought. In Dahod district the reported crop loss is 75% coupled with 10-20% irrigation facility. In Banaskantha the crop loss was 70%(only in Danta block) as the other block i.e. Dhanera block shows no decline in the crop production during the crisis year due to the following reasons:

- Majority of the land belongs to upper caste
- They are well equipped with irrigation facility.
- They use modern equipment like tractor for ploughing land.
- Use of hybrid seeds and good fertiliser increase the agricultural yield further.

The effect of drought is minimal in Surat district as the region has good facilities of irrigation. In Surendranagar cropping pattern among the vulnerable groups is restricted to Kharif crops only. The reported crop loss is 60% coupled with 20% irrigation facility, which are possessed by the upper caste people.

2.6.4 Forest

Forest is important for both environmental and economic reasons particularly for those whose livelihood depends on forest resources. In Gujarat, actual forest coverage is 6.4 percent against the desired level of 2 percent for climatic and hydrological stability norm of 19.27 percent (FSI, 1997). In Kutch, the share of forest in the total gross area is even much lower than that of the state average. In the present context, it can be stated that the dependence on forest and its products for livelihood among the studied communities is present. In Kutchh entire community reported of using fruit of the babul trees to feed the animal after boiling, as they believe that this stops the harmful effect of the fruit in terms of causing dizziness, numbness of jaw and inability to chew. These fruits are also consumed by the children as part of the coping mechanism and also out of fun as they like the sweet and sour taste. The dependence on forest for livelihood is absent in Surat. The other three districts are dependent on the nurseries for employment opportunities except for Banaskantha that has a fairly large population selling forest products also. These products include tendu leaves, honey, fodder, firewood, bamboo, edible gum, khajuri (a fruit), mushudi (medicinal 1100 /kg.), mahua (mahua indica), both flower and oil.

Banaskantha and Dahod districts are heavily dependent on the sale of timber products like firewood and charcoal. It is the primary source of family income especially for the ST households. The children of STs are involved in collecting edible gums, fruits and flowers of the mahuva and other trees yielding fruits for medicinal purposes. It was also seen that social forestry programmes were conducted during drought period.

It has been observed in Dahod that the residents in some of the villages encroach upon the forest department's land, thus, expanding their farm areas.

2.6.5 Labour and Migration

Over the years, the vulnerable groups are becoming more vulnerable due to land fragmentation with the rise in nuclear families. Further, due to worsening condition in the area, those who were marginal landowners became farm labourers and then casual labourers over the years. It was observed across the districts that people cultivate their own land and also work as farm labourers in order to support the livelihood, which depends on uncertain income sources.

“We work hard so much so that people engaged in other work will become fearful if they hear the pains which we encounter, we work so much but still are not able to feed ourselves with bare minimum. Our life is full of unhappiness and sorrows”. Sonaben, Banaskantha district

In all the districts covered except Surat, as the people are landless it was seen that kharif cropping is commonly practiced. In all the blocks covered under the study facilities of irrigation are inadequate and the agriculture is mainly rain-fed. Agriculture cannot serve as a primary occupation of people as the land in some districts is either saline or situated on a hilly terrain. The villagers reported having maximum workload in the field from the month of August- September and October – November. All the village people including children (above 10 yrs.) are involved in weeding and harvesting of both Kharif and rabi crop(only if there is a land of big farmer in the village) irrespective of the normal or crisis year. They earn Rs.15-20 as farm labourers.

The villagers (koli,) of Surendranagar reported maximum workload from the month of February- May as they are engaged as salt workers in the salt pans in the winter months. They are engaged as salt labourers and *agaria* in the salt pan. Both men and women are engaged in the salt work and get Rs.70-90 for 12 hours of work across all the blocks covered in the Surendranagar talukas.

As agriculture across all the blocks covered is rain-fed due to persistent drought and lowering down of water level rabi cropping was not practiced by the vulnerable groups. Rabi cropping is common among the higher caste (Patels and Darbar) of Surendranagar and Banaskantha district as the quality of land possessed by them is good and they have adequate resources of irrigation. Few villagers work as farm labourers in the winter months in the fields of big farmer while majority of them migrate in order to earn a living by engaging themselves either as farm labourers or casual labourers at the place of migration.

The people of Dahod and Banaskantha district reported coming back from the place of migration in the month of March-April as it is the season of festivity among the tribals. As the ceremony gets over they again migrate for employment but then reported coming back home in the month of June for cultivating their own land.

Majority of villagers across all the districts covered reported possessing meager (1.2-1.8 acres) land. Since a higher proportion of households own land, although small patches, incidence of farm labour in the land of other farmers is low and casual labour is limited. In the areas where people are engaged in farm labour during the crisis year farm labour

declines and casual labour increases. Casual labour is prevalent from the late November-April both in the normal and crisis year.

People are engaged in non-farm activities apart from farm activities in order to earn their living. The major non-farm activities are salt work (Surendranagar district), casual labour, forestry, dairy business, livestock selling and fishing. The villagers go to neighbouring towns and villages in order to work as farm and casual labourers. Women and children form an important part of work force. The villagers of Surendranagar taluka reported going to the rann with their families for 8 months i.e. from late October-May in order to earn a livelihood. In October, the men go to the salt pans to start the work by digging bores and the entire family joins after Diwali. They come to the village in the month of monsoon as the rann is filled with water on which salt farming can't be done. They work in various salt mandli's located in the rann.

Case note 1 Migration- A Farfetched Dream

Surat- the Manchester of India, is just 60 kms. away from this tiny village called Kaddaiya, district Surat. The poor villagers living under dire poverty in this village find the city beyond their reach. The reason- high travel cost, expensive accommodation and therefore no savings.

“So near yet so far” is this dream city from them.

“Sabeb... we are poor and are managing our life in this village. We find it difficult, as we do not have work every day. Still isn't it better to have something to rely upon than having nothing at all.”

“We do not migrate”.

The villagers are engaged in construction work, as industrial labourer (marble and chemical industry), stone cutting, and farm labour. There is no caste or tribe related difference in income generation activities done by Scheduled Caste and Scheduled Tribes. Migration was reported minimum in Surat district due to availability of agricultural resources to earn a living. Some of the villagers reported going for work in the morning and returning back in the evening.

Table 2.10: Migration Pattern

Talukas	Migrants (%)	Period of migration	Place of migration	Employment opportunities
Surendranagar	<ul style="list-style-type: none"> Men(90%) Women(90%) Children(90%) 	<ul style="list-style-type: none"> October- May November-December (for those working involved in groundnut plucking) 	<ul style="list-style-type: none"> Work in the salt pans called Saraswati Mitha Utpadak Mandli, Harijan Mitha Utpadak Mandli, Nayi DVS Mitha Utpadak Mandli, DVS Mitha Utpadak Mandli, Kuda Mitha Utpadak Mandli Junagarh Bharuch, Kandla and Gandhidham Ahmedabad and Kheda 	<ul style="list-style-type: none"> Salt labourers Plucking groundnut
Banaskantha	Men (50%)	November-December	Palanpur, Danta, Deesa.	<ul style="list-style-type: none"> ◆ Farm labour ◆ Casual labour(mud-lifting at construction site, marble work)
Dahod	Men and adolescent boys(70%) migrate with their parents all year through for farm work or casual work.	<ul style="list-style-type: none"> December-May. They are involved either as farm or casual labour in the place of migration 	<ul style="list-style-type: none"> They migrate to Ahmedabad, Jamnagar, Rajkot, Mithapur, Kheda, Anand, Dhanpur, Saurashtra, Kathiawad, Junagarh, Porbander, Dhoraji for working as farm labourers They migrate to Vadodara, Ahmedabad, Godhra, Surat, Nadiad, Halol, Savli for working as casual labourers and industrial workers 	<ul style="list-style-type: none"> ◆ Farm labour ● Casual labour (masonry work, lifting mud, digging telephone lines and industrial worker)
Surat	<ul style="list-style-type: none"> Men (2%) Temporary migration reported only in block and that too in one village but the people go in nearby town or villages to work as farm labourers for 10-15 days a month and keep coming back after 10-15 days. This activity is reported all through out the year. Majority of the villagers goes to the nearby 	All year through (relevant only for one village of one block)	<ul style="list-style-type: none"> Go to Bardoli, Navsari, Bilimora, Kosamba, Padga, Vakaner for farm work Go to Surat, Udna for lifting mud and masonry work 	<ul style="list-style-type: none"> Farm laborers casual labour

Talukas	Migrants (%)	Period of migration	Place of migration	Employment opportunities
	village to work and return home the same day. Work is easily available in the farm of big farmers			
Kutch	<ul style="list-style-type: none"> Men, women and children(5%) 	Dec-May	<ul style="list-style-type: none"> Kandla,Rapar, Bhuj, Bachhau, Gandhidham, Bombay, Surat, Dhori, Khavda, Madhapur,Bhujodi, kukma, Anjar 	<ul style="list-style-type: none"> Casual labour Very-very less in farm labour

The period of migration varies district-wise. The villagers of Surendranagar district migrate from the month of October-May to the rann for working as salt labourers. In Banaskantha and Dahod district migration is temporary i.e. for a 15-20 days in a month all throughout the year. In Dahod district it was reported that people migrate for casual and farm work within the areas of Gujarat State. Maximum rate of migration is seen from the month of March to May when they migrate for farm work and are involved in the harvesting activities.

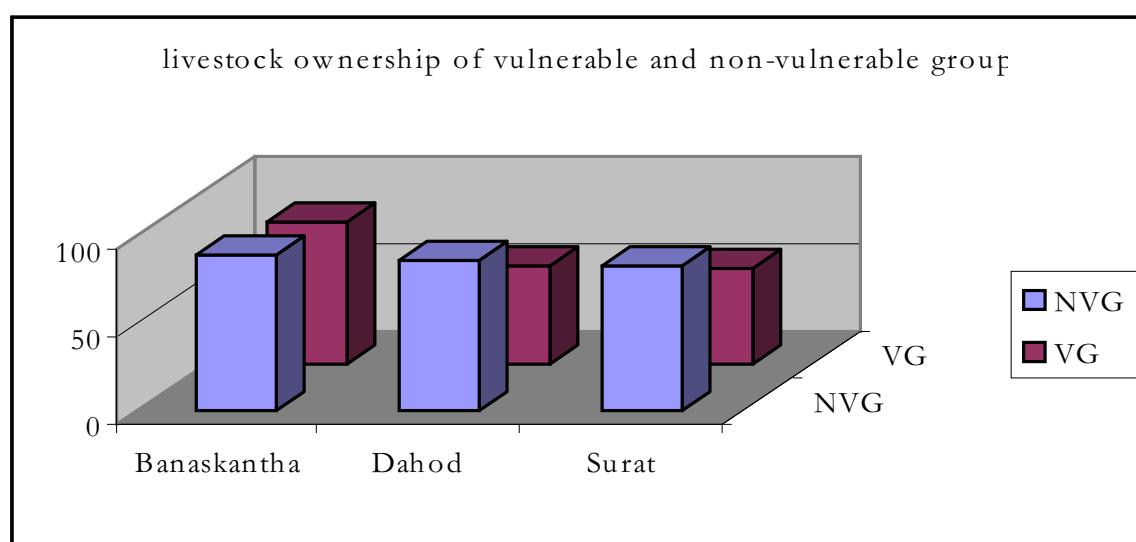
The villagers of Dahod district revealed that when they migrate to Saurashtra for working as farm workers they get Rs.20/day and food and tea. They migrate as casual labourers from the month of December to February. From the month of March to May when farm work is not available then they are engaged as casual workers for 5-7 days in a month. When they are not migrating i.e. from the month of July to October they cultivate their field. Once the work in their fields is over then they again engaged as casual labourers or farm labourers within the village or in the nearby villages. At the place of migration they are involved in weeding (get Rs. 40 per day) and spraying of pesticides (get Rs.100 per day) in the agricultural fields.

In Surat, only in the Uchchhal block villagers reported migrating temporarily as farm and casual labourers for 10-15 days a month. Mostly the households migrate to nearby towns within the district depending on the availability of labour work. The villagers return to their village in the month of June for cultivating their own fields. An individual earns a minimum of Rs 800-1000/- per month by working as casual labour and Rs. 700-800 from migration related to farm work. The industrial labour earns Rs.1200-1500 at the place of migration.

2.6.6 Livestock Raising

In Kutch district the Rabari and Muslim population have a significant dependence on livestock. The Muslim community of Kutch is involved in cattle rearing activities of small ruminants like goat and selling them. It forms a major part of their income, as the price of one goat is Rs 900-1200 depending on its built. The Rabari community of Kutch migrates with their cattle herds and earn their livelihood by selling milk of cattle.

Chart 4: livestock ownership of vulnerable and non-vulnerable group



In the Surat district dependence on livestock is also significant and the income from the animal produces is also substantial as the cattle are of best quality and there is also the presence of the dairy co-operatives to look after the marketing of their products. The co-operatives provide fodder and “*Sumul daan*” as cattle nutrients which has unaffected the milk yield in the crisis year.

2.6.7 Poultry

The selling of poultry birds was reported to be high during the crisis year in order to support livelihood. They also form an important part of diet of people both during the normal and crisis year. A family reported consuming flesh of birds once a month. Increased consumption was seen in during festivity. Normally a kilo or a little more than that suffice the dietary requirement of family of five members. The eggs obtained from poultry birds were eaten in every 15 days or depending on availability by all the family members. Majority of villagers are involved in the poultry and livestock business as it fetches little income in the crisis year by which food grains can be bought. The villagers said that the rearing poultry birds are difficult, as they are prone to diseases, which reduce their survival rate. The villagers prefer cattle rearing over poultry as it fetches more money as selling a goat they can earn Rs.900-400 depending on built in comparison to selling the birds (Rs 40-50). Both goat and poultry birds are sold once or twice a year as it matures. Goat selling is done in the weekly market called “haat” in the Banaskantha, Dahod and Surat districts but in Kutch and Surendranagar district muslim trader comes and buys the goat from the villagers. Regarding the selling of poultry birds they are sold in the local market or within the village (seen in Banaskantha and Dahod district). The villagers also told that sometimes they sell the poultry birds to passer-by who come to the village for buying poultry birds.

2.6.8 Fishing and Prawn Culture

Fishing was reported in Surat as an important income generation activity. The activity was undertaken in coastal and inland water. There were 148 fishing centers reported during 1989-90 in 12 talukas of the district. The rate of fishing is high because of the presence of Rivers like Tapi and Purna. The Ukai and Kakrapara area also serve as a catchment area. The villages covered under the study use to catch fish from River Purna and Ukai dam. The villagers reported that the income from fishing is highly seasonal which starts with the onset of rainfall i.e. from July and ends by the month of September. A person is able to catch 30-35 kg. per month fetching Rs.30 per kilo. Fish is sold in the nearby towns. Fish also forms an important component of diet of the people and consumption of it is reported high in the rainy season. Due to drought of past one year the fish catch reduced due to decrease in the level of water in the river.

In the Surendranagar district areas like Nimaknagar, Kopani, Enjar, Tikad, Ghatila, Surajbari have reported Prawn selling during rainy season as the hot rann is filled with water in the monsoon months. The Prawn culture starts in the month of July with the onset of monsoon where the rann serves as natural breeding grounds for prawn culture. The villagers take boats and fishing nets and place them in the rann. Prawn catching is done in-groups of 20 members. All the people involved in this activity are employed under the trader. They are able to catch 6000 kilo prawns from the rann in 3 months and the price of a kg prawn is Rs. 50. A month's income of a person involved in Prawn

culture is Rs.5000. Prawn selling is a mode of employment for these people and is done exclusively by the Muslim community of Surendranagar.

2.6.9 Other Activities

Women and girls in kutch district are involved in embroidery, tie and dye and bead work. The women of other districts are involved as salt workers and farm labourers.

2.6.10 Markets

It was seen in all the districts covered that villagers sell their crop produces in the local market. Access to local markets is often limited during the rainy season due to absence of proper roads. The livestock is sold at the weekly market.

The importance of credit market is significant for the villagers because it forms an income source both in the normal and especially the crisis year. In general it was found that the common mode of taking debts is mortgaging of jewelry at 3% interest rate or taking cash at 12% interest rate. The purpose of taking loans is during illness and social occasions in the normal year, which shifts to taking loans for obtaining food grains and illness during the crisis. The marginal farmer mortgages land at 0% interest rate within the village to the big farmer in the presence of village Panch on mutual understanding, this phenomena was seen in BanasKantha and Dahod district. The land is mortgaged for fulfilling the requirements of agriculture. The farmer who mortgages the land loses the right to cultivate the land till the period of time for which it is under mortgage. The land mortgages are also done in order to repay the existing loans. The widow and the aged face problem in getting loans as they either don't have or have limited income source for loan repayment. Even the marginal farmers face difficulty in getting loans in case the previous loan amount has not been cleared. The frequency of loan off taken is maximum in the moth of August and November when sowing is done and rate of diseases is high as it's a monsoon month

In the tribal communities loan off -take was maximum in normal year in the month of March-April, as it's the time of festivity. In the crisis year it was seen that food loans were taken majority of the cases from the month of February-March to replenish the depleting grain stock at home. All these loans are taken from the local markets from the moneylender. In the Surendranagar district it was seen that the salt workers and agaria ' salt pan owner' take money from the trader/employer for getting diesel required for running the engine used in process of salt manufacturing and meeting livelihood expenses in the rann. The salt workers and agaria are never able to repay the debts due to exploitation done by the trader in terms of payments made so they get trapped in the vicious cycle of debts.

2.6.11 PDS

The PDS is a very important source of purchasing the monthly provisions as it comes at a subsidised rate. The food items available at PDS are wheat, rice, oil (given during festival), sugar and Kerosene. However, the people at large are dissatisfied over the quality and the quantity of the provisions. They need to spend additional amount on buying the food grains and other daily items from the private grocery shops located within the village and many a times these commodities are bought on loan from these

shops. It was seen in the surveyed talukas that the grain off take from the PDS in the normal and crisis year remains nearly the same as the quantity obtained is limited in amount. The people of all the districts opined that grain provided in PDS is very dissimilar to the kind of staple grains they are dependent on i.e. wheat is the only grain component given but people think that objective of PDS can be met if they provide bajra, jowar and maize or cereal preferred by people which is a staple diet for them. It was found out through the proportional piling exercise that in Kutchh 35% of the total food requirement of the households is met from PDS followed by Surat and Surendranagar. In Banaskantha district mobile ration van fulfils the requirement of ration in the villages located in the interior. The people don't prefer it as they think that grains obtained from mobile ration shop are more expensive than those obtained from market or village shop. In Dahod district the villagers reported that when relief work was ongoing they obtained 10kg. maize through PDS. The villagers had to choose between maize and wheat. Maize was given once that is in the month of May'2001 and stopped after first rainfall. The villagers expect more food aid programmes from government, as they are very poor.

2.7 Diversification of income

The income, which is derived from various sources across all the districts covered, is displayed in Chart 5 and the sources of income district specific both in the normal and crisis year is given in table 2.11. It was seen that income across regions shows variation. It can be interpreted from table 2.11 that home production was highest in Dahod and Banaskantha in the normal year. The reason can be attributed to a system of share cropping done in Banaskantha district by the vulnerable groups on the land of Patels and Darbar whereas in Dahod district sample village was having good irrigation facility due to construction of checkdam by NGOs in the region. It can be observed that labour work supports the vulnerable people of Surat in the normal year, as the sample covered is landless. Salt work, which is a hazardous activity, forms a major income source in the normal year for the people of Surendranagar district. In Surat income from livestock forms an important part in supporting livelihood of the vulnerable groups as they possess buffaloes given as source of income generation under the tribal sub plan. Further supports from the dairy Co-operatives also provide a channel to increase earnings.

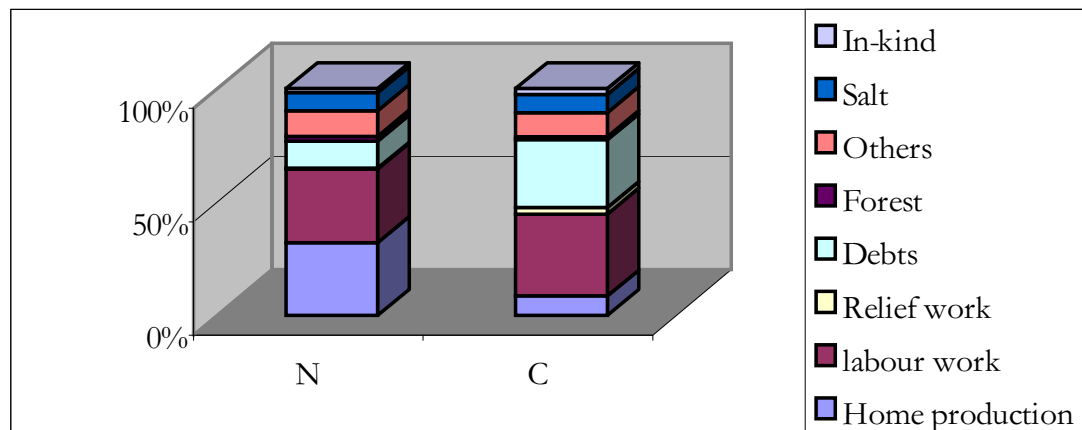
2.7.1 Source of income, consumption and indebtedness

It has been mentioned earlier that vulnerability is a function of the exposure to risk and the ability to cope. The exposure to risk and ability to cope are inversely related as the ability to cope helps to ameliorate the effect of the exposure to risk. The relative coping capacity of the households depends on the level of income that the household earns, the pattern of consumption, as well as the household's assets (both natural and human). It also depends largely on the ability of the household to diversify income and consumption so as to effectively mitigate the exposure to risk. Help from outside in the form of government programmes or NGOs, enhances their capacity to face the risk/crisis. However, this capacity also depends on factors such as quality of natural and human resources available with these people, access to market, quality and quantity of infrastructure and other services, and barriers to economic opportunities and social support.

Table 2.11: source of income of vulnerable groups in normal and crisis years

Sources	Banaskantha		Dahod		Surat		Surendranagar		Katchh	
	N	C	N	C	N	C	N	C	N	C
Home production	31	13	49	12	15	8	10	5	25	5
Labour work	25	34	27	25	42	48	26	20	42	53
Relief work	2	8	-	7	-	-	-	-	-	-
Debt	25	23	12	45	8	16	15	30	10	35
Forest	5	3	6	4	-	-	-	-	-	-
Others (Livestock, poultry, self-employment etc.)	12	19	6	7	26	15	9	5	13	7
Salt work	-	-	-	-	-	-	40	40	-	-
In-kind	-	-	-	-	9	13	-	-	-	-

Chart 5: Sources of income in the normal and crisis year



It can be interpreted from the table 2.11 that there is a remarkable fall in the home production in the crisis year in all the studied districts. Due to the fall in home production there is a rise in labour work in order to compensate the economic losses and fulfil expenditure which is maximum in Surat district as compared to other districts in the crisis year. Debts form a very important part of income of the vulnerable group of Dahod and Kutch district. When no labour work is available then they resort to such kind of measures in order to fulfil the food requirement at the household level. The purpose of taking debts varies both in the normal and crisis year. The debts in the normal year are taken for social occasions and that in the crisis year is taken for fulfilling the food requirement and for agricultural purposes like buying seeds, fertiliser. The in-kind income sources and relief work show a rise in the crisis year as compared to the normal year. These income sources help the female headed households of Surat district to cope up with their livelihood in the crisis year.

Table 2.12: Sources Of Income in A Year (approx. number of days work available and wages earned) across districts covered

S.No	Source of Income	No. of days work available in normal year	Change in the crisis year	Wages obtained
1	Farm labour	125 days	The work availability and the wages have reduced in the crisis year due to reduction in the agriculture activities. The number of days for which the work is available is around 80-90 days	40 Rs./day
2	Casual labour	80 days	The work availability as casual labourers has increased in the crisis year i.e. around 100-120 days but wages have decreased due to available surplus labour.	Rs.60-70 two years before but now get Rs.40 due to the availability of surplus labour
3.	Relief of work	----	Conducted this year and that too for a month in Devgarh Baria taluka and for 5 months in the Dhanpur taluka	For digging one brass a gang of 7 persons get Rs.175/day
4.	Livestock selling	Done two to three times in a year irrespective of season	Get fewer prices of livestock as the built of the cattle has reduced due to crisis of fodder	<ul style="list-style-type: none"> • The cattle are sold in extreme economic crisis i.e. when previous debts accumulate • Cow is sold for Rs.2000-3000 • Buffalo is sold for Rs.5000-6000 • All these animals are sold in the local market • He-goats are sold for Rs.400
5.	Poultry selling	Done two to three times in a year irrespective of seasons	No effect as the growth of poultry depends on the extent on which the bird can flee against the predators	<ul style="list-style-type: none"> • Hen is sold for Rs.40-50
6.	Income from the forest			
a)	Mahua flower selling	15 days each in March-April	Reduced due to improper rainfall	Rs.10/day if they collect Mahua for big farmers in whose land the tree is located. If they give the flowers directly to the forest Nigam from the trees located in the forest then they get Rs.70-80 for selling 20 kgs.of Mahua flower which they collect in 10-15 days. The people working for big farmers get at least RS.10 per day, which gives them a sum of Rs.150 for 15 days. The villagers find the deal profitable because the flower obtained can be used for other purposes by the big

				farmers such as preparing alcohol both for their own consumption and for selling within the village
b)	Mahua fruit selling	June 15 days	The production of fruits has decreased due to erratic rainfall	Get Rs.30-35 for collecting 10 kg. Mahua fruit.
c)	Timbru (bidi leaf) selling	In the month of May for 15 days	No effect	Collect 6000 leaves in a day and get Rs.25/day
d)	Tadi selling	15 days each in the month of February-March	No effect	Get around 4 liters (15 medium glasses) tadi per day and on selling it get Rs.20 per day
e)	Fuel-wood selling	All year through except rainy season (July-September). In 15 days collect 40 kgs. fuelwood. On selling it they get Rs. 15, sell fortnightly within the village or outside the village	Because of the restriction from the Forest Nigam the people can no longer fetch fuel-wood from the forest	Rs.30 per month
f)	Nilgiri seed selling	Only in the month of May. Sold to the village shopkeeper or to the Forest Nigam.	Stopped due to less rainfall.	Are able to collect around 40 kgs. Nilgiri seeds in a month. A kilo Nilgiri seed fetches them 40 Rs. so they are able to earn Rs.1600 per month
7	Rope making and selling	In the month of May	No effect	Are able to produce 200 feet rope in a month for which they get Rs.200
8	Fishing	From the month of July-September	Affected as the level of water has gone down in the crisis year.	Are able to catch 20 kgs of fish in a month in a normal year, in a period of 3 months they earn Rs.400 from fishing. Fishing was undertaken as a major activity in Surat district.
9	Salt work	October-May	Affected due to drought as the groundwater has gone down so in order to pump brine it requires more power	Get work of Rs.70-90 for working half day. Get employment of 8 months

*** The table presented above is based on the FGD's done with the villagers in the districts covered. The sources of income described above may not be uniform for all the villagers but it gives a general idea of major sources of income in which people are involved.

- It can be viewed from the table that all the income sources available to the villagers are uncertain and seasonal. The income, which is dependent on the forest, is time consuming and fetches fewer prices.

- Across the talukas covered it was seen that the villagers are engaged as farm labourers or as casual labourers in order to earn their livelihood apart from working in their field.
- The forest income (that from Mahua flower and Mahua fruit) is rainfall dependent. The other sources of livelihood, which are from forest, are seasonal like the income from Timbru leaf, Tadi selling, Nilgiri seed selling.
- Livestock selling and poultry selling are done in the local market. The income from the livestock selling has reduced as cattles have reduced in built due to fodder scarcity.
- The ropes produced by the villagers (village: Piperio, Dhanpur taluka) are also sold in the local market
- The activities like farm labour, casual labour, livestock selling, poultry selling, selling of Mahua flower, Mahua fruit, selling of timbru leaf and tadi selling serve as a source of income in the Devgarh Baria taluka.
- The sources of income which dominate in the Dhanpur taluka is farm labour, casual labour, livestock selling, poultry selling, Mahua flower selling, Mahua fruit selling, fuel-wood selling, Nilgiri seed selling and rope making. Nilgiri seed selling has completely declined in the crisis year as it's a time consuming activity and fetches less price. Secondly people don't prefer this kind of activity as it involves climbing on large trees which can cause accidents.
- Relief work supported livelihood of the villages during the crisis period. In the Devgarh Baria taluka the relief work was conducted for one month and in the Dhanpur taluka relief work went on for five months.
- The relief work is assigned to a group of people referred to as gang. A gang consists of 6-7 people. Payments, as reported by the people, are made to the gang at the end of the week. In the Devgarh Baria taluka the payment received by the villagers is Rs.1051 per week for a gang of 7 people. It amounts to Rs.25 (per person) per day whereas in the Dhanpur taluka the villagers are paid Rs.600 for 6 days for a gang of 6 persons which amounts to Rs.16 (per person) per day for digging 1 brass (10 feet by 10 feet and 1 feet deep) of land.
- Salt workers get a wage of Rs.70-90 for working 12 hrs. a day. Employment of 8 months is available to them.

2.8 Levels of consumption

The crop production as well as the period of harvesting governs the level of food consumption of vulnerable households. In order to explain the level of consumption it is essential to look into the cropping pattern adopted by households across regions. The cropping pattern has a significant influence on the consumption level of not only those who have agricultural land but also those who are landless. The cropping pattern determines the employment opportunities for the landless and, therefore, their level of consumption.

There are mostly two types of cropping seasons namely *Kharif* and *Rabi* practised by the surveyed communities. *Kharif* is the major crop for the people across all the regions, since it is rain-fed. Only a few households who are generally of higher caste and possess some irrigation facilities can practice *Rabi* cultivation. In Surendranagar and Banskantha high cast groups like Patels and Darbar practice *Rabi* cultivation while in the other districts it was observed that rabi cropping is not done at all. The major *Kharif* crops are maize, bajra, paddy, cotton, til, wheat, jeera, math, mung, tuvar, udad, chaula, arinda, guvar, raido,

aniseed, tobacco, isabgol, groundnut, sugarcane and jute in the normal year. In the crisis year the number of crops grown and production of crops has drastically declined. The major *Rabi* crops are wheat and gram in the normal year, which are not grown at all by the vulnerable group.

As the villagers covered are small farmers in a acre of land they grow 70% staple crop (maize/ jowar/bajra) and 25% in the form of pulses like tuvar/mung/udad. In 5% cases vegetables/guvar/cahula are grown. If paddy is grown then staple crops cover 45% land area and 50% land area is covered by paddy. Cash crops like arida, tobacco, isabgol, sugarcane, groundnut are grown by big farmers and also grown in share cropping.

The villagers reported that the household food stock is maximum in the month of October- November in the normal year as harvesting of kharif crop is done in these months. For the villagers who have less than 3 acres of land reported having enough food stocks from the month of November-June. They start buying grains from the month of July to November. In the crisis year the crop production is reduced to an extent that it doesn't suffice the food requirements of even 2-3 months comfortably. In the crisis year the grain stock lasts from November-February. So the villagers start buying grains from village shop and market for the period from March to October.

2.8.1 Sources of consumption

It can be observed very apparently that for the vulnerable groups the major source of food grains is cash purchase from market and village shop both in the normal and crisis year. However, dependence on this source significantly increased during the crisis. Their home production levels are never enough to address the food needs at the household level as they possess meager land holdings and it is also true in case of those who even possess a bigger land which are unproductive due to the terrain and lack of irrigation. The grains taken from the PDS remains the same in normal and crisis year as the grains provided through this food distribution channel is limited in amount. In addition to this as the family size of the communities covered is high the food grains provided through PDS are not sufficient. The villagers of Dahod district reported that food grains available on the village shop and in market are expensive as compared to the grains available in PDS, which contributes to the reason why food expenditure shows a rise in the crisis year (refer table 2.14).

Chart 6: source of consumption

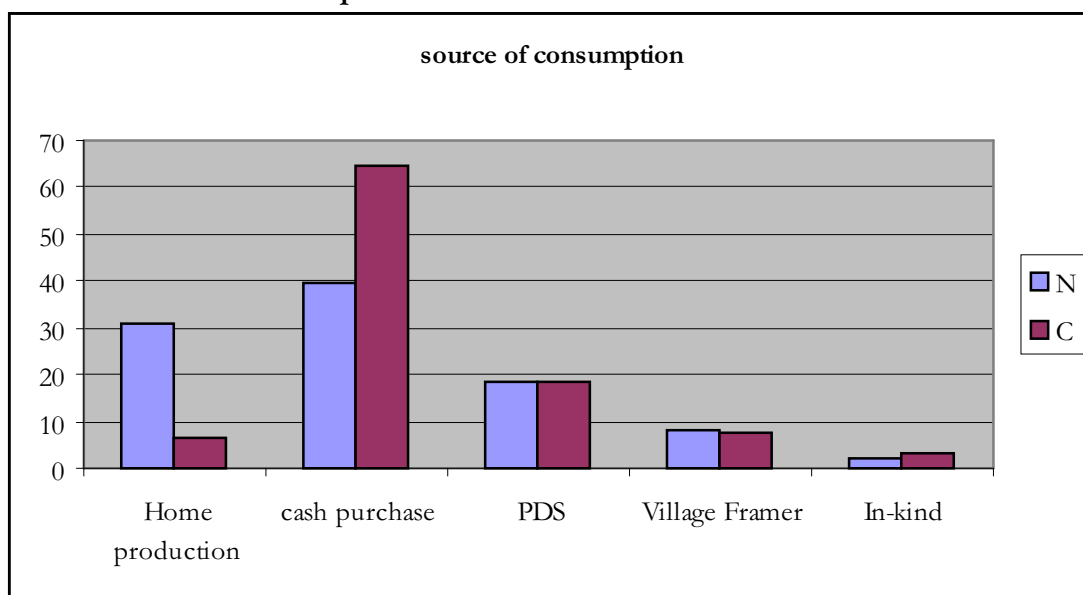


Table 2.13: Source of consumption in normal and crisis years

Sources	Banaskanth a		Dahod		Surat		Surendrana gar		Kutch	
	N	C	N	C	N	C	N	C	N	C
Home production	38	7	70	12	18	5	10	3	20	5
Cash purchase	22	53	17	78	55	65	60	67	45	60
PDS	12	12	9	10	20	20	15	15	35	35
Village farmer	23	22	4	0	0	0	15	15	0	0
In kind	5	6	0	0	7	10	0	0	0	0

* N – Normal; * C-Crisis

In some of the districts like Surendranagar and Banaskantha the villagers buy grains from the big village farmer as he provides grain at low cost as compared to market and in return their travelling cost gets saved. The widow and the aged population are helped with in-kind help from the communities as they lack familial support.

2.8.2 Food and Non-food Expenditure

The poor spend a greater proportion of their income on food items. The study across all the five districts also tries to estimate the expenditures on food and non-food items in the normal and crisis year among the food insecure household. It was revealed through the study that the food insecure households try to compensate the expenditures done in the crisis year by cutting down the expenditure on education, social occasions and health. The reason for this can be explained as the income earning sources prevalent in normal year decline or shift in the crisis year. It was observed across the districts that maximum expenditures are done by the people on buying food grains in the Banaskantha and Dahod district both in the normal and crisis year. The reason accounted for this is the ownership of unproductive land and high dependency ratio.

Table 2.14: Percentage Breakdown of total expenditure on food and non-food items by region.

Regions	Normal Years		Crisis Years	
	Food	Non-food	Food	Non-food
Surendranagar	60	40	65	35
Banaskantha	65	35	70	30
Dahod	65	35	75	25
Surat	60	40	70	30
Kutch	60	40	50	50

2.9 Level of indebtedness

The sources of income show a shift in the crisis year. The food needs of the family are met either by borrowing food or money. The reason for indebtedness in general is to meet the expenditures related to health, social occasions, buying food and to meet the expenses at the place of migration. In order to repay the existing loans and fulfilling agricultural needs land is mortgaged at 0% interest rate within the village. The practice of taking loans from the moneylender is common across all the districts covered. Indebtedness is high in Dahod and Surendranagar districts. The reason accounted for this in Dahod is lack of irrigation facility (checkdams constructed by NGOs have dried

up due to drought) which reduced the production level drastically in the crisis year. In Surendranagar district it was seen that the debts of agaria and salt workers has increased due to the rise in diesel prices and exploitation faced from the salt traders. This leads the salt workers in a continuous cycle of debts.

2.10 Hazards and Coping Strategies

Drought is one of the major natural hazards occurring in one or the other part of Gujarat almost every year. Climatically, more than 70% area is falling in semi-arid to arid climatic condition. The rainfall in the state is unevenly distributed from an average of 340 mm in Kutch to 1800 mm in the southern hills of Dangs. The rate of rainfall is highly erratic with 2 to 3 droughts every year and is concentrated in a few days 15-25 rainy days in most regions.

This hydro-meteorological hazard has direct impact on availability of freshwater for drinking and agriculture (irrigation). Further, the shortage of fresh water affected the overall health of the people in drought prone area. People migrate from one part of the state to other in order to earn a livelihood. Regarding the coping strategies the villagers are coping with their local sources of water (village tank, wells etc) and also with the help provided under government programmes like supply of drinking water by tankers, food aid programmes by government and NGOs, transfer of drinking water/irrigation water through pipelines and canals etc. During recent period people have initiated management of local water resources through the implementation of participatory watershed development work.

2.10.1 Effects of Natural hazards

“God is punishing us with drought and earthquake in which we don’t have a say but this salt work is like hell which is an ongoing process for years together from which we can’t escape as for satisfying our hungry stomach we have to work in the painful process of salt manufacturing” - a koli women, Patdi taluka, Surendranagar

The lack of rainfall resulted in persistent drought situation in the districts. The problems faced due to drought situation mainly were loss of agricultural production due to dependence on rain-fed agriculture, drying of irrigation sources thereby loss of agriculture labour work and loss of income. The dependence on agricultural production for sustenance and surplus sale to meet household expenditure affected districts the most.

Drought also affected the cattle rearing activities due to non-availability of grass and fodder across all the districts - the price of 250 gms dry grass costs a rupee whereas green grass costs rupees 1.50 per kilo in the crisis year. The cattle consume 500 kilograms of dry grass and 300 kilograms of green grass per month. Due to crisis the income generation activities show a decline, which pose difficulty in buying fodder. The villagers during the FGDs revealed that green grass is good for milch cattle as it increases the milk production and thus the livestock income. They also opined that economic insecurities faced at the household level restrict buying good quality and quantity fodder for cattle.

The economic development of people of Gujarat has been marred by the persistent crisis faced by them. Crop loss, loss in forest income, increase in casual labour, loss in income from livestock, migration and going into debt has occurred in all the districts. Table 2.15 depicts all the hazards and impacts in detail across all the districts covered

Table 2.15: Occurrence of Hazard and its Impact

Taluka	Type of hazard/s	Year	Worst year in the memory	Social Impact	Economic impact
Surendranagar	<ul style="list-style-type: none"> • Cyclone • Drought • Earth-quake 	<ul style="list-style-type: none"> • 1998 • 1998 • 2001 	• 2001	<ul style="list-style-type: none"> • Increase in temporary migration in the rann for making salt • The villagers reported going to Junagarh for two months with their families for plucking of cotton and groundnuts • The temporary migration makes the family life of the villagers very excruciating. • Their social groups are disturbed in the village due to continuous migration, which weakens the community interaction, but during crisis the people reported helping each other with money and petty loans. • Decrease in the social occasions • Dietary intake has remained unchanged in the normal and crisis year as they are involved in hard physical labour of salt work. • People reported consuming limited variety of food in the crisis year. • The villagers not as a coping response consume the <i>bawad pods</i> but like the sweet and sour taste of the pods. Its eaten both in the normal and crisis year. • Decrease in food in-take immediately after earthquake • Child labour increased 	<ul style="list-style-type: none"> • There is absence of alternative employment opportunity in the region • Highly indebted • The wages earned by the salt workers have reduced in the crisis year i.e. for working for 12 hrs. in the loading work they get Rs.70 • The people can't be involved in other employment occupation as they lack the skills to do so as they are involved in the salt business since generations, which strengthen their economic insecurity further. • Lack of fodder availability sub-sequently leading to a fall in income from the livestock • 50-60% crop failure • Mortgage and sell jewelry in order to meet the food expenses and medical expenses • The availability of farm labour has declined due to drought • The whole family is involved in the labour work(salt and farm) during the normal and crisis year in order to meet the increasing expenditures • The debts taken by the agaria and the salt labourers have increased in order to meet the increasing price of food and increasing diesel price • The issue of house construction is of foremost importance
Banaskantha	• 3 Drought's faced	<ul style="list-style-type: none"> • 1986 • 1988 • 1998 	Drought 1998	<ul style="list-style-type: none"> ◆ decline in the social functions like marriage ◆ food intake pattern changed in the widows, aged and disabled to nearly half of their total 	◆ Job opportunities are available in ample but due to excessive intake of liquor they are not able to converge the earnings on savings seen only in one village Called Pansa, block

Taluka	Type of hazard/s	Year	Worst year in the memory	Social Impact	Economic impact
				<p>consumption</p> <ul style="list-style-type: none"> ◆ Decline in the food intake of women as they are feeding their husbands and children first and then consuming food in the end. ◆ Change in the food intake i.e. they have switched over food items available at cheaper rates i.e. cereal based diet (wheat, Bajra and Maize rotlas) and red chilly chutney. ◆ Decline in the livestock income and also the consumption of milk products due to less production due to drought. ◆ Temporary migration is seen in village Khairmal block Danta. The villagers are involved in farm and casual labour. The period of migration lasts from November-June in which the availability of work is uncertain. The villagers don't like the separation and family disintegration ◆ Increase in child labour 	<p>Danta.</p> <ul style="list-style-type: none"> ◆ The income procured from livestock showed a decline due to the lack of fodder. ◆ 60% loss in crop production is reported by the vulnerable groups ◆ Selling and mortgaging of land at 0 % to the big village farmer and jewelry ◆ Selling of livestock and poultry ◆ Farm labour has declined and people are engaged in casual labour and relief work in order to cope up the crisis situation ◆ Highly indebted. They are unable to repay the previous loans, which poses a difficulty in obtaining fresh loans. ◆ Wage rate has decreased in farm work in the crisis year. ◆ Income from forest has reduced as the forests have been declared as a prohibited area
Dahod	• Drought-1998	• 1998	• Drought-1998	<ul style="list-style-type: none"> • Increased rate of migration seen as the family size is large so to cope up with the ongoing economic crisis large number of able bodied workers migrate in order to earn a livelihood • Temporary migration is seen all throughout the year. They migrate for 10-15 days in a month ◆ They migrate to Vadodara, Ahmedabad, Kheda, Nadiad, Khambhat, Dhandooka, Sujitra and Tarapur for farm work like harvesting Bajri, Rice and Wheat ◆ They go for casual labour to places like Ahmedabad and Vadodara. • The consumption of chapati has declined 	<ul style="list-style-type: none"> • As the terrain is hilly it lacks employment opportunity so the people have to be contented in whatever little they produce in their land as majority of the land is uncultivable • They migrate to the regions of Gujarat in order to do farm and casual work • The wages earned both as farm and casual labourers have reduced due to the availability of surplus labour in the crisis year • Highly indebted • The livestock is sold in fewer prices in the local market in order to cope up with the monetary requirements of the family

Taluka	Type of hazard/s	Year	Worst year in the memory	Social Impact	Economic impact
				<p>drastically in the crisis year. They have switched to alternative diet i.e. eating coarse maize boiled in water, tamarind kadi and kadi of unripe mango (seasonal). The reason for consuming such a diet is fewer amounts of grain feed more mouths.</p> <ul style="list-style-type: none"> Variety of food items consumed was less in the crisis year, as they can't afford buying it. Increase in child labour 	<ul style="list-style-type: none"> 90% crop failure reported The number of crops grown has reduced due to the lack of irrigation facility and erratic rainfall. Rice production has suffered total damage The money that is obtained by mortgaging and selling jewelry is used to meet the food and medical expenses Land is mortgaged within the village to the big village farmer at 0% interest. A marginal farmer mortgages around 1 acres of land if he has 4-5 acres of land for a fixed duration of years. The marginal farmers can't cultivate the land for the period for which the land is under mortgage The money which is obtained by mortgaging land is utilized in buying agricultural equipments, seeds, fertilizer and for social occasion The availability of farm labour has declined due to drought The debts have increased during the drought in order to cope up with the ongoing crisis. The villagers face difficulty in obtaining fresh loans due to their inability to repay previous loans
Surat	<ul style="list-style-type: none"> Drought 	<ul style="list-style-type: none"> 1999-2000 	<ul style="list-style-type: none"> 1999-2000 	<ul style="list-style-type: none"> Temporary migration seen but is not evident due to crisis. The villagers are mainly daily labourers both men and women migrate in order to earn a livelihood they are helped by villagers and son in order to earn a livelihood food intake pattern has changed i.e. consume food which economically costs less and satisfies hunger too. They eat 'Bhedko' which is made out of coarse Jowar 	<ul style="list-style-type: none"> production of grains has declined in the drought year which lasted for a year 70% crop failure the income from fishing shows a decline due to the decrease in the water level in the River which has affected their livelihood strengthening the economic insecurity level which has an effect on the increased food insecurity level at the household

Taluka	Type of hazard/s	Year	Worst year in the memory	Social Impact	Economic impact
				and Rice boiled into water <ul style="list-style-type: none"> child labour increased decrease in the social functions like marriage 	<ul style="list-style-type: none"> mortgaging of jewelry and land at 0% interest to the big farmers increases in the crisis year the aged and widow depend more on in-kind help from the community members and son
kutch	<ul style="list-style-type: none"> Drought Earthquake 	<ul style="list-style-type: none"> Since 1997 26th January 2001 	<ul style="list-style-type: none"> 26th January 2001 	<ul style="list-style-type: none"> Increase in migration Decline in social functions like marriages Food intake pattern has changed. Harmful eatables like <i>bawad fali</i> consumed as a coping response in villages like Paiya Increase in diseases related to water consumption Decrease in food in-take immediately after earthquake More deaths More women and children died in earthquake Migrants have come back 	<ul style="list-style-type: none"> Less job opportunities No scope for savings Lack of fodder availability sub-sequently leading to a fall in income from the livestock 75% crop failure Selling of livestock Mortgage of jewelry is a common phenomena Decrease in the availability of farm labour. Those hiring labour are themselves engaged as casual worker Increase in the indebted persons Relief work Focus on house construction

Due to the crisis the similarities and dissimilarity across the districts are explained below. Among the **social impact** the **similarities** are:

- Increase in temporary migration makes the family life excruciating.
- Decline in social function like marriage in crisis year.
- Decrease in food intake
- Increase in child labour
- Decline in crop production

and the **dissimilarities** are:

- In Surendranagar intra-community help is seen among people in terms of food and petty cash.
- In Kutch and Surendranagar districts decrease in food intake immediately after earthquake due to destruction of food resources.
- In Surendranagar district people eat *bawad pods* as they like the sweet and sour taste of the pods irrespective of the normal or crisis year.
- The reason for Surendranagar district for being so different is the land being saline, desertification of land due to bawad trees and persistent drought.

On the **economic impact** due to cyclone, drought and earthquake, some of the **similarities** are:

- Lack of alternative employment in the region
- High indebtedness
- Wage earned as farm and casual labour have decreased in the crisis year
- Fodder availability has declined due to drought.
- Mortgage jewelry to fight the economic insecurities at the household level
- Farm labour declined due to crop failure in drought.
- Income procured from livestock has declined during drought.
- Income from forest declined

and the **dissimilarities** are:

- Small farmers mortgage land within the village at 0% interest to the big farmers who reside within the village
- Livestock is sold in fewer prices in Dahod due to economic insecurities faced at the household level
- In Surendranagar district people lack skills for other employment generation activity as they have been employed in salt activity since ages
- In Surendranagar and Kutchh districts shelter is the most important need of the hour as the houses have fallen due to earthquake.
- Job opportunities in Banaskantha are there but in Pansa block due to the increased rate of alcoholism they are not able to converge the earnings on savings
- Aged depend on in-kind income in the Surat district.

Drought, cyclone and earthquake are the three main natural hazards experienced by the people in the districts covered under the study. Not only the marginalised section of the community, but also those who were economically well off felt the impact of the hazards. The cyclone happened in 1998 followed by a drought, which has continued till date. The region was hit by earthquake on 26th January 2001. Maximum damage of earthquake was seen in Kutchh and Surendranagar district.

2.10.2 Coping Mechanisms

The coping strategies as seen during the study are adopted at multiple levels and are situation dependent. The common strategies at the community level is support to one another whereas at the household level, it is resorting to non-farm work near and far away areas depending on the degree of crisis, undertaking hazardous occupations, child labour migration, asset selling, resorting to the credit market, cutting down consumption, etc.

Eating less preferred foods

The tribal communities of Banaskantha, Dahod and Surat district reported eating green leafy vegetable called “ Khatti Ambli”. They mix this vegetable in dal and consume it or make a paste of it and consume it.

It was also observed during the course of study that the outgrowths in the forest areas are used as the only diet for filling the appetite. The women during the discussions also stated serving their family members with soup made of jungle tree leaves. In order to overcome the pungent green colour, a pinch of turmeric is added to make it consumable.

“What can we do ben... we are forced to make our loved and respected ones to drink something that can at least fill their stomach for a while”.

- Women during discussion, Gujarat

This mode of appetite is a big adjustment for the residents of the studied districts also. Their normal diet comprises of bajri, wheat or jowar roti (depending upon the crops grown in the region), green vegetables, rice, khichdi, buttermilk, ghee and a sweet dish (sukhdi). This abruptly reduces to *ghesh* or even eating fruits of *babul* tree (as has been observed in Surendranagar). The people due to crisis reduce on green vegetables, rice or even jowar or bajri roti and adapt themselves to wheat roti (due to its availability from the PDS at a cheaper rate). The women in Banaskantha, Dahod and some villages of Surendranagar district have expressed these views. On the other hand, they give up on rice or other items made from it due to its non-availability.

Limiting portion size

The decrease in quantity of food eaten is the foremost response seen in the crisis year. As evident from the survey, during the normal times, the families reported to consume full meals, which consists of *bajri rotla/ maizē rotla/ jowar rotla, wheat rotla*, vegetables, pulses and rice. However, during the drought period, there was a change in the consumption pattern. The diet reduced to almost half in the crisis year by both men and women. No change in the consumption pattern was seen in case of the children.

The quality and quantity of food also gets affected during crisis period. In a normal year, consumption of males was 2-3 *rotlas*/meal, women ate 1-2 *rotlas*/ meal, children had 1½ - 2 /day and elders had 1-1/2 *rotlas*/ day on an average whereas in the drought year the consumption was reduced in case of males to 1-2 *rotlas*/day, women 1 *rotlas* / day. Whereas the consumption of children and elders remains same as in normal years.

The people across districts showed dependence on non-vegetarian diet i.e. meat, fish and eggs both in the normal and crisis year. The consumption of goat's meat was maximum during festivity like marriage, diwali, holi etc. on an average a family consumes 10-12 Kg.

meat annually i.e. one goat. The consumption of eggs depends on availability of it on the village shop. Men and adolescent boys consume 2 eggs, women and adolescent girls consume 1-2 eggs while children consume 1 egg. The consumption of fish is seasonal.

Limiting the quantity of food served to an individual was practiced in the majority of cases across the entire region during the crisis. As a coping response these households reduce the meal size served to each individual except children during a crisis year. People in the Surat district preferred eating “*bbedko*”, a preparation of coarse maize boiled in water. The reason for dependence on such kind of meal is less grain fulfils the requirement of many mouths. This kind of meal is preferred more by the widow and the aged due to the food insecurities faced at the household level

Borrowing either food or money to buy food

It was seen across all the districts that people depend highly on moneylender or Bania for getting money for buying food. Borrowing of money or grains lead to permanent indebtedness

Maternal buffering

It is a common practice that mothers gives her share of food to the children limiting her own share or skipping it fully. This is the practice of a mother deliberately limiting her own intake in order to ensure children get enough to eat. This practice was evident across all the social and economic groups in the study areas.

Skipping meals

It was seen across all the districts covered that in order to cope up the ongoing food insecurities at home women have a tendency of missing meals in order to give adequate meals to the other family members.

Labour response

As the agriculture is mostly rain-fed due to persistent drought the villagers across all the districts have suffered loss in agricultural production. The agricultural income provides food for only 2 to 3 months in a crisis year. As the crop produced is insufficient so in order to sustain a living the villagers across majority of districts migrate for labour activities. This was observed to be the practice in normal years as well. The people of Surendranagar district have reported working in the salt pans as salt labourers in both normal and crisis year in order to sustain a living, as no alternative employment is available to them. In the crisis year it was seen that the child and adolescent labour has increased in order to fulfil the monetary requirements of the family.

It was also revealed through the study that the source of income from home production has decreased in the crisis year compelling the people to work as labourers

Cropping response

It was observed that in the crisis year the crops grown by the farmers were same as normal year in a hope to get a good crop production but due to persistent drought the crop grown never reached maturity leading to production loss. Across all the districts covered it was seen that vulnerable people prefer growing staple crops like maize, bajra and jowar in major land area as it major part of their diet.

Livestock response

During the crisis year it was seen that the income from livestock decreased. As the built of cattle decreased due to fodder scarcity the cattle fetched less price in the local market but inspite of this the vulnerable household were engaged in cattle selling in order to meet the food insecurities at the household level. In the Dahod district the villagers reported selling cattle for Rs.400 in the crisis year much less than a price of Rs. 1500 – 2000. In Kutch district it was reported that as the villagers are not able to feed cattle in crisis year they sell cattle at “Panjrapol” where cattle are looked after.

Community response

In the study it was revealed that intra-community help was not prevalent among the people, as the extent of poverty is very high. The people are so poor that they face difficulty fulfilling two square meals of the day. It was seen that only the aged are helped by the community people with food when their household stock depletes as they lack familial support.

Family response

During the crisis year it was seen that all the family members including children work with parents as labourers in order to earn a livelihood so that the household expenditure can be supported.

Other assets response

In all the districts covered it was seen that credits were taken by mortgaging land and jewellery for social occasions in the normal year which shifted to meeting food requirements at the household level in the crisis year. In almost all the districts covered people reported mortgaging jewellery at 3% interest in the crisis year. The jewellery was mortgaged to the moneylender in order to fulfil food requirements at home. In Banaskantha, Dahod and Surat district it was seen that the assets like land was mortgaged by the marginal farmer within the village to the big farmer for buying seeds, paying the rent of tractor or ox for ploughing land. The land was mortgaged at 0% interest within the village in the presence of village ‘Panch’. The marginal farmers reported that they could not cultivate the land during the period for which the land was under mortgage.

CHAPTER III

INTRA-HOUSEHOLD VULNERABILITY AND GENDER

Many great revolutions of the past century have its genesis from the hungry and impoverished mouths. Marrie Antoinnet's declaration of eating cakes instead of bread laid the foundation of the French Revolution. The Industrial Revolution broke out in England due to the prevalent poverty and the proposed step towards increasing it by the installation of machines and in turn preparing many more impoverished stomachs. In India, Mahatma Gandhi stressed on the need for cottage over the core industries. The debate over the need for computerisation continues in the 21st century. This also is a manifestation of the concern that might lead to many more emaciated mouths.

All these incidents throw light on the consequences that have emerged out of food insecurity in the past. Besides, it also attempts at looking into the probable consequences it might have in the long run. Today also there exist millions of hungry mouths making unthinkable adjustments for survival. Looking at the women across the four districts, one would shudder to think of a day under such circumstances. With a handful of flour and vegetables that can barely suffice the need for even a single individual, the women feeds the entire household comprising elders, children and the male members keeping herself half-fed or hungry.

The present chapter takes a stride through the difficult lanes traveled by the women during the normal and the hard times. This is besides the various methods adopted by her in terms of home management.

3.0 Tasks Performed by Women

“Ben why do you want to know the different household work we do every day? Isn't it a part of every women's life? It is neither easy nor hard when we know that it has just to be performed. There is no escape from these activities till the last day of our life.”

In rural Gujarat, the women perform various household activities from dusk to dawn. As is evident from the above statement, it is perceived as a part of their daily routine. Therefore, the tasks are performed more in a mechanical or mundane fashion. Washing, cleaning, cooking, childcare, fetching firewood, milking the cow and mortaring the floors and the walls of their houses are some of the regular activities discharged by the women. During the Kutch field visit, (after the earthquake), it was observed that a major portion of time was spent on cooking and mortaring their walls with cow-dung. In the earthquake-affected villages, women devoted more time towards rebuilding and arranging the household goods in the temporary structures.

The women were asked to rank the household activities performed by them based on their perception of the activities as easy, difficult and most difficult to perform. Women expressed that tasks like cooking and cleaning of house are very easy. Collection of fuel wood, fetching water and fodder besides plastering the houses with cow dung is very time consuming. In few districts like Surendranagar the women like the otherwise perceived difficult tasks of fetching water and washing clothes. A closer look at the remark tells us that this is the only outlet that allows them to interact with the other women of the village. Childcare is a hard nut to crack. This view expressed by the women is the outcome of the care and attention demanded by the children. This view has been expressed in almost all the districts.

The women do not wash the clothes daily. Water scarcity in nearly all the districts makes the women wash them every alternative day. In some villages of Banaskantha, Surendranagar and Dahod the water scarcity makes the washing clothes possible on a weekly basis. Thus, it is not a very difficult household task. This holds true for both normal and the crisis years. However, the women find washing clothes as the most difficult activity during normal times due to problem of water availability in Kutch in the period following the earthquake, availing water was all the more difficult as the pipelines were damaged. The women working on salt pan and the farms find their work to be very difficult. The primary reason is that this is an additional task they need to perform after completing the household work. In Surendranagar, as has been observed during the study, working in the hazardous salt pans is a way of life in absence of a viable option. The women dislike the salt work as the drudgery involved in the salt work and exposure to heat and chemicals gives them augmenting pain.

They also find the labour work to be physically strenuous but in absence of an alternative resort to this work mainly for supporting the family.

We do not know what is the definition of free time. We do not even have the time to take care of our children when we are forced by the situation to work in the agar. All we lead is a life where except for compulsive work, we do neither have time nor money for making pickles or papad so that some more money flows in to make our life easier.

-
*A salt pan labourer,
District: Surendranagar*

The activities of women across district in normal and crisis year are represented in table 3.1. There is a difference seen in the tasks performed by women in the normal and crisis year.

Table 3.1: Tasks of Women in Normal vs. Crisis Years

Activity	Kutch		Surendranagar		Banaskantha		Dahod		Surat	
	Normal	Crisis (Earth quake)	Normal	Crisis	Normal	Crisis	Normal	Crisis	Normal	Crisis
Water fetching	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Clothes washing	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cooking	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fire wood collection	✓	✓	✓	✓	✓	✓	✗	✗	✓	✓
Casual L	✓	✓	✗	✗	✗	✗	✓	✓	✗	✗
Salt work(Oct-May)	✗	✓ seen in Bhachau and Anjar	✓	✓	✗	✗	✗	✗	✗	✗
Farm labour	✓	✓ but declined in the crisis year	✓	✗	✓	✓	✓	✗	✓	✓
Casual labour (Dec-May)	✓	✓	✗	✗	✗	✗	✓	✓	✗	✗
Relief work	✗, seen only in Bhuj in normal year	✓	✗	✗	✗	✓	✗	✓	✗	✓
Embroidery	✓	✓	✗	✗	✗	✗	✗	✗	✗	✗
Bead-work	✓,only seen in Anjar	✓,only seen in Anjar	✗	✗	✗	✗	✗	✗	✗	✗
Tie and Dye	✓,only seen in Anjar and Mandvi	✓,only seen in Anjar and Mandvi	✗	✗	✗	✗	✗	✗	✗	✗

Drought and earthquake in the districts covered mark the crisis year. The earthquake did not have a devouring effect on the other four districts (Surendranagar, Banaskantha, Dahod and Surat) as it did on Kutch. Table 3.1 indicates that the women besides household chores are involved as labourers in salt pans (Surendranagar), farm work (Banaskantha) and casual labourers (Kutch, Surat & Dahod). The women folk of Kutch district reported being engaged into skill development and income generating activities like embroidery, bead work and tie and dye whereas the women of Surendranagar district migrate to the rann for 8 months along with their children as salt labourers. In the other districts it was reported that if the elder are at home to take care of children then only women migrate otherwise men migrate to earn a livelihood. The women of Banaskantha district reported not migrating as they belong to the higher caste groups called the Darbar. The women invest major part of the day's time in farm and casual work in all the districts covered. They preferred farm work to casual labour, as it's a work in which they are involved since years and can be managed with household work. The women of Surendranagar district hearsay that the salt work is high in winter months as the work involves eminent physical labour and is done under hazardous conditions like extreme

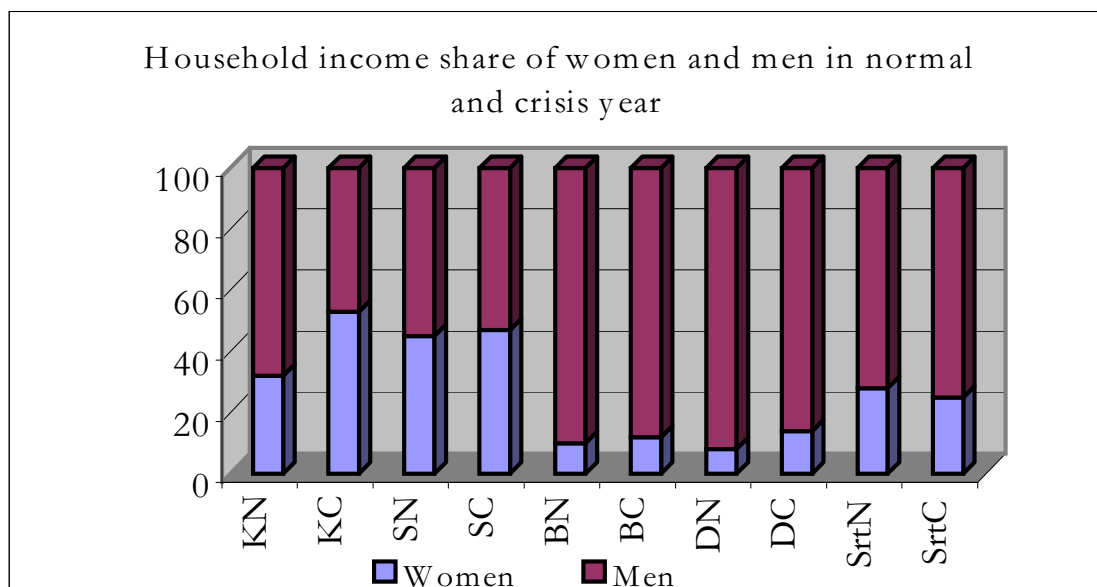
temperatures prevalent in the rann. During the years of crop failure, they are burdened with additional tension of generating income for the household, as it becomes crucial for making the two ends meet. Except for Surendranagar, the scarcity relief work comes to the rescue of people in all the other districts. The women also participate actively in the activities like roadside leveling, pond digging and deepening besides other activities like construction of check-dams and roads. The women folk across all the districts opined their dislike for the relief work as it makes them dirty with mud but in order to earn a livelihood they don't have a way out but to toil in the work available.

3.1 Women's Role in Income and Expenditure

"We are involved in embroidery work. We work on 4-5 meters of cloth for which we are paid an amount of Rs.40. The women in our community do not have any say in spending the amount, which they earn, without the consent of their spouses. We can't even save money as whatever we earn, goes in the hands of our husbands. If we express a desire to do something on our own, it's totally ignored".

-Women artisans' - district: Kutch

Chart 1: Household income share of women and men in normal and crisis year



KN- Kutch Normal	BN-Banaskantha Normal
KC-Kutch Crisis	BC-Banaskantha Crisis
SrtC-Surat Crisis	Srt N – Surat normal
SN-Surendranagar Normal	DN-Dahod Normal
SC-Surendranagar Crisis	DC-Dahod Crisis

Table3.2: Women’s Occupation – Normal vs. Crisis Years %age

Occupation	Kutch		Surendranagar		Banaskantha		Dahod		Surat	
	Normal	Crisis	Normal	Crisis	Normal	Crisis	Normal	Crisis	Normal	Crisis
Salt work	0	2	30	35	0	0	0	0	0	0
Farm labour	9	7	10	5	10	5	3	1	25	20
Casual labour	8	18	5	5	0	2	5	8	3	3
Relief work	2	6	0	2	0	5	0	5	0	2
Fishing	0	0	0	0	0	0	0	0	0	0
Embroidery	6	9	0	0	0	0	0	0	0	0
Dairy products	2	1	0	0	0	0	0	0	0	0
Tie & Dye	3	4	0	0	0	0	0	0	0	0
Bead ornaments	2	6	0	0	0	0	0	0	0	0
TOTAL	32	53	45	47	10	12	8	14	28	25

It can be interpreted from Table 3.2 and Chart 1 that the contributions made by women are maximum in the Kutch district because there is lack of employment opportunities from agriculture as majority of the participants canvassed in Kutch were landless. In the crisis year the contributions made by women show a rise in order to face the ongoing food insecurities at the household level

In Surendranagar, both in normal and crisis year women’s participation in livelihood generation is nearly equal to half of that of men. Women are involved as salt workers in the normal year majorly followed by farm labour and casual labour. Association as salt workers increases as agricultural and casual labour decreases in the crisis year.

In Banaskantha, women’s participation in sharing workload is low as compared to men both in the normal and crisis year. Women are involved as farm labourers in the normal year. They have shared the responsibility of work with men in the crisis year by working as casual labourers and by getting involved in relief work. The reason accounted for this can be the decline of farm labour in the crisis year so to equate the income of household they are engaged as casual labourers. The contributions made by women are less as the sample villages covered had more population of Darbar community.

In Dahod, women’s participation is less in normal year, which almost doubles in the crisis year. Women are engaged as farm labourers and casual labourers in the normal year but availability of casual labour is more in normal year as the land is uneven and unfit for agriculture which further increases in the crisis year and is aggregated by relief work. In Dahod district the workload shared by women is less as compared to men due to the cultural construct of the sample tribal villages covered i.e. women are not allowed to go out of the house to earn.

In Surat, as the availability of farm labour is more in the district, women contribute their share of income by working as farm labourers followed by casual labourers. It is very-very less as compared to men the reason for this is men go to the nearby towns and villages to earn returning the same day whereas women take care of the household chores. In crisis year farm labour decreases a bit but is compensated by relief work, which is conducted in the crisis year.

An inference that can be drawn by the data presented above is maximum participation of women i.e. almost half of the household income is contributed by women in the Kutch district followed by Surendranagar district. In other districts women's contribution is comparatively low due to caste composition of the area or their involvement in household chores.

Overall it has been observed that across all the districts that men bear the mantle of decision-making especially those monetary by nature. The women in all the five districts are involved in economic generation activities be it farms, casual, salt pan labour or activities pertaining to embroidery, beadwork or *mawa* making. The women reported getting a wage of Rs. 30-40 as farm labourers and casual labourers across the districts covered. The women of Surendranagar district reported getting Rs.70-90 for working as salt labourers. However, the diffident dominating her expressions and gestures clearly puts her in to the category of secondary bread earner of the family in spite of contributing almost equally as compared to men. However, these remain confined solely to the labour input and earning the wage in cash. The true picture projects that the entire income is handed over to the head of the household especially the husband who decides on the future course of action. This is despite the shouldering of responsibilities on the same platform.

Banaskantha is a face in the crowd the women from the tribal community are assertive. They seem to be proactive. In the other districts, however, despite being an earning member through the conventionally defined men's job, women's decision-making is limited to household chores. She usually takes decisions on daily purchases of the household, buying small things for children preparation of food etc but the tribal women of Banaskantha reported keeping accounts of the family and the entire household.

What do the men know about the kitchen? When we take care of the food and other needs of the family, don't you think, we have the full right to decide on the income and expenditure of the family.. we mean the well-being. This needs to be the picture everywhere.

*- tribal women during discussion
District: Banaskantha*

The women however, do not display the pseudo-feminist attitude. Instead there is sympathy extended towards their counterpart. In Banaskantha and Surat district men are preferred more in farm work than women. The reason for this can be accounted as in Banaskantha the ethnicity group in consideration is Darbar and in Surat the people have a comparatively higher standard of living as compared to the other districts.

3.2 Women's Access and Control over Resources

Women are the most vulnerable at the household level. This is despite her desperate attempts of pulling in resources that she remains behind the long veil. She lacks the right to control the resources she earns. A women is accountable to men for all the expenditures done but a man doesn't owe any explanation for his expenditure even if it is unproductive.

The primary objective of this section is to determine the access and control over resources by women. In Gujarat women have the access to land, money, jewellery and commodities in home like utensils, food grains etc. However, the interesting aspect is the

fact that although adorned by women decisions pertaining to the purchase and sale of jewellery lies with the men. During the study in Gujarat, it was seen that a majority of the women did not adorn any jewellery. As narrated by them, they have all been sold off due to their inability to pay-off the mortgage amount. The land holding and land ownership predominantly lies with men primarily due to patriarchal system prevalent in India. The accessibility and ownership of the livestock also lies with the men. The irony is the fact that the women in all the five districts take care of the livestock right from milking to feeding, washing and cleaning.

The custom of marriage is marked by magnanimity from the progenitor's side. In the tribal communities of Banaskantha and Dahod men give dowry to compensate for working hand received from the bride's house but in case of divorce or separation if a man withdraws a relation with his wife then possession of dowry goes in the hands of wife. This is a peculiar custom seen in tribal community in the course of adverse relationships.

3.3 Women in Decision Making

“Ben how do women know what's right and wrong for her. Men see the world from various perspectives. They are definitely more capable than a woman is. In fact, they should guide a woman's actions”

These words uttered by an elderly lady tells in generic terms the overall situation of women seen across the five studied districts of Gujarat.

Although women contribute significantly to household income, men dominate the decision making process both within and outside the family. During the discussions, women indicated that they have very little role to play in decision making process regarding children's education, migration, health care, sell of livestock, the type of crop to be grown and buying of grain stock for household purpose. The consent of women is not taken in any important matter, as they are considered inferior to men abridges their decision to procurement of groceries, cooking meals and appropriation of accoutrements for children.

It is interesting to note that loan off take which fulfils the expenditure during crisis year is entirely men's decision in which women don't have any say. They are almost unaware about the amount of loans taken, rate of interest and the mode of loan repayment.

Women do not have any role in the community level decision-making process either. Men take decisions on their behalf totally nullifying their role in community level participation. She is allowed to work in activities carried out under village development, but her opinion is not sought regarding wage fixation, work to be undertaken etc. Generally, men determine her level of participation in any work outside the house.

In certain districts like Kutch, it has also been observed that despite the woman of the house being the village *sarpanch*, the men tend to overshadow her by dominating discussions of any nature. In the Darbar community, as has been observed during the study in Kutch, the women do not come in front of men, nor do they talk loudly or express themselves openly before the elders. In these families women have no role in decision making. It is only in unusual circumstances i.e. in women headed household, she may be forced to take decisions on her own. It was found only in the female headed

households that they take all the household level decisions as they lack support of their spouse.

3.4 Intra-Household Distribution of Food

The women in Indian society is called the “Annapurna” i.e. one who fulfils the food requirements of others but in actuality she feeds others at the cost of keeping herself under-fed. They serve the food to elders, male members and children first sacrificing their share of food in order to cope up with the ongoing food insecurities at home. If the cooked food gets consummated they satisfy their hunger with tea or buttermilk (seen in Kutch) or by skipping meal of one time deliberately in order to satiate hunger of family members especially children. On top of all this woman across all the districts undertake fasting on religious grounds like Navratri, Sawan, Pancham which involves long days of fasting and in normal weeks at least twice a week which may increase to thrice a week increasing the rate of mal-nourishment further. The NFHS-2 data of Gujarat reveals certain important facts about women in Gujarat i.e.46.3% women are anaemic between the age of 15-49years and percentage of women with BMI below 18.5 is 37%. These facts clearly indicate the level of malnourishment, which the women are suffering from.

Consumption of stale food is seen quite often. Their dependence on tubers, pulses, sprouts or any nutritious item is very scarce. Certain tribal women of Banaskantha and Dahod district also secretly reported giving up on the non-vegetarian items. During the normal years, it forms an integral part of their food basket. During crisis years, they have no other option but to compromise on their consumption pattern. The other mentioned diets during the crisis years are *chapatis*, onion and potato curry and chutney made of red chilli and garlic which clearly denotes that as a coping response women have reduced vegetable consumption due to lack of affordability

Table 3.3: Dietary intake of families/meal across all the districts covered (approx. in cooked form)

Food items	Major nutrients available	Normal year	Crisis year
Bajra /Jowar/makai /chapati rotla (200 gms.) eat bajra chapati/rotla during winter and monsoon.	Energy, protein, invisible fat, vitamin B1, vitaminB2, folic acid, iron fibre	2 chapati/ rotla for women, 3-4 for men, 1-1.5 for elders & children	1-2 chapati/rotla, 3-4 for men, 1-1.5 for children
Wheat chapati/ rotla (150 gms. during summer)	Energy, protein, invisible fat, vitamin B1, vitaminB2, folic acid, iron fibre	3-4 chapatis/ rotla for female, 4-5 for men and 1-2 for children. Occasional and seasonal dependence on wheat.	2-3 chapatis/ rotla for females, 3-4 for men, 1-2 for children. Occasional and seasonal dependence on wheat.
Rice (occasional)	Energy, protein, invisible fat, vitamin B1,	200-300gms/ men, 100-150 gms/women, 100	Occasional but prefers khichdi in crisis period.

Food items	Major nutrients available	Normal year	Crisis year
	vitaminB2, folic acid, iron fibre	gms/ children	
Khichdi (prepared out of rice and mung dal)	Energy, protein, invisible fat, vitamin B1, vitaminB2, folic acid, iron fibre	300-250 gms for men, 200-250 gms for women, and 100-150 gms for children. Khichdi consumption is less in normal year as they prefer to eat more chapati	Amount is almost same but more consumption of Khichdi in the crisis year. They eat khichdi for dinner
Vegetables (brinjal, cabbage, onion leaves, tomato)	Carotenoids, folic acid, calcium, fibre, invisible fats, vitaminB2, iron.	250-300 gms. for men 150 gms. for women, and 50-100 gms. for children	Not available during this period
Butter milk**	Protein, fat, vitaminB2, calcium.	400-500ml. for men, 200-300 ml for women, 100-150 ml for children	Nil or very less due to lack of availability
Milk (for tea and giving milk to children)	Protein, fat, vitamin B2, calcium.	1 kg. - 1 ½ kg.	Shortage of milk (200 ml.) that meets with only tea requirement for the members of the family.
Potato & onion Vegetable	Energy, protein, invisible fat, vitamin B1, vitamin B2, folic acid, calcium, iron, fibre.	250 gms for men, 150 gms women and 100 gms for children	The consumption is more frequent as the other vegetables are not available.
Pulses	Energy, protein, invisible fat, vitamin B1, vitaminB2, folic acid, iron fibre	150 ml for male, 100 ml for female and 50 ml for children	Occasional(only in Dahod & Surat districts)
Red Chilly Chutney	Proteins, fat minerals, fibre, carbohydrates, calcium, phosphorous, iron	20-25gms. /men and women, 5-10 gms. / children.	More than normal year.

* The villagers of Kutch and Surendranagar consume Bajri chapati in winter and Wheat chapati in summers while the villagers of Banaskantha and Dahod depend on maize chapati all year through. The people in Surat district reported dependence on Jowar chapati.

In Kutch after the earthquake it was observed that the food intake among all the adult members had reduced as their food stocks got affected during earthquake but in such crisis also the hunger of children was satisfied in the same way as the normal year. The dietary intake however resorted to normal after two days of quake when the NGOs

came in for help. During the normal times, the consumption of vegetables (like brinjal, guvarfali, cauliflower, onion, potatoes, cabbage and tomatoes) in Kutch has been reported about 100-150 gms by men. During drought, the consumption of vegetables dropped to 50-75 gms. During this period, their consumption was limited to very few vegetables like brinjal, onion, tomatoes and potatoes. After the earthquake, they received onions and potatoes from the PDS and NGOs.

It can be seen very clearly across districts that adolescent girls are most vulnerable in terms of accessing food within the household, which has much to be blamed on the age-old culture in the country, women as an image of sacrifice. However, on probe, this does not seem to have an overt implication on their health, as their consumption of cereals is not very low. Moreover, they do not consult doctors on the matter of nutrition and have accepted it as a way of life.

Conclusion

The women contemplated that as the households are poverty stricken since ages so they have a dietary pattern, which is consistent since years. The women opined that lack of affordability of nutritious food is the biggest factor responsible for mal-nourishment among women across the study. In addition to this they also are unaware about nutrients which are readily available and cost less.

A peep in to the food basket of the vulnerable section during the crisis years is nothing short of a tragic event. The ways adopted to satiate hunger and the silent sacrifices through the fasting initiates a wish to create alternatives in terms of job and food. The women require a diet rich in calories, fat and protein but from the study it was found that the diet which they are consuming is deficient in calories, Vitamin A, Vitamin B-complex, Vitamin C and Iron making them deficient in all essential nutrients. In the study approximate RDA was also estimated. The standard RDA of these women workers should be 3800 Kcal/ day as they are engaged in physically strenuous work but from the diet which they are consuming the RDA among the women workers comes out to be 1778 Kcal/ day. This clearly indicates that women are deficient in 2022 Kcal/day, such high calorie deficiency is a direct indicator of many expected deficiencies, which the women may be suffering from. The expected nutritional deficiencies might be PEM, anaemia and Vitamin A associated deficiency.

CHAPTER IV KNOWLEDGE AND PRACTICES ON HEALTH AND NUTRITION

4.0 Introduction

Health is heavily dependent on the dietary pattern practised by the people. It has been observed during the study that the intake of the people especially the women, is highly imbalance. However, it needs to be mentioned here that the reported pattern is more a coping response for the vulnerable section than a deliberate choice. Gujarat is a state that has been tormented by the natural calamities like drought, earthquake or cyclone in succession since many years now. The coping mechanism and the alternative dietary pattern strongly dominate the scenario. Co-existing with the natural vagaries is the cultural dimension that envelops several beliefs and practices that is very hard to overlook. It in turn shapes the way of life primarily the eating habits.

An attempt has also been initiated to look into the various areas concerning the healthy existence. These include the feeding behaviour, childcare, hygiene behaviour, health seeking behaviour etc. that influence the nutritional status of individuals. This chapter attempts at understanding the prevailing practices of communities especially vulnerable sections which include Scheduled Caste, Scheduled Tribes, Muslims, Rabaries, in terms of hygiene and health care that can augment nutritional insecurity.

4.1 Drinking Water

In rural Gujarat, less than a fourth the population depends on the handpumps and the wells for accessing drinking water (NFHS-2, 1998-99). However, all the districts except Kutch covered under the FIVP study in Gujarat largely receive drinking water from handpumps and wells. The Kutch district receives water through the pipeline. The preference for this source is so high that even during the drought period they continue to drink water from the pipeline. However, scarcity through this source (supply usually once or twice in a day) forces villagers to get tankers and also draw water from the well although it is highly saline. Due to the earthquake, water supply was interrupted for 4-5 days at length. During that time, pipe-water was contaminated however people continued to use the same but in a few villages water was chlorinated with individual initiatives like *sarpanch* of the village in this district. It led to the rise in cases of diarrhoea, vomiting, headache, the panacea for it was provided by the NGOs and the health providers. In the other districts where the water source was from handpumps and wells reported decline in the water table due to drought which has largely affected the water supply in the villages.

Had the social organisations not been there, the number of deaths and diseases in our villages would have been far higher than what it is today. Just imagine our plight ... our houses razed to the ground, our near and dear ones either hurt or dead and the health of the survivors ... in a poor condition. At this hour if someone comes with help to you and that too with something like medicines... that person or the sanstha (organisation) becomes your God.

- a resident of Kutch district

Surendranagar and some villages in Banaskantha receive drinking water through the pipelines also. Tankers from the “Gujarat Pani Purotha” acts as an alternative source during the summers and the drought period in all the studied districts. It has been

observed through the discussions that the water from the tanker is also a relief as it suffices the need (thirst) of the domestic cattle.

The villagers in the Dahod and Banaskantha district reported difficulty in accessing water from the tanker as their household are located on a hilly terrain. Except for Surendranagar the water in other districts is potable. The water tastes saline in Surendranagar district. The drought, which exists since past three years, has made the availability of drinking water scarce. SEWA, which is actively working in Surendranagar, has tried to address the problem by developing a recharge roof water harvesting structure in which rain water can be stored underground. As reported during the discussions, the villagers said that the village had nearly 80 households out of which only 35 households had this structure. The residents showed keenness on having more such water harvesting structures in the village. The underlying reason is the highly prevalent casteism ruling the village social life that does not permit the people from the lower caste to access water from the upper caste household¹.

Filtration is the most common way of purifying water practised by the women. Except Kutch, this is done by straining the water into the earthen container known as *matla* in Gujarat. It is worth noting that the water though stored in earthen containers in Surendranagar, Banaskantha and the Dahod districts, steel containers are used for fetching water. In Surat, steel water containers are used for both collecting and storing water.

All the studied districts get chlorinated water. Although in most of the cases, it is the official chlorinating the water, in Surat the ANM and the doctor at the PHC do so regularly (chlorination of the handpump water). The urban population in Kutch however, is engulfed with the problem of unclean drinking water through pipelines with a common tap for the inhabitants of the slum. Incidences of diarrhoea, cramps in the stomach, vomiting, headache due to indigestion and fever has been reported as very high before as well as after the earthquake.

Caste discrimination is an another telling issue that spills over within the area of water accessibility. Besides Surendranagar, that has a village forbidding the entry of the lower caste even if they come temporarily for some work, it also exists in the other three surveyed districts of Gujarat in one form or the other. In Dahod, each cluster has a handpump. The clusters have been formed on the caste basis. No trespassing for fetching water is tolerated in this village at the micro level and at the district level. The maintenance of handpumps is the responsibility of Panchayat.

A surprising practise seen during the study is the prevalent discrimination within the lower caste also. The SC women standing at the top of the staircase of the well fill the vessels of the ST and the OBC women from a fairly large distance. This has been observed in the Surendranagar district.

In the past a family has been burnt alive in this village. Their own fault was that they were Harijans. Forget fetching water their (lower caste) shadows are also not tolerated in this village.

A resident of Ajitgadh village in Surendranagar district

¹ The village in mention has one roof water harvesting structure between two houses. This is posing to be an inconvenience for the villagers as the caste factor is seeping into this aspect and thus not allowing a comfortable access.

Except for the women from the Darbar community in Kutch, the women and the adolescent girls in all the five districts covered under the study shoulder the responsibility of gathering water from the resources. A large part of the day is spent in collecting water from the wells, stand post or handpumps in all the districts. The women and girls suffer from bodyache especially the hands and the shoulders. This can be specifically attributed to the 4-5 steel water containers they carry at a time. In the Darbar community men and younger boys undertake all outside work including fetching water from wells and ponds. This is a feature irrespective of the situation, normal, drought or earthquake years.

4.2 Iodised Salt Use

Iodine is one of the essential micro-nutrient of the edible salt consumed by us in our daily life. The World Health Organization (WHO) states that lack of iodine can lead to various disorders like miscarriages, cretinism, brain disorders and retarded psychomotor development. These disorders are known as Iodine Deficiency Disorders (IDD). The iodine deficiency is one of the most important causes of mental retardation and can be avoided by using iodized salt.

In 1988, the prevention of food and adulteration act was amended to fix the minimum iodine content of salt at 30 parts per million (ppm) at the manufacturing level and 15 ppm at the consumer level (Ministry of Health and Family Welfare, 1994). The Government of India has advised all states and union territories to issue notifications banning the sale of edible salt that is not iodized. However, the ban was lifted in September 2000 (National Family Health Survey- 2 [NFHS], 1998-99). Gujarat has nearly a third households that consume non-iodized salt. The proportion is slightly higher when looked in relation to India as a whole (NFHS-2, 1998-99).

The primary cause of concern is the fact that the level of awareness on this issue is not very high within the rural population. An attempt was made to find the proportion of population aware of and utilizing iodized salt in their regular meals. The rapid kit test was used for measuring the iodine content of salt consumed by people residing in the Kutch and Surendranagar district. The process undergone is as below:

Minimum 2-3 households were taken as samples for carrying out the test. The following steps were undertaken in carrying out the salt test:

A drop of the solution was put in the little quantity of salt that was taken from the selected household

An attempt was made to see if the colour of the salt turned purple as this would determine the presence of iodine in the salt

In case the salt did not change colour a drop or two from the alkaline solution was put in the salt. This would determine the salt's being alkaline by nature

If the salt did not change colour despite the presence of both the solutions, it determined the absence of not only alkalinity but also iodine from the salt

Twelve out of the seventy-eight tested samples contained traces of iodine. The residents in Surendranagar district are in a large number involved in salt pans. Consequently, they use raw unprocessed salt of the salt pans. As result of it none of the salt sample tested for iodine in the Surendranagar district show its presence. The people here are not aware of the positive effects of iodine on human health.

Those samples containing iodine were reportedly purchased from the local shops located within the village. In the post earthquake period however the salt being used by the villagers is iodized as it has been provided as a part of the food kit by the NGOs to the villagers. The salt purchase is based on availability and they are not aware of the serious consequences of not consuming iodine from health and nutrition points of view. Thus, awareness generation on iodized salt and its benefits needs to be undertaken.

Strangely it was found in one of the studied villages of this district that the salt distributed by an NGO after the earthquake (as a relief material) was non-iodized.

“The salt available in the market is very expensive. We thought that when we are working in the salt pans we could at least curtail on one of the expenses. No one ever told us that the salt that has iodine is good for health.”

- A woman working as a salt pan labourer, district Surendranagar

4.3 Garbage Disposal and Diseases

A clean dirt free surrounding is demanding in more than one ways. It not only calls for a proper source of garbage disposal but also an appropriate arrangement for the disposal of human and animal waste. Nearly all the villages of the studied five districts of Gujarat are dogged with the menace of houseflies and mosquitoes. This is a major cause for the prevalence of diseases like cholera, malaria and diarrhoea besides the gastric ailments.

79% rural household have no toilet facility at all (NFHS-2, 1998-99). This aspect holds true for the studied districts of Gujarat also. None of the districts, on the whole, have concrete structure as far as the latrines are concerned. The residents access the open spaces lying close to the village periphery. In case of ailments like diarrhoea, the patient uses the compound of the house. Very few household belonging to the upper caste in the villages have latrines constructed within the household. As reported by the people during the discussions-

“Even the Darbars and the Patels go out in the open for defaecation. In the villages, we do not have latrines constructed within the house. Yes, definitely bathrooms are there.”

- A woman belonging to the Patel household, district: Surendranagar

In Kutch district some of the urban slums of Anjar and Bhuj districts were provided with latrines by the government, they were non-functional as the latrines were not provided with water tap and further damaged due to earthquake.

A woman from our slum had to be hospitalized with acute gastroenteritis complains seven eight months back. She was in the hospital for more than a week. She was administered saline bottle. The condition is very bad in our locality.

-A woman resident of Jogi vaas [Bhuj]

In one of the slums in Bhuj district, the dwellers had built private latrines, which had broken down due to the earthquake. As mentioned above, due to lack of space, the urban slum settlers go to nearby areas, even the lane next to their houses, for defecation. This increases the incidence of various diseases like fever, cholera, malaria, stomach-ache, diarrhoea and vomiting in the area.

The women in urban slums are aware of diseases caused by flies and mosquitoes and to avoid these, they mop floors with phenyl and also keep water vessels covered. They also know that it is important to wash hands after defecation and most of the times they use soap at home for washing hands.

Across all the villages covered in the district it was seen that the adults defecate in open grounds located outside the village while the children defecate outside the house. Their faecal matter is disposed in the common community bin or the open grounds where adults go for defecation.

In most of the districts, the people soil their hands after defecation. The reason besides being the awareness tilts more towards the sunken economic condition in which the vulnerable group is groping for survival.

“ Soap is a luxury for us. We cannot afford two square meals a day. It is only for the want of money. It is beyond our imagination and capacity to invest five to six rupees just for a soap cake.”

- A farmer in Banaskantha district

All the districts covered under the study have a *ukeda* (an open pit) in the village periphery for garbage disposal. However, the *ukeda* is the place that primarily sees the disposal of the animal waste. The animal waste (faeces) is also sold as manure for using it in the fields as has been reported in all the four districts.

*“ A tractor full of *chaan* (cow dung) helps us earn Rs.150-200. However, it takes around two to three months to gather so much of *chaan*. We sell it within the village. Some times the people from the neighbouring village also buy from us. It is very useful for agricultural purposes.”*

*A woman during discussion,
district: Banaskantha*

The villages in the studied districts are the haven of litters as well. They are compounded by cow dung and the mire that is an outcome of the water flowing from the water sources like the common taps or handpumps accessed by women for drinking water. There is no provision with regard to cleanliness in terms of a regular person taking care of this aspect. However, the people residing in the studied villages of the four districts have reflected keenness. The sale of the cowdung solves the problem of waste in some of the villages of the studied districts. However, this is a distant possibility with the human faeces. Spraying of pesticides regularly within the village is a felt need expressed by the residents of all the districts. This is an offshoot of noticing the positive effects generating from the DDT sprayed twice during the monsoons in all the studied villages.

*“ We want that *bbai* to visit our village more frequently so that the nuisance caused by these flies and mosquitoes is lessened to a great extent.”*

- Residents canvassed in the Dabod district

4.4 Treatment Seeking Behaviour

Earthquake has taken its toll in the ill-fated Kutch district. Apart from the prevalent diseases in the area due to unhygienic practices mentioned above, some commonly reported diseases after earthquake are diarrhoea, fever, vomiting, cold and cough. However, their incidences have reduced due to relief and health services provided by the government and NGOs. Since the earthquake was so fresh in their mind, they tend to relate their health problems to the post-earthquake time primarily. However, on probe, it was found out that the diseases in the drought area are not any different than in the normal year as they continue to drink pipe water.

In the other districts, however, be it normal or any crisis year like drought, cyclone or earthquake, the commonly reported ailments or diseases are cold, cough, diarrhoea, vomiting, typhoid, cholera and jaundice. Diseases or ailments due to the nature of work also have been observed during the study in the districts. As for instance, the children and the adults in Surendranagar suffer from painful blisters on their hands and feet stunted growth of nails besides hair loss due to the work in salt pans. Cold and cough is a regular feature among the people belonging to the fishermen community in the Surat district. This is due to constant exposure to heat and the abrupt shift to the cold night on account of their waiting with the bait for a catch. The people also catch cold due to their getting drenched during the monsoons. The cases of hand, feet and shoulder ache is very high in the Dahod and Banaskantha districts respectively. This is an outcome of their involvement as farm labourers through out the year.

Home remedies are the most reliable options with the residents across the four studied districts. SSS (Sugar and Salt Solution), cumin mixed with curd, rice and curd are the remedies administered to the individual suffering from diarrhoea. The residents in some parts of Surat reportedly administer ORS as the primary treatment.

In some (4-5) villages of Kutch, the people depend on home remedies like exposing the child to the smoke of *ajwain* and turmeric powder in case of respiratory problems; giving the baby massage on lower abdomen and back to give relief from diarrhoea, body massage with goat's milk to a child suffering from fever etc. This treatment-seeking pattern has remained same, in drought years and even after the earthquake. The administering of SSS in case of diarrhoea remains similar to that of the other districts.

Cloth soaked in cold water is applied on the forehead of both the child and the adults running temperature. The paste made out of the clay used for mortaring the walls and floors of the house and buttermilk is also applied on the forehead of the individual running temperature in Dahod.

Besides the above remedies, henna mixed with coconut oil is applied on the palms and feet of the person acquiring blisters on the palm and feet due to the exposure to heat on the salt pans in Surendranagar district.

The dependence on the traditional faith healers is remarkably high across the four districts in Gujarat. However, the advice from the faith healer known by different names like *bhna*, *devtar*, *bhopa*, *maharaj* is sort only when the treatment of the ANM (the first choice as far as a formal medical professional is concerned) and the practising doctor fails to be effective. In certain studied villages of the Dahod district absence of ANM as well as the formal medical practitioner has led to this practice of seeking the counsel

from the traditional faith healer. Moreover, the studied areas of this district comprise tribal population.

4.6 Antenatal and Postnatal Care

The healthy development of child depends on the antenatal care, which the mother is given during pregnancy. Across all the districts covered it was seen that the elders in the house provide the antenatal care. The diet consumed by the mother has impact on the physiological and cognitive development of the child. In Kutch, in normal years, pregnant and lactating mothers are given nutritious foods like green vegetables, 'sheera' made of wheat flour, pure ghee and milk. However during the drought conditions, families are not able to provide these nutritious foods and the women are given rotis made out of bajri and wheat in all the vulnerable groups. The earthquake has made their situation worse as pregnant women did not have food in the initial days.

In Dahod and Banaskantha districts there is no divide between the normal year and the crisis year with regard to the dietary pattern. As a result, pregnant and lactating mothers are given bajri's (pearl millet) rotla, potato and onion vegetable and chutney made out of ground red chilli and garlic. No special diet is administered to them during this period because they lack the monetary resources to buy nutritious food. The condition of the women is so vulnerable that they also eat the paste or mixture made out of bajri or maize flour seasoned with a pinch of salt.

They also lack awareness about the food items, which are readily available at home and can be eaten during pregnancy. Some of the women across districts covered reported not consuming papaya, brinjal, jaggary, milk and milk products during pregnancy as they feel that it can cause miscarriage while some women opined consuming everything due to lack of choice of food. This restriction in the dietary pattern due to cultural construct is a direct indicator that women are refraining themselves from fibres, vitamin A and B-complex, minerals, iron, proteins and calories which leads to nutritional deficiencies. The women also added that they don't require any additional supplements as they feel that whatever they are consuming is enough for them during pregnancy. That is why they don't consume Iron tablets given by the ANM during pregnancy.

Although better off than Banaskantha and Dahod, the pregnant and the lactating women in Surat are deprived of milk products like *chaash* (buttermilk) and *ghee*. The reason behind this despite the presence of a dairy in the village is that the milk collected from the entire village is poured at the dairy, as it is their mode of income.

In the Surendranagar district the women eat fullers earth or the mire near the village pond in lieu of unripe mango or any other sour fruit like lemon. The rationale beyond this is the scarcity of money compounded with lemon's not being available in the studied areas of the district in mention. So huge is the quantum of consumption that as reported by one of the midwife's that it leads to complications during childbirth.

The local dais performs the deliveries at home. In case of complications, the dai refers them to the nearest health institution. The favourite choice in this case is the government medical practitioner. Lesser money and the desired treatment are the

rhetorical answer behind this choice. In case of failure in diagnosis, the patient is taken to the private practitioner.

Surendranagar stands apart as nearly three-fourths the population is engaged in the salt pans. Consequently there is a migration to the salt pans (known as *agar*) for the eight months that happens to be the production period. Migration keeps them away from the village for a stipulated time span. Thus, the expectant women are unable to access the services of the *dais*. They are unable to access the ANMs services also. The abortion rates are extremely high besides the stillborn and the stunted babies. The continuous exposure to the heat arising out of the salt pans poses these hazards to their health. The birth of an infant takes place at the hands of any elderly women living as a migrant in the salt pans.

Immunisation is also a far-fetched dream for these women living in the salt pans. However, fortune is still kind on the pregnant women in the other studied districts. The ANM is the main source of immunisation across the studied districts.

The indicators of ANC as per NFHS II shows that 86.4 % of pregnant women receive at least one antenatal check-up, 72.2 % receive 2 or more TT and 78 % are given IFA in Gujarat. All these indicators for Gujarat are higher than the national average.

The responses across the four districts highlight the facts given below:

The ANM is the main authority according to the women as far as seeking advice is concerned

The pregnant women take two doses of tetanus toxoid vaccines. One dose is administered in the third month and the other in the seventh month

It is also encouraging to note that those villages having no ANM, the women taking the initiative go to the nearest health institution and get themselves vaccinated. However, a contradiction was seen in the studied villages of Banaskantha and Dahod where the women depending highly on the traditional faith healers do not approach the health institutions or the professionals.

“We are very scared of the vaccines that she pierces into the hands. It is better to go and seek the advice of the bhopa (traditional faith healer). After all, he represents God. Thus, he will be more accurate.”

- a woman during discussion, District: Banaskantha

The degree of workload largely averages across the districts with the exception of Surendranagar. Due to heavy work in the salt pans the women are burdened even during pregnancy. Contrary, to this the women working at the salt pans in the Kutch district give up their job after the fourth or fifth month even at the risk of cutting down on the household income unlike the women salt labourers of the Surendranagar district. The workload of women during pregnancy depends on the type of family, health conditions and her financial status.

As part of the postpartum care, one can observe various practices in the field.

The Muslim women in Kutch give fish and chappati to the new mothers as they attach medicinal qualities to it.

The vulnerable women in all the villages of Surendranagar gave ‘*Sheera*’ made with lots of ghee, brinjal curry and bajri’s chappati as medicinal treatment for a period of six days

after the delivery. They are however not given any paddy products like rice for a fortnight.

Ghesh is administered to the new mothers in Dahod and the Banaskantha for a month. Surat reveals another dimension where the women are administered only starch with a dash of salt for a month. This is done with the intention of helping them regain their lost energy.

Access to health facilities across districts

The studied villages were geographically different and were located in the interior. The health facilities like sub-centre or PHC were structurally present in the village but their functioning is inappropriate because of lack of staff and proper equipment's in the PHC. It was also seen that the tribal communities of Banaskantha and Dahod were unable to access CHC or nearest hospital as they were residing on hilly terrain and as the region lacks well-constructed roads and proper means of commutation accessibility of health services is difficult. The community members of Surendranagar districts are involved in making salt for which they go to the rann. For any health-related problem or for delivery they have to go to the nearest town, which is not easily reachable from the rann due to distance. It was also observed under the study that the participants prefer traditional faith healers because of their easy availability and low cost.

4.7 Childcare

Childcare is being addressed in terms of breast-feeding and weaning practices within the community and immunisation. No difference has been witnessed in breast feeding practice in normal and drought years. Across Gujarat the NFHS-2 data reveals the following information about children i.e. as follows:

IMR is 62.5/1000 births

% of infant ages 0-3 months exclusively breast-fed is 65.2%

% of children under age 3 who are under weight are 45.1%(under weight), 43.6%(stunted) and 16.2%(wasted)

% of children ages 6-35 months with anaemia is 74.5%

% of children ages 12-23 months fully immunized is 53%

% of households using iodised salt of at least 15ppm is 56%

% receiving ORS is 28.9%

Looking into all these parameters the district level findings of the study are presented below about certain issues like breast-feeding, weaning and immunization.

Breast Feeding

Breast-feeding is a practise adopted by women in all the districts covered in Gujarat under the FIVP. It is initiated largely from the second or the third day from the birth of the infant. In Surat, this practise is initiated from the same day i.e. the day the infant is born. It is a common practice of not feeding colostrum across all the districts covered in the study. Although the reason extended is lack of breast milk in the initial days but the reasons are more deep-rooted. There is a common belief that the stored milk is not good for the child as it is impure or very heavy for a child to digest. Consequently, the infant is given sugar or *gur* (jaggery) solution for these days. In Kutch, the infant is fed goat's milk during the first two three days as it is perceived to be lighter and easier to digest for the infant. In the Muslim community, as has been observed in Kutch, the mother initiates the breast-feeding after the *Quazi* reads the prayer or the *Azāan* in the infant's ear. If a child is born in the evening, the breast-feeding is initiated from the next morning, as

customarily they do not give prayers in the evenings. Some also said that in case of Quazi's unavailability the next morning, the father can read prayers in the infant's ear.

On the whole across the districts, breast feeding as a practise is adopted till the conception of the next child. In some parts of Kutch, the girl child is breastfed for a longer duration than the male child as women feel that the male child is strong by birth whereas a girl child calls for attention, as she is physically very weak.

Weaning

The weaning starts at the fifth or sixth month with the child being given semisolid diets like khichdi, crushed rotla and biscuits soaked in milk in all the vulnerable groups. The child is acquainted to solid food from the twelfth month. Tea is also acquainted to them around the same time. In one of the villages in Surat the child is directly put on to solid food from the twelfth month. Till then the infant is breast-fed. However, it cannot be termed as exclusive as water is administered from the day of the birth of infant. Overall, in Gujarat, water is introduced from the day the child is born.

In Kutch however due to the earthquake, the women reported their inability to pay required attention to their children. Their damaged houses have added to the worry – stray-dogs spoiling their cooked food that is being kept in the open. All such worries have adversely affected the childcare practices. In the period following the earthquake, the women reported reduction in lactation due to the fear and shock.

Immunization

The NFHS II reveals that 51.9 % of children aged 12-35 months in Gujarat is given at least one dose of Vitamin A as against a national figure of 29.7 %. 84.7 % of children between 12-23 months in Gujarat are given BCG injection as compared to 71.6 % in the country.

The women across the State are aware of vaccination for DPT, tetanus toxoid called '*dhanur ni rasi*' and polio drops called '*lakwa na teepa*'. In many parts of the State like Banaskantha, the infants are administered only two doses of polio drop. However, the picture is not very disappointing as the other studied districts have reported the other doses of immunisation. The Surendranagar district calls for a special mention as the children of the salt pan workers are many a times left out from the immunisation process.

Their primary source of information is the ANM in most of the districts. In Kutch, despite the earthquake, the ANM is continuing her immunisation service in the village and caste discrimination has not been witnessed. She actually goes door-to-door to disseminate information and provide services. Across the districts in general, the ANM is well aware of the cases in the village.

A very encouraging action noted during the study was the women's initiative in getting their child immunised in those villages where the ANM was not visiting since many months.

Conclusion

The trend is definitely encouraging. There is now a need for imparting the left out information and correcting mis-conceptions about breast –feeding and weaning practices like the child should be exclusively breast –fed for at least 6 months, colostrum should be given highlighting its importance that it increases immunity. Other important information beneficial to child’s health should also be given to mothers like Tea should be avoided in children as it hinders the iron absorption leading to anaemia in children. All this information should be imparted through resources, which are easily accessible to the villagers like AWC, PHC and CHC. The active involvement of community in disseminating information about health can be very beneficial for the villagers.

CHAPTER V

INFRASTRUCTURE AND SERVICES ACCESS, UTILISATION AND VULNERABILITY

5.0 Introduction

The food security does not lie in the mountains of grain but in millions of jobs and workdays for people

- The Times of India, Ahmedabad, September 10, 2001

This chapter highlights the perception of the community on problems related to their livelihoods, the opportunities that exist to enhance their overall status and the existing institutional arrangements and their outreach to address the issues related to the food insecurity. In addition, this chapter focuses on the resources that are available with the community and how these resources might be used to address some of the communities' problems in the context of development programs, particularly food aid programs.

5.1 Community Identified Problems

The communities studied across districts are irked with a number of problems. Some problems are conjoint across the state but most of them are region, district and caste specific. The participants revealed that because of natural hazard like persistent drought the problems have aggravated. Some of the problems identified by the people across the five districts are enlisted in table 5.1. The community perceives that the foremost reason for the problems is the depleting natural resource base of the community, which restricts them from becoming self-sufficient. They also added that accessibility and utilization of infra-structural services is also one of the problems which community faces.

5.1.1 Problems related to agriculture and the Natural Resource Base

Water

Drinking water is a major problem in nearly all the districts covered in Gujarat. Except for Surat district that has a provision of handpumps in all the clusters of the surveyed villages, the other four districts (Kutch, Surendranagar, Banaskantha and Dahod) have acute crisis of drinking water. The ground water in Kutch has declined over the years. Depletion of potable water has implication on water borne diseases and fluorosis due to salinity of water.

The status of drinking water quality in Gujarat reveals that water in Gujarat is excessively saline (compared to the WHO permissible limit for TDS is 500 mg./L). It is not potable especially in the Surendranagar district due to its proximity to the desert. In Gujarat, 15% of the districts are affected by excessive fluoride, 5.48% are affected by excessively saline and 4.41 % of villages in the state have excessive nitrate. This well explains that potable water scenario is not too promising in the state.

The water received by the villagers in the Surendranagar district is saline in taste. Dahod and Banaskantha districts reflect the presence of fluorine in the water used for drinking purpose. Kutch and Surendranagar have pipelines and tankers, which are primary sources of drinking water. The pipelines have been giving unclean water after the drought, which has further accentuated in the post-earthquake period. Surel village in Surendranagar district has a specially designed roof water harvesting structure for storing and recycling the rainwater (designed as a watershed structure by SEWA with the efforts and initiative of the village residents. Today Kutch has one of the largest rural pipeline networks in the country covering about 95% villages.

Surendranagar besides Kutch reported the maximum damage to the pipelines due to earthquake among the four districts.

Except for Kutch, water supply was reported to be regular in the post earthquake phase. People have constructed ponds, checkdams, under the drought relief programme. These structures, however, do not serve the purpose due to the lack of rains. Need of adequate financial resources also hampers the prospects of alternative watershed structures in the studied districts. The crux being natural hazards, maintenance of wells and pumps and excessive lowering of groundwater pose problem in the accessibility of drinking water.

Agriculture

The people across all the districts voiced that agriculture contributes significantly towards sustainability during the normal year. But persistent drought decreases the crop production increasing food insecurity at the household level. Low agricultural yields are a result of multiple factors such as inadequate irrigation, infertile soil, use of traditional seed variety, lack of hybrid seeds, not using compost and rain-fed agriculture.

Agriculture in Kutch is difficult, as the land is infertile, as Rann occupies major part of the land. The growth of Prosopis Juliflora trees is causing land desertification lowering down agriculture. On the other hand land of Surendranagar district is saline lowering the sustainability of agriculture further while Banaskantha and Dahod districts are characterized by hilly terrain weakening the ground water table due to surface run-off. Only in Surat district agriculture is good as the region has fertile land and good irrigation facility. The villagers are engaged in single cropping, as agriculture is mainly rain-fed. The crop produced is sold mainly in the open market at a low price in the harvesting season, as the supply is maximum. The villagers reported that the cost incurred on agriculture is high, as in the sowing season the seed price is high. As a coping response they keep a portion of agricultural produce as seed for next year and buy seeds of cash crop like cotton, arinda etc.

Due to consistently low agricultural return the farmers used to take loans during the agricultural season to carry out agricultural activity, which results in adverse terms of trade. A bulk of crop produced is kept for household consumption and very less part of it is sold. Many farmers reported taking loans for purchasing seeds and food during the agricultural season, which necessitates the need of a grain and seed bank at a community level.

Livestock

Livestock is important resource for the people of Gujarat. Livestock income from the sale of cattle and ruminants vary across district. However the livestock income has decreased in the crisis year because of reduced built of cattle due to scarcity of fodder. The pastureland has depleted due to drought. The problem of fodder is invincible in Kutch, Banaskantha and Dahod in the drought year so the villagers buy fodder from outside at higher price. The villagers of Kutch district reported keeping cattle at “Panjrapol” so that they don’t die of fodder scarcity.

Forest

Forest is important for both environmental and economic reasons particularly for those whose livelihood depends on forest resources. In the present context, the dependence on forest and its products for livelihood is mentioned.

In Kutch and Surendranagar people reported livelihood dependence on fuel wood and making charcoal out of “*Bawad*” wood but now due to the restrictions posed by the forest corporation the manufacturing of coal has become difficult.

Banaskantha and Dahod districts are heavily dependent on the sale of timber products like firewood and charcoal. It is the primary source of family income especially for the ST households. Due to continuous drought the forest resources have depleted which has affected livelihood. The children of STs are involved in collecting edible gums, fruits and flowers of the mahuva and other trees yielding fruits for medicinal purposes. The dependence on forest for livelihood is absent in Surat.

Pastureland

All the surveyed districts except Kutch have pasturelands. Continuous drought in the district with ever spreading of the *babul* trees has substantially reduced the pastureland of these districts. The grass provided under ration to the '*maldharis*' is meagre considering the requirements. It is ironical to note that it is easier to gather food than getting fodder for livestock rearing. Due to vast stretch of dry lands with thorny shrubs, cattle owners have to walk hours to graze their cattle. Most of them feel that if the drought continues, it will be increasingly difficult for them to stick to animal rearing as the main source of income.

With the exception of Surat, the residents in all the other districts are forced to buy the fodder or the cattle feed from the nearby villages, towns or in very rare cases from the nearby cities. The reason cited for this is the presence of dairy, which provides fodder and cattle-feed (*Sumuldaan*) at subsidised rate. In the other districts most of the expenses are utilised in fodder buying. A slight reduction in the pastureland has been found across the districts. Expansion of the land area for cultivation and the persistent drought are the main reasons responsible for this switch over.

The initiatives from the government to develop the pastureland looking at the high dependence on livestock rearing are also not evident.

Problem relating to institutions and infrastructure

In all the districts covered under the study there are various institutions and infrastructure present in the village but the functioning of these institutions and its accessibility is a problem.

Public Distribution System (PDS)

In the study almost all the districts covered are dissatisfied with PDS. The reason highlighted for this is the quality and quantity of food grains supplied. Across all the blocks covered people reported that the quantity of grains is limited and does not suffice the household requirements. The residents of the studied districts prefer the private shops for purchasing wheat. The rationale put forth by is a better quality in lieu of the same price as that of the PDS.

They need to spend additional amount on buying the food grains and other daily items from the private grocery shops located within the village and many a times these commodities are bought on loan from these shops. These loans often remain unpaid due to lack of financial stability. Sometimes jewellery is mortgaged in case they are unable to repay loans.

In addition to this the villagers also reported location of PDS at a distance, which increases the travelling cost and after going to the ration shop its found closed. The participants also referred to the irregularity of stocks in the ration shop when they go to buy it. Inaccessibility in Banaskantha and Dahod are due to undulating land. On the whole PDS in the studied talukas of Gujarat provides wheat, rice, sugar and kerosene oil. In Dahod, it also provides maize and palmoline oil to the cardholders. The Palmoline oil is however provided only during the

festivals. Despite its not being a regular provision, the men in Dahod reflected a preference for groundnut oil as against the palmoline oil.

Cases of black marketing have also surfaced during the discussions with the men especially in the Surat and Banaskantha districts.

“The shopkeeper does not sell us the provisions when we ask for it. However, the same goods are sold in some other market at a higher price.”

- Women during discussion in Banaskantha district

“Sabeb, why should we buy from the sasta anaj ni dukan when we get it much better from the other private shops in the market within the village.”

- Men during discussions, Haripur village, district-Surat

After earthquake, Kutch and Surendranagar received free provisions through the PDS. Wheat (20 Kgs.), rice (10 Kgs.), Kerosene (5 litres) were given as relief to the ration cardholders. The participants reported that the supply received after the earthquake in Kutch - wheat (20 kg.) and rice (5 kg.) by each family was full of dust particles and was of low quality. The villagers opined that increase in quality and accessibility will encourage them to avail PDS services further.

Overall, the current scenario of the PDS in Gujarat reflects a need for increasing the quality and quantity of the food grains provided through these fair price shops. The frequency of the supply should also be regularized. There should be a monitoring body for supervising the functioning of the fair price shops so that complains of black-marketing can be combated.

Integrated Child Development Services

At the macro level, the anganwadis are present in all the surveyed districts of the FIVP study.

This section aims at highlighting the nutrient distribution, functioning of AWCs at the village level and analyses the level of satisfaction and expectations of beneficiaries.

All the villages have AWCs within the village and most of them are in government building. Drought hasn't affected the functioning of AWCs. Overall, the AWCs are perceived as a very important institution within the village. The reasons differ from a play school like environment to a place where the child gets good food. The beneficiaries in the districts like Surat render it important as they view it as an important institution for pre-school education.

Apparently, all the districts in majority have a formal structure but as far as the AWC functioning is concerned, there are gaping holes. The crux of the problems faced in implementation of ICDS is the irregularity of food stock, pilferage of the stock available, quality of food which does not suit a child's palate, inappropriate functioning of AWW and lack of motivation for work among the AWW due to the meagre wage she gets.

In Kutch, the villagers perceive AWCs as source of food for children but they are not aware of other facilities that these centres are supposed to provide. They also opined that the centres should provide food to the children and have plays to keep them occupied. Apart from the complaints on the quantity of nutrients, the women during the discussions have put forth caste discriminations especially in Kutch and Surendranagar. The villagers reported that the children

of Harijan are discriminated in terms of food distribution in the AWC. The reason cited by AWW for this discrimination was the involvement of parents in selling dead skin of animals. In some of the villages of these two districts it was seen that the post of AWW is lying vacant, which poses a problem in the dissemination of services of ICDS. The reason for this is the marriage of AWW in other village. The parents in Kutch and Surendranagar districts don't have an idea of where and whom to report about all the discrepancies going on in the AW.

On the other hand sample villages covered in Banaskantha and Dahod are located on hilly terrain which makes the accessibility of AW difficult by the children due to increased distance. The AWW does not open the AW regularly because of low attendance.

Across all the districts covered the commonly reported nutrients are boiled grams, biscuits, India mix (only in Surendranagar), *sheera*, *laapsi* and *mamri* (RTE, only in Dahod). The nutrients do not however hold a favourable view with the beneficiaries. In Dahod, the beneficiaries do not like the RTE. Though the officials stated supply of three flavours i.e. sweet, sour, and both sweet and sour. However, in actuality the picture reveals a different story. It is a compromise on the beneficiaries.

“What can these children of the poor tribals do? They consider it a privilege to at least eat something. Else if this is given to a child from a well-off family he would not be able to taste it forget eating it.”

- AWW, district Dahod

Banaskantha and Dahod are the only two districts of the study that have immunisation and nutrition of the lactating and expectant women. Pre-school education is also not functioning properly. Adolescent meetings were not held in any of the districts.

The Mid-Day Meal Scheme (MDMS)

The MDM scheme was started by the government of India to increase enrolment of children in government schools but it seems to be evading the aim in nearly all the surveyed districts. Despite the implementation it has failed to make a mark, as there is a lack of co-ordination between the teacher, the sanchalak and the district officials of the MDM department.

The other problem dogging this scheme is casteism rampant in the village social structure. On the whole the districts covered under the study have an agrarian background. During the harvest season there is a sharp fall in the attendance. Except for Banaskantha and Dahod, the MDMS is not a reason for the increase in the enrolment and the attendance figures respectively. In Kutch, since the study was undertaken in the post-earthquake period, all the school buildings have been damaged in the sample blocks and the scheme was thus not in operation. However, the mid day meal scheme was functioning in the district prior to the earthquake as stated by the villagers.

The commonly reported meals across all the districts are *khari bhaat*, *khichdi*, *chana*, *laapsi* and *sukbadi*. The quantity and the quality do not meet with the appetite and the taste buds of the beneficiaries. The students do not like the porridge like thing in the meal known as the laapsi, which the teachers are also very well aware of but an alternative seems far-fetched to them.

As far as the regularity is concerned, it is very irregular in the Banaskantha and the Dahod districts. The diminishing of the stock on the fifteenth day of the month brings the MDM to a complete standstill.

Enrolment wise the boys dominate the scene. The reason attributed by the teachers and the sanchalaks' is the cultural construct of the society.

In nearly all the districts the felt need is the regularising of the MDMS and improving the quality of food grains. Besides this there is a need for a stringent monitoring body. This aspect comes in to focus on account of the rampant pilferage by the various concerned persons within the village.

In the Dahod district it was observed that the storage place has been shifted from the school premises to the sanchalak's residence. As reasoned by the sanchalak, a theft in the school premises few years back has led to the change in the venue. In the discussions the Sanchalak admitted that the stock received for the MDM is adequate but the quantity being provided to the students is very less.

Indications of linkages between the sanchalak and the teacher are evident in nearly all the districts. However, it is not spelt out.

Women's literacy and training

Across all the districts covered it was observed that the literacy levels of women were quite low in spite of the existence of SGH. The reason for this is lack of awareness and attitude towards girl's education because of the cultural construct that prevails i.e. the girls are not sent to school but are compelled to work at home and take care of the siblings. Above all the literacy rate lowers further as the women don't have time to study because of their involvement in the household chores as well as farm activities.

Disaster management

In all the districts covered it was seen that drought is the most prevalent disaster. Drought had severe implications on the life of people. The rainfall became erratic causing a decrease in the water table and having direct effect on the crop production. Other effects of drought were scarcity of fodder, which decreased income from livestock. In order to cope up with the crisis situation the villagers take debts from the moneylender. They mortgage jewelry, land and take debts in the form of money or grain from the moneylender. The villagers also reported selling livestock at throw away prices in the crisis year. The biggest problem faced by the villagers is the lack of safety nets like grain or seed bank for meeting their food requirements at the household level and agricultural requirements.

Other Problems

Lack of transportation, electricity, veterinary services were mentioned as other problems by the villagers. Access to well maintain roads was another problem faced by the villagers.

Table 5.1: Village-based Problem Analysis

Problem	Number of villages by District						Specific Issues
	K	S	B	D	Srt	T	
Irregular water supply	14	7	3	-	-	24	The problem is due to drought & low water table Irregular water supply from the pipelines Water at the Stand-post does not come regularly A minimum of 1-2 km. to be covered for fetching drinking water due to the scattered location of houses
Saline in taste	17	8	-	-	-	25	
Accessibility	10	7	3	4	-	24	
Agriculture Problems							
Dependence on monsoon	19	12	4	4	4	43	Rain-fed agriculture Loss in crop production Ground water decreased due to persistent drought
Inadequate irrigation	19	10	4	4	4	41	
Inadequate fodder	20	12	3	4	2	41	
Wild growth of Babul trees	30	12	-	-	-	42	
Destruction of crops by wild pigs and Nilgai	30	12	-	-	-	42	
Forest Issues							
Closure of nursery	20	10	-	2	-	32	Due to the restrictions posed by forest department fetching fuel-wood has become difficult Forest resources depleted due to drought Nurseries functional only in monsoons for 15 days. People get Rs 30-40 per day.
Restrictions imposed by forest dept.	30	9	-	2	-	41	
Employment opportunities(labour)							
Reduction in farm labour	30	12	2	4	-	48	Due to loss in crop production the farm labour has declined As the area is located in tribal zone there is absence of industry
Absence of industries	24	11	4	4	2	45	
Panchayat							
Inactive with regards to implementation of programmes and schemes	14	8	4	4	-	30	Benefits from government schemes denied Employment opportunities denied as the work is being handed over to contractor Implementation of government scheme is improper due to intra-caste disputes among communities.
Casteism	8	11	2	3	-	24	
Contractual labour's hiring marring the job opportunities of villagers	29	2	-	-	-	31	
PDS							
distance	19	-	2	1	2	24	In Kutch PDS located within a radius of 15 km Dirt & insect a common feature in cereals given Irregular opening & availability of the shop keeper in the PDS shop which poses inconvenience for the beneficiaries People dissatisfied with the quantity of grains received
Inferior quality	30	-	3	2	4	39	
irregularity	14	4	3	4	4	29	
quantity	28	12	3	4	4	51	
ICDS							

Improper functioning	12	5	2	3	2	24	Post of AWW still vacant As houses are located on a hilly terrain children face problem going to AWC Amount of food given to children is inadequate The quality of food provided is not good Children of the upper caste do not eat food of AW Caste discrimination is seen in Kutch and Surendranagar district
Inadequate quantity	20	12	2	4	4	42	
Nature of nutrients provided	17	8	2	3	2	32	
No programmes for adolescent girls	28	12	2	4	4	50	
Need for greater attention to the Lactating and pregnant woman	19	5	2	4	4	34	
Closure of AWCs	6	-	1	1	-	8	
Need for health counseling	28	12	2	4	2	48	
MDM							
Casteism	3	5	1	-	-	9	Casteism prevalent as the children from high caste do not eat MDM in the school Attendance is irregular as the children are involved as farm labourers The food present in the MDM not liked by children Food contains insect and is half uncooked Tribal girls don't go to the school regularly because of the cultural construct Children are forced to eat bad quality food due to poverty Irregular stock
Irregular attendance	17	12	2	-	-	31	
Inferior quality	28	12	2	4	3	49	
Inadequate quantity	18	12	-	4	2	36	
Nature of food	28	10	1	-	3	32	
Lack of preference for the meals provided	22	12	-	3	2	39	

K= Kutch, S= Surendranagar, B= Banaskantha, D= Dahod, Srt= Surat

5.2 Community – defined Opportunities

All the districts covered have a natural resource base as well as human resources. People in the districts covered reported their dependence on forest resource. With the ongoing crisis natural resources have depleted creating coercion on the livelihood of people. The opportunities across the districts are described in table 5.2.

Availability of Natural Resources

Across all the districts covered the villagers reported that water is a very important resource in spite of the difficulties faced in accessibility.

The villagers of Banaskantha and Dahod districts accounted that forest products support the livelihood of the villagers. The forest provides income of 2-3 months. The people of Banaskantha district reported dependence on forest products like tendu leaves, honey, fodder, firewood, bamboo, edible gum, khajuri (a fruit), mushudi (medicinal, Rs.1100 /kg.), mahua (mahua indica), both flower and oil.

Due to the presence of forests the government conducted social forestry programmes for the people in drought year as an activity of income generation. The social forestry programme was executed through Panchayat in which village people participated. Under this programme the

share obtained from the forest plants is distributed equally between the Panchayat members and the villagers. The importance of this scheme is the ownership of the forest by the people. Besides this few of the villages also benefited from the forest department works during the agriculture off seasons.

Land is a very important resource for the people across all the districts covered. Some of the villagers reported being landless and some that possessed land had infertile land. Land holding lie in the hands of higher caste. They possess good quality land with proper irrigation facility. This particularly helps the landless and the marginal farmers to get employment in farm activities within the village.

Livestock is a very important income generation source for these people. In the crisis year it was observed that livestock was sold at throwaway prices because of the reduced built. The reason for this can be cited as scarcity of fodder. In the Surat district the villagers were given fodder and cattle feed called as Sumul daan during the crisis year. The government has helped the tribals of Surat district under tribal sub-plan by providing buffaloes of Surti and Mehsana district, which acts as employment generating activity. Presence of dairy co-operatives also substantially increased their income through cattle rearing.

Availability of Human Resources

The human resources are present in plenty across all the studied districts. Men and women are engaged in labour activities for earning a living. Women and children form an important part of the work force. In the study women of Kutch district possess skills of embroidery, tie and dye and beadwork. Their skills have been identified by NGOs and have been promoted as income generation activity. In the other districts the women lack skills of embroidery, tie and dye but have identified certain income generation activities and have expressed a desire to get trained (refer table 5.2). Traditional skill of mat making, carpet making, preparation of leaf plates etc. are mostly limited within the communities due to lack of adequate marketing opportunities and absence of higher order technical skill within the communities. Major section of the population (women of upper caste community, old, diseased, physically handicap) is economically dependent on the income of the able bodied workers in the family. The existing skills should be promoted through training and marketing support to improve the earning potential of the women. These skills could be drawn upon for SHGs. The women should be given training of the new skills by formation of SHGs. After training, the products produced should be linked through proper marketing channels. If the existing skills are promoted well then it can improve the earning potential of the people.

Table 5.2: Village –Determined Opportunities/Resources

Opportunities	Number of villages						Specific benefits
	K	S	B	D	Srt	T	
Water							
Bore	10	-	-	-	-	10	Drinking water's regular supply will be facilitated. The water in the many villages of the Kutch as a whole tastes saline. Therefore, steps can be taken for desalinization of the water.
Desalinization	8	7	-	-	-	15	
Overall scope / opportunities							
Agriculture							
Clearing the babul trees growing around the agricultural lands	23	12	-	-	-	35	The crops and the soil texture will benefit as the babul tree soaks the available surface water
Loans from the govt. Institutions esp. bank	21	5	1	1	3	31	For facilitating agricultural practices
Forest							
Nursery	16	10	2	2	4	34	It will generate employment opportunities during the monsoons
Protection from the wild animals (forest dept.)	30	12	-	-	-	42	It will help retain the existing crops from being eaten by animals. It will thus help in saving at least the existing income.
Overall scope / opportunities							
PDS							
Within the village	11	4	1	3	3	22	The distance as well as the quality will encourage the villagers to access the PDS, the largest food security net.
Better quality food grains	30	12	4	4	4	54	
Overall scope / opportunities							
MDM							
Foodgrains	23	12	2	3	4	44	The enrolment as well as the attendance of students will increase with the provision of foodgrain.
Dry snacks	23	12	2	-	2	39	
Better quality of the food	23	12	2	4	4	45	
Increased quantity	23	12	2	4	-	41	
ICDS							
Responsible AWW	12	7	2	2	1	24	The beneficiaries feel that the dry snacks provided will act as an impetus towards larger enrolment.
More Quantity	25	12	2	4	1	44	
Dry snacks	25	12	2	-	1	40	
Relief work							
Pond deepening	15	12	3	1	3	34	This will help in the extending employment opportunities to the people in the villages of the Kutch district.
Road construction	12	12	3	3	4	34	
Clearing rubbles	14	-	-	-	-	14	
Check-dam	13	4	3	1	4	25	
Cottage industry							
Tailoring	16	9	3		4	32	Income generation opportunity involving the inherent skill of the women in the villages of the Kutch district.
Papad making	14	7	-		-	21	
Cane work	-	-	1		-	1	
Embroidery	17	5	3		3	28	
Tie & dye	6	-	-		-	6	
Incense stick rolling	15	8	1		2	26	
Candle making	1	4	-		-	5	
Packaging	1	-	-		-	1	
Colouring of leather	-	-	1		-	1	
Fodder bank							
Initiate a fodder bank	21	12	4		4	41	The cattle feed will be taken care of during crisis years.

Opportunities	Number of villages						Specific benefits
	K	S	B	D	Srt	T	
Grain bank							
Initiate a grain bank	13	12	4		4	33	It will strengthen the food security net even in the crisis years. It however calls for support from the govt./NGO as presently their economic and social status is not healthy.
Seed Bank							
Initiate a seed bank	20	-	4		4	28	The villagers despite their inclination need support from the govt./NGO, as presently their economic and social status is not healthy.
Food for work* (proportion of cash and food grain)							
75:25	-	7	-		-	7	The FFW will meet with the two-fold purpose of providing food and money at the same time. It should however be a long-term programme to provide the long-term source of income generation.
80:20	-	5	-		-	5	
60:40	14	-	-		-	14	
50:50	3	-	3		3	9	

Institutional Opportunities

There are many local institutions listed by the villages as having potential. These included schools, the PDS, AWC, and many local groups such as self-help groups and NGOs. A majority of the villages surveyed, considered the anganwadi centres as an asset. This is despite the fact that the community identified many weaknesses in access to the centre.

Many village-level organisations were highlighted including water development committees, village forest protection committees, education management committees, and village development organisations. Few of the communities specifically mentioned that their village panchayat is running perfectly and the Sarpanch to be very active. Some of them also clearly highlighted the importance of the unity in the community in bringing development to the village concern.

Self-help groups were mentioned in all the districts with up to 15 to 20 different groups operating within the studied communities. Most of these were women self-help groups involved in savings. Dairy co-operatives were identified as important institutions in Surat and Surendranagar. The NGOs are actively involved in the development of people in Kutch district like KMVS, which is working for the development of women. In the other districts like Surendranagar SEWA is functional, which is working for the welfare of salt workers.

Other infrastructure

The local infrastructure includes electricity, transportation facilities like roads, telephone and post-office.

Village Ranking of Institutions

There are many institutions present for the development of villagers like schools, CBOs, NGOs, ICDS, SHGs, dairy co-operatives, PDS, institutions like DRDA, panchyat. The villagers were aware about all these institutions and ranked their importance and influence in the village ranking exercise.

A Venn Diagram exercise was used to get an understanding and ranking of the various institutions that the villagers consider relevant in their day-to-day life and their own perception regarding the accessibility to these institutions. The importance of any institution shows the importance they carry in the livelihood cycle of the community. The community might not be using them so frequently for reasons like inaccessibility but they feel that these are the institutions that can play a greater role in their livelihood. The influence on the other hand shows the interaction of the community with these institutions in their day to day life but these influences may be positive or negative. The degree of the influence and the importance was measured in a relative term by the size and the distance of the circles (chapatis) under the Venn diagram exercise. This particular exercise was conducted to present the local dynamics at the micro level in determining the most important and influential organization in the day to day life of villages.

The influence-importance matrices presented below are reflective of the situation as it exists in the selected villages at the grassroots level across the districts covered. The primary intention of such an exercise is to support the design of appropriate programs, which are relevant and also acceptable to the beneficiaries.

Table 5.3: Institution Importance and Influence Matrix

Kutchh	High importance	Important	Low importance	No importance
High influence	Water Supply = 20 School = 13 Electricity = 13 Panchayat = 11 ICDS = 11 NGO/CBO = 3 CHC/PHC = 3 Fodder Depot = 2 PDS = 2 ANM = 1 Sub-Center = 1 Pvt. Dr. = 1 DPAP = 1 Vet. Service = 1 Bus Service = 1 Road = 1	Water = 2 Post Office = 2 School = 1 PDS = 1 Bank = 1 NGO/CBO = 1	Post Office = 1 ICDS = 1	
Medium influence	Water supply = 6 Electricity = 6 Sub-Center = 6 School = 5 ANM = 5 Panchayat = 4 CBO/NGO = 2 PDS = 2 Cooperative = 2 Relief = 1 Fodder Bank = 1 Bus = 1 DPAP = 1 Post Office = 1	NGO = 4 Elcetricity = 3 ICD = 2 Panchayat = 1 ANM = 1 MDMS = 1 School = 1 Relief = 1 Water = 1 Bank = 1	Post Office = 2 ICDS = 1 PDS = 1	
Low influence	ICDS = 7	ICDS = 5 Panch	PDS = 3	

	Panchayat = 5 PDS = 4 School = 4 Telephone = 2 Electricity = 2 NGO/CBO = 2 ANM = 2 Govt. Scheme = 2 Water = 1 Post Office = 1 Bus Service = 1 Forest service = 1	4 CBO = 3 School = 2 Telephone = 2 ANM = 1 PDS = 1 DRDA = 1 Fodder Depot = 1 Forest Deptt. = 1 Post Office = 1	Panchayat = 2 Electricity = 2 Telephne = 2 Coop. Bank = 2 Forest = 2 CBO/NGO = 2 MDMS = 1 Post Office = 1	
No influence				

The top five high importance and influence services are water, electricity, school, Panchayat and ICDS. PDS and NGO/CBO are important but have medium and low influence on the villagers. The villagers opined that NGOs have a high importance after the post earthquake as they have worked towards the rehabilitation of villages after the massive devastation. The public health institutions such as PHC/CHC, Sub-centre are of high importance but of middle and low influence. It is surprising that relief work is neither of high importance or high influence despite the time when the fieldwork was done. The mid-day meal scheme is of low influence but of high and medium importance. Fodder depot/bank is of high importance but varying degree of influence. The importance and influence of moneylender is high primarily as the villagers are dependent on them for loan off takes

Surendranagar	High importance	Important	Low importance	No importance
High influence	Water-9 Panchayat-4 School -10 ANM -5 Electricity -8 Balwadi -5 CBO-1 NGO -2 ICDS -5 PDS -1 Phone-2 Agri. Co. -1 Road -1	Panchayat -1 ICDS -1 NGO -1 School -1 Bank -1 Veterinary clinic-1 CBO -1	Community room-1	
Medium influence	Gove.schmes-1 NGO -2 Electricity-2 Water-2 PDS-4 ICDS -2 School -1 Panchayat -2 ANM -1	Electricity -1 Women group-1 Ayurvedic clinic-1 ANM -3 Panchyat-1 Veterinary clinic-1 PDS -1		
Low influence	ICDS -1 PDS -2	CBO -1 Post office-1	Dairy coop society -1 Panchyat-1	

	ANM –2 Gov. Schmes-1 DPAP-1 Water-1 Panchayat-1 Balmandir-1 Dairy co. –1	DRDA –1 Panchayat -1	MDM-1	
No influence				

Surendranagar

Water, electricity and school are the institutions considered being highly important by the residents of Surendranagar district. However, important institutions like the NGO, CBO, PDS are considered to be important by the residents of the studied villages in this district although they are having the minimum of influence. Important infrastructures like the panchayat that can also be referred to as the backbone of the villages as far as the development is concerned does very little for the welfare as the degree of influence it has on the villages is remarkably low. The health related institutions also call for attention as the institutions and the personnel like the ANM, the veterinary clinics, the ayurvedic clinics besides the doctor are the need of the hour for the residents of Surendranagar district as is also evident from the above data presented in the table.

Other institutions like MDM, DRDA, anganwadi and the dairy cooperative society are depicting low influence and importance on the villagers.

Banaskantha	High importance	Important	Low importance	No importance
High influence	School –4 ICDS –2 ANM –1 PDS –1 Govt. schemes-1 Community room-1 Panchyat-1 Balmandir –1 Water –1 PHC-1 Agri. Co. –1 Dairy co. –2 Electricity –2 Bank –1	Bus service -1	Community room-1 Water-1	
Medium influence				
Low influence	Panchayat –2 Electricity –1 Water –1			

	ANM -1 Veterinary service-1 ICDS -1			
No influence				

Banaskantha

It was observed during the fieldwork of the studied villages of Banaskantha district that the main focuses of the community was on the infrastructures like schools, anganwadis, ANM and bus service are not only highly important but also having fairly large influence over the lives of the people. Other institutions like PDS, ICDS and School have been stated as having high importance but level of influence they have is medium. Panchayat, veterinary services and water have been stated as highly important but it has very low influence in terms of reach.

Dahod	High importance	Important	Low importance	No importance
High influence	School -3 ICDS -3 Bus services-2 Post services -4 Water -1 Balmandir-1	Phone -1		
Medium influence		Phone -1 Bus services-1	Dairy co. -1	
Low influence	Electricity -1 ANM -3 Panchyat -1 Water -2 PDS -1	Electricity -1 ANM -1		
No influence				

Dahod

Infrastructures like school, ICDS, conveyance (bus services), postal services have been reported as both being of high importance and influence also. However, panchayat, electricity, banks, PDS though having very high importance for the villagers, due to the lack of accessibility termed as being of medium influence on their lives. Electricity, ANM and water are of high importance but is not reaching out thus being rated as low influence.

Surat	High importance	Important	Low importance	No importance
High influence	Water –3 School –3 Panchyat-1 ANM –2 ICDS –1 Electricity –1 Post service -1			
Medium influence				
Low influence	PDS –1 Bus service –1 ANM –1 Panchayat -1	NGO -1		
No influence				

Surat

Water, school, ANM as reported in Surat has both high importance and influence in the esteem of the beneficiaries. Electricity, dairy co-operatives, DRDA, telephone, MDM despite being of high importance is reaching out only as medium influence. PDS, bus service, panchayat and NGO are perceived as being of high importance but is very low in terms of influence.

Availability of Institutions and Access by Vulnerable Groups

The previous sections have described the village perspective on their problems and the opportunities they have within the village. Descriptions of opportunities clearly state that the institutions only partially meet the needs of vulnerable groups. The following section describes in greater detail the benefits and constraints of these institutions drawing upon additional information from studies on Gujarat

Education

Formal as well as informal primary schools and other institutions exist in all the studied districts of Gujarat. However, accessibility, availability, and utilization of education facilities are restricted in some regions. There has been an attempt to increase access to schools in Gujarat (particularly primary schools), and the number of institutions increases each year. In the 54 villages studied for the FIVP, all have a primary school, but only few of them have middle schools. For primary schools, distance is rarely given as a reason for lack of attendance, but this is a serious problem for middle school, particularly for girls. It was observed that access to educational centers becomes difficult as the Middle and Higher Secondary School are located in the other town or village. In Kutch district it was observed that non-formal education was going on with the help of NGO called Janvikas in only one village.

The communities do not always use educational facilities because education has no direct impact on earnings. Households classified as food insecure and vulnerable opined that irregularity in school attendance and the unwillingness to send children to the school is due to the indirect cost of education, i.e. the loss of income, non-involvement of the children in agricultural work, and loss of time in going to the schools etc. A second important reason provided for not pursuing education options was the continuous migration of the villagers. The drop out rate of girls is very high because of the cultural construct and their involvement in household chores while in case of boys their enrollment is there but attendance is low as the village lacks proper facilities of commutation. The parents opined that indirect cost incurred on education is high. Children have to travel 10-12 kms in order to go to school as reported in Khumbaria village of Kutch, which becomes cumbersome. More importantly the boys drop out of school, as the families are so poor that they cannot afford the cost of education. After leaving school they support the family by working as casual and farm labourers. Most important the affordability and motivation on the part of parents is lacking. It was also seen that the importance of education is lacking among the parents. In the Surendranagar district it was seen that there is low attendance of children as they accompany their parents in the rann and are also engaged as salt workers.

Mid-Day Meal

Mid-day meal programs are functional in all the studied districts. There is high irregularity in the distribution of food grains in about 80% schools across the studied districts. In addition to this lack of storage facilities at the schools is another problem in the proper implementation of MDM. Sometimes there is no distribution throughout the year. The reasons for irregular distribution of the mid-day meal as reported are irregularity in the supply of grains at the schools and lack of storage facilities at the schools. Moreover, on the operational front, a *Sanchalak* (coordinator) is employed by the taluka panchayat and usually of the village. The teacher and the Sanchalak administer the beneficiaries. However, the Sanchalak takes the decision on type and quality of food. At times there are differences of opinion between the teacher and the Sanchalak on this issue and that of the latter prevails. The villagers indirectly hinted that the Sanchalak takes some share out of the scheme. On the flip side, the Sanchalak complained that they are not paid for commuting to the place from where they collect the ration for the scheme.

Besides the mid-day meal scheme, other incentives such as free textbooks, scholarships, and school dress are also available for school-going children of the ST and SC communities. Children of SC and ST communities are given Rs 90 for the purchase of uniform. Books and other study materials are available in the schools.

Health

Infra - structurally all the districts covered had health facilities. The districts covered had facilities of sub- center and PHC but the services provided by them are not satisfactory as per the opinion of the people. It was observed during the study that sometimes the health facilities are located far off, which poses a problem for pregnant women if any complications arise during pregnancy. The transport facilities are also irregular which is a set back in the accessibility of health institutions. Secondly, it was seen that the villagers don't spend much on health expenses. It was observed that the health and hygiene practice is poor among the vulnerable groups. The villagers also reported that the services provided by ANM are not appropriate. The irregularity in the functioning of ANM is a problem for the pregnant women and immunization of children. The people reported going to the doctor in case of complications.

Some of the villagers reported presence of Ayurvedic clinic, which is not accessed by them regularly because of the unavailability of doctor. Majority of the villagers reported their dependence on “Bhua”, “Bhopa”(traditional faith healer). The reason for this is their firm belief on them. If the treatment of “Bhua” or “Bhopa” fails then only the villagers approach the PHC or doctor.

ICDS

Integrated Child Development Services (ICDS) is available in all of the studied villages. However, in some of the villages’ although there is a centre it is non-functional either due to the absence or transfer of the AWW. In the villages with ICDS, the number of children attending varied from 15 to 60. The activities were predominantly supplementary feeding, although immunization was also mentioned as a service of the centre.

Villagers identified the Anganwadi and Balwadi centres as important institutions. They consider the most important benefits to be the supply of cooked food- dalia and grains. Lactating mothers and pregnant women are supplied with 160 gms of grain. Children in pre-school are supplied with cooked dalia. In some of the centres IFA tablets and ORS is also supplied to the villagers.

Accessibility and supply of services are problems of the ICDS system as noted by studies. The following reasons were provided by women in the surveyed villages as to why use of these services are limited:

- Poor location of AWC. Some are located at the extreme end of the village restricting access for pregnant and lactating women, and children. Sometimes there is only one common ICDS centre for two to three villages or two to three hamlets of one village
- Irregularity in opening times of the centre
- Irregularity in distribution of *dalia* (supplementary food).
- Conflict in the timing of AWC and labour and household chores
- Limited supply and poor quality supply of food
- AWW does not live in village and doesn’t visit regularly
- Social and caste barriers in some of the studied districts.
- Inadequate pre-schooling opportunities at the ICDS centres.

Other studies confirm that these are indeed barriers to full use of the centres (Singhi 1997; WFP 2000, Mid-term evaluation Annex 2; Seva Mandir 2000). Additional factors that have been identified from other sources are that many AWWs are illiterate and likely to be from more affluent households or groups (Singhi 1996), and that the centres are frequently ill-equipped without appropriate tools for child growth monitoring, food preparation, or effective infant care. The role of the Anganwadi Helper (AWH) is frequently overlooked, although in most of the cases she, is from the village, prepares the food, gathers the children, and interacts most with the women. Studies also note that in villages where NGOs function, the AWW is more likely to be motivated and enthusiastic (Singhi 1996).

The issue of caste figured prominently in the discussions with women in the villages. The most cited constraint was that women from upper castes do not attend the centres when the AWWs and/or the AWHs are from lower caste. In general, the opposite does not appear to be the case. Since evidence shows that SC and OBC women and children are the most disadvantaged, this problem is not as large a concern for household food security, but many studies show that all women and children can benefit from the services provided. There are several general problems among all women, particularly anaemia and poor nutrition and child care practices. There may

be a need to address this problem in the longer run. Besides overcoming social and cultural biases, another option would be to open more than one centre in a village.

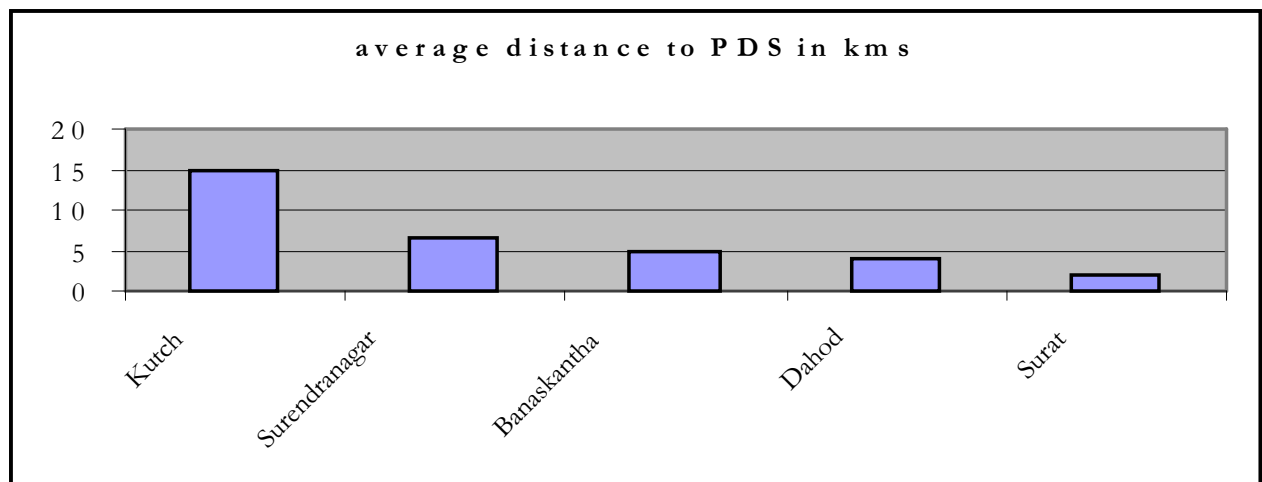
ICDS services are better utilized in most of the studied villages in Gujrat. It was also marked that the ideal situation for the better utilisation of the services by the beneficiaries is when the centres are located within the villages, the AWW is frequently from the same village and from a caste acceptable to all women. The greatest barriers to the accessibility and utilization of the ICDS services are irregularity in the opening of the centre, irregularity in the distribution of products and as mentioned above, caste barriers. To ensure regular opening times for the ICDS centre, every effort should be made to appoint an AWW from the same village. The AWW should be given adequate training on basic health services and should be provided additional incentives through foods.

Public Distribution System(PDS)

The PDS is one of the biggest food safety net. It provides grains at a subsidized rate. It is one of the several ways of transferring income from the government to targeted groups of people. The income is embodied in a product, in this case a food item with nutritional value. For the transfer to be effective, the product must be scarce and necessary for the recipients (Bhargava and Sagar 1991). As a mode of transfer, fair price shops (FPS) were found in the studied districts. The items provided in PDS are wheat, rice, sugar and kerosene. It was seen that the villagers of Banaskantha district were given maize in lieu of wheat in the month of May 2001 under the relief work conducted in the crisis year. The villagers reported that Palmoline oil is given during festivals, which is disliked by the villagers because of its bad taste.

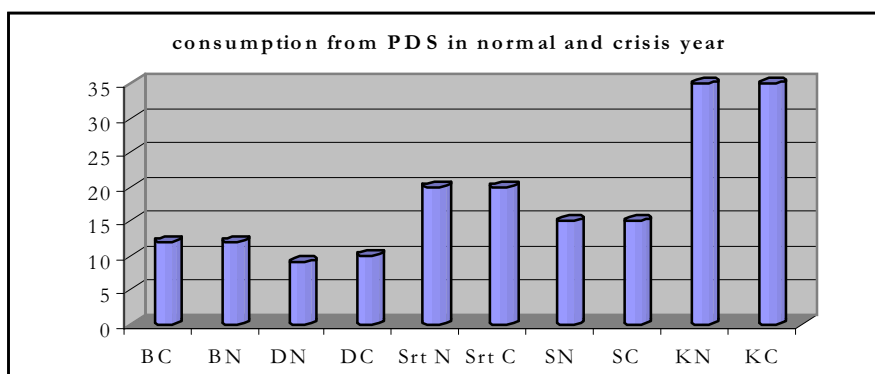
The PDS is available in all the blocks surveyed, but most of the people find difficulty in its accessibility and also find the quantity and quality of grains low. The villagers reported inaccessibility due to irregularity in the opening of PDS shop - once a week, which is also uncertain. Some of the villagers reported that the distance of PDS shop is also a constraint in the utilisation of the services (chart 5.1). The people also reported irregularity in stocks in PDS shop by which the supply gets affected. The villagers also opined that there is a limited variety of food grains and no supply of preferred grains such as bajra, jowar and maize. Favoritism is also observed in the accessibility of the grains i.e. the less needy people get more goods in the Banaskantha district where caste discrimination is high.

Chart 1: Average Distance to PDS in Kms.



It can be seen clearly from chart 1 that in the Kutch district the distance of accessibility of the PDS shop is the farthest but still people buy grains from there as it is available at subsidized rate. Another reason that can be accounted for taking grains from PDS is the relative poverty levels faced at the household level, which compel the people to take grains available in limited quantity and low quality. After Kutch the villagers of Surendranagar district face problems in accessing the services of PDS because of distance. On the other hand the PDS shop of Dahod and Banaskantha district is located at a distance of 4 kms and 5 kms respectively. Since the terrain in these districts is hilly this pose a problem in accessing the services of PDS. Despite the geographical difference, irregularity and uncertainty in the opening of PDS shop is the biggest problem in accessing the services of PDS.

Chart 2: Consumption from PDS (normal and crisis year)



BC-Banaskantha Crisis,	BN-Banaskantha Crisis,
DN-Dahod Normal,	DC-Dahod Crisis
SrtN-Surat Normal,	SrtC- Surat Crisis
SN-Surendranagar Normal,	SC- Surendranagar Crisis,
KN-Kutch Normal,	KC- Kutch Crisis

It can be interpreted from the chart that the grain off take in the normal and crisis year does not show a difference as the grains obtained from PDS are limited in quantity. There can be an added reason to it i.e. the PDS shop is not preferred because of the supply of bad quality grains. In the Dahod district in one of the sample villages named Pansa, block Danta a mobile ration shop fulfils the ration requirement, as the village is located in the interior. It was found that the villagers don't prefer grains from mobile ration shop as they feel that the grains provided in the mobile ration shop is expensive as compared to market. The suggestions of how the loopholes in the Public Distribution System can be addressed are described later in the chapter.

Agriculture

The availability of the services of the agriculture extension officer (AEO or *gram sevak*) is negligible in all the districts. The AEO comes to the *Panchayat* headquarter at least four to five times in a year to create awareness among farmers on the advantages of using manure and high yielding variety seeds. Villagers of these districts congregate at the *Panchayat* quarters. The AEO in all the districts is assigned the responsibility of preparing the village demographic profile, sanction of old age pension, and identification of *Jawahar Rozgar Yojana* (JRY) beneficiaries in the village. Access to the service of AEO is almost negligible in the districts of Dahod, Banaskantha and Kutchh. Communities in these districts have never been advised on the use of better quality

of seeds and manure in agriculture. The villagers across all the districts covered are dissatisfied with the agricultural extension officer, as they haven't received any help in matters of agriculture.

Forest

The participants revealed that they are dependent on forest for fuel wood, fodder and forest products like mahua flower and seed and collection of gum. The participants of Dahod and Banaskantha are involved in nurseries for generating employment in the monsoon. They are involved in the social forestry programme. In Dahod district the villagers received Rs.35 a day. The total mandays generated in one village named Bambroli, block Devgarh Baria were for 500 people for a month and 3 persons for a whole year. In the other districts i.e. Surendranagar and Kutch 15 days employment through nursery activities was generated in the monsoon months. The forest provides employment through public works programmes and income through the collection, use and sale of non-timber products (NTFPs) during different seasons.

Veterinary Services

Across the districts covered under the study it was observed that none of the villages covered in the study had veterinary services. In the villages covered in Surat district the veterinary services were located within the vicinity of 4-12 kms whereas in the Surendranagar district it was seen that the villagers approach Jesada village for veterinary services. The villagers across all the blocks comprehended that because of lack of veterinary services they have to face lots of problem regarding health of livestock.

Irrigation

In most of the villages covered under the study it was seen that the agriculture is rain-fed. Assured irrigation systems are not available in any of the studied districts. Irrigation water is mostly sourced from the privately dug wells or from the village pond or a canal that passes near the village. In very few villages covered wells and borewell served for the purpose of irrigation but due to drought the water level in the well has gone down posing difficulty in irrigation. It was seen that only in one village of Dhanpur block of Dahod district NGO called Utthan is functional which has constructed check dams but due to drought they have been rendered unfit for agriculture. The villagers across all the districts revealed that the level of ground water has also gone down due to persistent drought.

Electricity

Electricity service was available in nearly all the villages covered but regular power cut is a problem suffered by the villagers. Electricity is used for home consumption in the districts covered but in agriculture its used is limited due to inaccessibility and unavailability of irrigation sources.

Credit institutions

Access to formal credit is particularly low for vulnerable groups. This is partly due to lack of information on availability, lack of adequate collateral securities, and the fact that many default on repayments. This situation leads to increased dependency on moneylenders. A greater percentage of vulnerable groups depend on informal credit market. The issuance of loans from

the informal credit market is often restricted to those who have durables such as land and jewellery, and the borrower must accept terms and conditions (including a high interest rate). In the districts covered people don't access formal means of credit like banks as the loan off take from bank is a cumbersome process. Secondly loans from the banks is not available to the villagers at the time of need. So in the time of need they approach moneylender. The credits are taken by mortgaging land at 0% and jewelry at 3 % interest rate. The villagers also reported taking credits in the form of cash at 12 % interest rate. The purpose of loan off take differs according to situations faced. They take loans for buying food, agricultural implements, illness and social occasions. The women in the house don't have a control on taking credits. They are just aware that credits have been taken but the mode of repayment is almost unknown to them.

Local and Community based institutions

The village level institutions contribute mainly in the developmental process of the communities. The biggest local level institution responsible for people's development is the Panchayat.

With the Panchayat elections scheduled for November 2001, there are candidates swarming the village scenario. However, presently the activities are being taken care by the ex-sarpanch known as the *maji sarpanch*. Overall the performance of the Panchayat cannot be rated as satisfactory as revealed from the Participatory Baseline Exercise. The objectives of Panchayat include construction of village road, school building, construction of ICDS building, pond digging, community well digging and distribution of ration under the DRDA. The prime role of panchayat is to provide employment opportunities to the BPL population. It was seen that the implementation of schemes through Panchayat for the development of people was improper as the people reported that the schemes are not floated well. Nepotism and Favouritism form an integral part in the scheme implementation. Women are less aware and involved in the activities of Panchayat and its activity. If taken a closer look at the districts individually the following picture comes to the fore:

Kutch:

All the villages have a panchayat. The people are not satisfied with its functioning especially after the earthquake. All the facilities that have been provided to the villages are during the normal year. No special help has been extended to the villagers during the drought or the earthquake. Although they recognize that Panchayat is important but they are not satisfied with their performance and lack of aid after the earthquake. The government programmes have not reached many villages.

Surendranagar:

Nearly all the villages covered in this district have a panchayat located within the village. The primary activities and programmes reaching out to the villages are the construction of the ICDS or the anganwadi building, the panchayat room, cattletrough, crematorium shade, washing platform, well besides the taps, bathroom, a bore and the roads within the villages.

Banaskantha:

In Banaskantha three out of the four studied villages have a panchayat within the village. As far as the welfare of the villages are concerned constructions of the anganwadi centre, schoolroom, community hall, cattleshed, cattle troughs, wells, and panchayat bhavan.

Dahod:

All the villages covered in the study have panchayats. The developmental activities undertaken are the construction of village roads, wells, installation of hand-pumps, anganwadi buildings, and community room and school buildings.

Surat:

Not all but half the villages covered under the study in Surat have a panchayat located within the village. Among the infrastructures constructed for the welfare of the village are the anganwadi building, the community halls, internal village roads, common taps and bathrooms, bores, panchayat rooms, cattletroughs, crematorium shades, washing platforms and wells.

All the panchayats have implemented schemes like the Indira Awas Yojana, the Sardar Awas yojana and the other schemes of the DRDA. Though caste discrimination exists within the villages of all the districts in mention, it is only confined to the social areas like marriages. It does not spill over in the governance area.

Self Help Groups

The Self-Help groups were seen only in Kutch and Surendranagar district. The concept of self-help groups is promoted through the efforts of NGOs working for the upliftment of deprived groups. They are involved actively with the women groups in income generation activity, saving groups and their development. The aims and objectives of these SHGs is:

Provide a security at the time of loan off take

Abstain from the exploitation of moneylenders

Promote income generation activities, which help in raising the economic standard of people.

It was seen in Kutch and Surendranagar that the SHGs are formed irrespective of caste. The people are quite satisfied with the activities of SHGs as they are aware of its importance.

5.4.13 Non-Governmental Organisation

It was seen that in the five districts covered under the study, most of the non-government organisations present in the state are not an outcome of the exigencies. NGOs like **SEWA**, **Sadguru Watershed Development Trust** is working towards the development of the districts specifically the rural segments.

In Kutch, the non-governmental organisations covered under the study were present in the normal years, some came due to drought and some were involved after the earthquake. Some of the NGOs reported as working in Kutch are the Kutch **Mahila Vikas Samiti(KMVS)** and the **Jan Vikas Trust(JVT)** which are involved actively with the women group.

In Surendranagar district **SEWA** is functional. The sector priorities of **SEWAs** are training and thrift co-operative groups for making the women self-sufficient. The **Sadguru Water Development Trust** is actively involved in the area of water shed development. Both these agencies are active in the Dahod district. **Swati** is the other NGO that has imparted training in candle, incense stick making, papad and pickle making.

The picture of the NGO activities is grim in Surat. All the areas covered under the study reflect only one aspect- the NGOs were active three-four years back. Presently, there is no agency taking care of the studied areas.

“Few ladies came three years back saying that they wanted to start a savings group here in our village. God knows what happened.. they went some where and haven’t come back as yet. Every thing that was instructed to us in this regard is lying ready.”

- A woman during discussion, Surat district

As far as the Banaskantha district is concerned, **Bhansali Trust** is the only active NGO found during the study. The NGO is functional since past two years as the region suffers persistent drought and concentrates on the health related issues and cattle feed aspects with relation to the livestock. The trust organises cattle camps at the block during the summer season

Swami Vivekanand Trust is the other NGO working in the studied villages of Banaskantha. This NGO is involved in the area of education. The trust is involved in the construction of educational institutions.

On the flip side lies the fact that despite the presence and mention of many NGOs the benefits reaching out to the beneficiaries is very limited. The names are many like **Utthan Sanstha** in Dahod, **Navsarjan**- that provide agro implements on subsidy in the past, **National Rural Development Trust** that undertook some work in the area of non-formal education, both in Surat, **Swati** in Surendranagar that was active till the earthquake but never came after the devastation.

CHAPTER VI

PARTICIPATORY EVALUATION BASELINE FOR FOOD AID PROGRAMMING

Community perspectives regarding the quality of existing social programs

In order to evaluate the contemporary programmes with a food component, a participatory baseline exercise was conducted. All the views presented in this section are opinion of the community members. This survey highlighted the level of utilization of different services that are provided to tackle the food insecurity aspects of the target population.

Food For Work(FFW)

Asset Creation through Food for Work

The communities studied have major dependence for food on agriculture. However, agriculture does not form a major source of livelihood support in all the studied districts due to various factors like persistent drought, land fragmentation, rain-fed agriculture, rugged land, saline land and continuous soil erosion. The agricultural production provides food for 8 months in the normal year, which is reduced to 4 months in the crisis year. Under the prevailing circumstances, vulnerable households in most of the districts have little scope for producing *Rabi* crops. In all the studied districts few food secure households (mainly Patels and Darbars) do cultivate *Rabi* crops in normal years. Therefore, the vulnerable households need to work hard to meet the additional food requirements. Barring a few, significant sections of community do not have any work within or nearby villages in the *Rabi* season. Hence, they migrate to distant places for manual labour and often migrate with the entire family. Focus group discussions with people revealed that they prefer to work as labourers in their own village or nearby villages rather than migrate to far-off places. This preference is also evident from the community participation in the food for work carried out in these areas.

In order to fulfil the yearly food requirements the villagers reported migrating to near and distant places from the month of November to March as farm and casual labour. Across the districts studied mainly men migrate but in the Surendranagar district all the family members migrate to the salt pans. During the FGDs the communities revealed that they dislike migrating to far away places as it increases expenditures at the place of migration leaving a nether amount for family. The people opined that they would like to get involved in income generating activities in their own village so that the expenses incurred on migration is decreased. The people of Kutch and Surendranagar district reported taking debts from the moneylender for migration.

FFW was implemented in the Surendranagar and Dahod districts covered which was implemented by DRDA under the drought relief programme.

ADVANCE RATION SCHEME: Under this scheme cereals like wheat and rice was given. The wage, which was given, was Rs.40 per day for a piecework out of which the people were given food coupon per day, which could be cashed in the PDS outlet. They were entitled to get wheat at the rate of Rs.2 per kg. and rice at the rate of Rs 3 per kg per day per person. Under the second scheme people were given 25 kg. Cereal (wheat and rice) at the end of the month.

Under the third schemes the village people who were aged, diseased and lacked total kindred supports were given 5 kg. wheat per person at the end of the month. The identification of

the diseased and aged was done with the help of Sarpanch and village people. The stock of food grains was kept in the anganwadi from where the distribution was done. The people liked the schemes as they helped them in the year of crisis and addressed food insecurity at the household level.

The FFW programme also generates fund, which are used for creating community assets. The assets created under FFW were pertaining construction of institutions like community room, anganwadi room/Balwadi, well, pond deepening and road construction. The payments were made in the form of cash and grains. The State government provided the food component as a part of wages. All the community members opined that through the FFW programme employment opportunities are generated for the entire village and especially the vulnerable groups but as it is time bound its not able to furnish permanent employment opportunity which the people think is a set back of the programme. The villagers revealed that the foremost importance of these kinds of programmes is that the rate of migration is lowered. The villagers opined that FFW activity could be linked with income generation activities performed by women, linked with the school, which would help in increasing the attendance of girls and promoting cottage industry.

Table 6.1: Village Summaries of Food for work activities

District	Assets	Beneficiaries	Labour	Payment	Comments
Kutch	Nursery	Entire village	100-125 people	Rs. 40-50/days	Provided wages monsoon months Want food as a component
Surendranagar	Community Anganwadi Panchayat room deepening, construction,	Bharwad, Harijoli communities	100-150 villagers 1 ½ to 2 months	Rs. 35 per day wheat Rs. 42 per day wheat.	Prefer more wages in form of wheat Want better quality grains
Banaskantha	Pond digging construction, nurseries	SC community	100-150 villagers 3 months	Rs. 40-50	Prefer grains
Dahod	Road, school school room, checkdam	ST community	1100-2000 for 3 months	Rs.40/day + wheat per week	Prefer grains
Surat	Road, community room, well	ST community	85 villagers months.	Rs. 40	Prefer more cash

Wage rate and Payment for Food for work

The villagers opined that under the FFW programme employment is generated in the crucial months of monsoon and during drought years which is a positive trait of the programme. The wages are given according to the amount of work done in a day in the form of cash and grain. The communities prefer the wages being paid in cash and in the form of grains but across different groups the wage payment mode was viewed differently. The women group during the discussions preferred grains to cash as it would reduce the cost of buying food grains from the market, which is normally very high. They were particularly vocal about the advantages of receiving partial payment in the form of food, as they see it not only contributing directly to food security but also preventing men from ‘wasting’ the wages. This in turn would reduce the debts incurred on food and address the food needs at the household level. The men on the other hand opined for more cash as it will increase savings and give them money in hand, which can be used for repayment of debts, buying other household necessities and during illness. While few of the

women groups suggested that wages under FFW should be given in the ratio of 75 per cent in kind and 25 per cent in cash to support their short-term coping strategies the majority preferred it to be in the ratio of 50:50. They feel that cash earnings are more likely to result in temporary employment but no lasting improvement in the household food security. Women argued, that wage in terms of only cash is used mostly by men for consumption of liquor, leaving a small share for food purchases, which results in increased dependency on private loans for food. They also said that a payment in terms of both cash and kind helps them to not only meet the daily grain/food requirements, but the cash component can effectively be used in the repayment of loan.

The villagers reported that the grains sanctioned in FFW under DRDA could be obtained from the PDS on producing a token (workers had to produce the token at the end of the week to get ration from the ration centres). The villagers faced problem in accessing grains from PDS due to distance. They have to travel a long distance to collect the ration, and sometimes must return to the shop repeatedly due to lack of availability of the goods. The villagers inquired about the feasibility of making the payment of grains more facile so that the cost of travelling to the PDS gets reduced. This system might work more efficiently if grain banks are given the responsibility for distribution.

Women's education and training

Women work extremely hard and yet are the first to be deprived of food when there are shortages. They contribute up to half of the household's income, sometimes even more, but have little control over the income that they earn. They contribute in the household income in Kutch and Surendranagar district almost equally as compared to men because of lack of employment opportunities. In the other districts it was seen that the contributions made by women is low but is not negligible. In spite of this situation, women expressed a strong interest in improving their income earning opportunities. Some of them recognize the link between literacy and management of resources. And those who have formed self-help groups (SHGs) are even more committed to improving their situation. Although economic and social barriers limit women's opportunities, the following could support their development: improving income generation activities; improving literacy; and forming and assisting SHGs.

Income generating activities

Women in all the districts reported being involved into one or the other income generating activities. In all the districts except Surendranagar it was found that the women have one or the other income generation skill. In the Surendranagar district women expressed a desire of training for adopting an income generation activity, as they dislike salt work in which they are presently involved. The women of other districts reported probable opportunities of income generation enlisted in table 6.1.

Table 6.2: Probable Sources of Income Generation among Women

Kutch	Surendranagar	Banaskantha	Dahod	Surat
Embroidery Tie & Dye Bead work Dairy business	Papad & pickle making Tailoring Dairy products	Papad & pickle Making baskets out of paper	Advanced information of developing the agro-s & providing market for products	Dairy related opportunities Tailoring

The women across all the districts were inquisitive regarding the procurement of raw material will be procured, finance and market in the case of starting an income generation activity. The women opined that for initiating any income generating activity need of a support organisation is very essential, as the economic situation of the participants is impecunious. In the discussions the women also revealed about increasing the literacy level because it will help them in becoming independent. They want the non-formal educational centres to take the initiatives and ameliorate their literacy level. The programs taken up by NGO should bring a long-term impact. In majority cases they opined men should also be involved so that they realize women's role in income generation and respect their contributions. This will be progressive in increasing her power in decision making. The women of Banaskantha and Surat district during the discussions agreed on accomplishing income generation activity, which can benefit community as a whole. The women require community support for undertaking such activities and assertively opined that the income generation activity should be need-based. They opined that the programme would succeed with the assistance of proper funding and promotional and motivational measures taken up by the NGO and family members.

Self Help Groups

It was seen across five districts that 25 self-help groups were functional. The SHGs are largely formed as savings forums, and many of the groups surveyed have moved beyond savings to either lending or investing. The SHGs were formed by NGOs called Janvikas, KVT(Kutch Vikas Trust), SEWA(Self Employed Women's Association) and KMVS(Kutch Mahila Vikas Samiti) in Kutch, SEWA and Swati in Surendranagar, Utthan in Dahod. The women reported contributing Rs.10-.20 in a month in the savings account. They can take a loan after 6 months contributions and have to repay it within one year. The rate of interest is 3-5% per month. The women reported that they cannot take a loan of more than Rs.5000 initially but after repaying the first loan amount they can take a higher amount. The women appreciated the autonomy and operational flexibility of NGOs and also feel that NGOs play a supportive role in the savings. In Surendranagar district SEWA has utilised the skills and potentials of women in constructing roof water structure. Implementation of this programme has solved drinking water problems in the village. SEWA has helped villagers in the construction of roof water structures at a subsidised rate. The villager's contributed Rs.1000 and SEWA contributed Rs.3000 in the construction of one roof water. The women SHG have been insured through Jeevan Bima in which their families are entitled to health benefits by contributing a premium of Rs.80 per month for a year. The women of other districts expressed that apart from savings the women should be actively involved in income generation activities. They also opined that through self help groups fringe benefits should be provided. The women have opined for a holistic approach for the sustainability of the SHG. Across all the districts it was comprehended that SHGs can be used for empowering women for improving health and nutritional status through Anganwadi. The women of Kutch district expressed that SHGs have helped them in becoming self-reliant.

Table 6.3: Self-help Groups across districts

District	Number of Women groups across district	Contribution per month in Rs.	Organiser	Purpose
Kutch	12	20	KMVS, KVT, Janvikas,	Income generation
Surendranagar	11	10	SEWA, Swati	Income generation, Insurance, Water harvesting structure
Banaskantha	-	-	-	-
Dahod	2	10	Utthan	In the incipient stage
Surat	-	-	-	-

Gender inequality is seen in the patriarchal society. It ensures that men play a critical role in determining the education and employment of family members, age of marriage, besides access to and utilization of health, nutrition and family welfare services for women and children. The money obtained by income generating activities is used for buying groceries and things for children but absolute control of income is not in the hands of women. The women across all the districts felt a need for education through orientation and training programme, which will help them in exercising power. The women entrenched that group meetings should be regular and every member should be aware of their responsibilities. In addition to this there should be transparency and accountability among the group members which will make the long term objective attainable. The women contemplated that discussions of resource mobilising should be held with the support unit for income generation. The support units should know ways of making an SHG self-sufficient and independent in problem solving. They should also emphasise on alternative financing and insurance, which will provide them social security in the later years of life. The women referred that the operational efficiency of the group should be improved by developmental initiatives. The cohesiveness of the group can be maintained through management games, which will lead to rapport building of the NGO and help the group members in realising each other's importance. Community cost sharing and local entrepreneurs at village level can help the income generation activity by providing soft loans.

Table 6.4: Different Programmes for Women and Girl child in Gujarat

S.no	Name of Project	Beneficiaries	Programmes	Districts Covered
1	Integrated Child Development Scheme(ICDS)	Pregnant and Nursing women and children below 6 years. The ICDS envisages provision of vital services to most vulnerable groups in disadvantaged areas with a focus on area inhabited predominated by SC, ST and OBCs	supplementary nutrition, immunization, health check up and referral services, education for pregnant and lactating mothers, pre school education and growth monitoring	Entire State
2	Adiwasi Jan Jati Vikas	Adolescent girls	Increase the attendance of adolescent tribal girls in school	Banaskantha, Dahod and Surat
3	Balika Samridhi Yojana	Girl Child	To promote survival and care of girl child	Entire State
4	Maternity Benefit Scheme	Mothers who have their first child after 19 years of age, for birth of first and second child	To promote child birth at a right age in order to decrease infant mortality rate	Entire State
5	Family Welfare linked Health Insurance Pan	For both men and women	Couple belonging to BPL categories who undergo sterilisation with not more than 2 children	Entire State

6	Swarnajayanti Gram Swarozgar Yojana	Women	Self employment including organization of self-help groups, training, credit, technology, infrastructure and marketing	Entire State
7	District Primary Education Programme (DPEP)	Children	Education	Entire State
8	Swa Shakti Project	women	Women empowerment by formation of SHGs by sanctioning revolving fund which gives interest bearing loans during formative stage.	Entire State

In order to empower women, the Govt of Gujarat introduced a number of schemes for providing gainful employment opportunities, awareness creation, subsidize education of girl child and giving incentives/benefits to the couple going for sterilization after two children (one of them should be girl child). The initiatives, however, have not percolated down to the village level because of natural and institutional bottlenecks. By and large, specific schemes such as the Integrated Child Development Schemes (ICDS), Swa Shakti Project, Swarnajayanti Gram Swarozgar Yojana, Adiwasi Jan Jati Vikas and Balika Samridhi Yojana could be promoted in the studied districts with the assistance of WFP. This will not only generate a conducive environment for women's growth in particular but emancipate the girl child from the fringe forever. Looking at the status of women in the state, there is a necessity for the promotion of education and improvement of traditional as well as non-traditional ways of income generation.

6.3 Maternal and Child Health

The ICDS programme centres for proper cognitive, physical and social development of the child, enhance the capability of mother to look after the normal health and nutritional needs of child through proper health and nutrition education. ICDS takes care of the essential needs of pregnant women and nursing mothers in socially and economically backward communities. In the studied districts ICDS was existent but its functioning was inappropriate. Regarding the Health status of respondents PHC was present in the vicinity of majority of villages canvassed but its functioning was not up to the mark as opined by the community members. The reasons of mal-functioning of ICDS and PHC as contemplated by participants are described in Chapter 4 and 5. The participants expressed a desire for programme for adolescent girls as they face many problems on the onset of puberty, which can be shared in-group meeting. The women during the focus group discussions revealed that if issues of nutrition, health, hygiene, family welfare, home management and child care can be discussed with adolescent girls then it can abstain them from the problems which they had undergone during their motherhood. This kind of programmes will ensure a safe motherhood to the adolescent girls. In addition to this it would be easy for them to acquire literacy and numeracy skills through non-formal education. Their special requirements comprise health counselling, reproductive health education and supplementary nutrition.

In only a few of the ICDS centres had mothers meetings been organized. Awareness on maternal care and child care practices is poor. Most women are not aware of the value of the IFA (iron/folic acid) tablets or the benefits of child's immunization. There are strong mis-perceptions

about IFA tablets, immunization and colostrum. Colostrum use is strongly abused under the notion that it is 'bad milk'. Women reported that they do not use IFA tablets for fear of losing the child. Awareness about IFA is negligible among pregnant women as they feel that the food, which they are eating, is enough for sufficing the nutritional requirements during pregnancy so they don't prefer any additional supplement. The women also opined for regular "mothers meeting" as it will help in improving health status of pregnant and lactating mothers.

The biggest drawback of ICDS was put forth by the migratory population of salt workers of Surendranagar that the scheme is not advantageous for them in any way because of their inhabitation in the rann for eight long months stampeding their own village.

In Dahod and Surat district the tribal population resides in remote and low-density areas which do not have access to affordable health services. They remain under-served in the coverage of reproductive and child health services. The needs of such communities can be addressed by mobile health clinics.

There are some ICDS centres that appear to function well than others. The quality of the ICDS depends on the efficiency of the workers, the regularity in the opening of the centres and the distribution of food in these centres. Some of the ICDS centres in Kutchh, Banaskantha and Dahod perform well due to the efforts put in by the AWW. Where there are centres, there are also higher rates of immunization and improved knowledge of basic health practices such as ORT.

Provision of food in the centre did not appear to contribute substantially to increasing participation of the beneficiaries. In most of the communities the women complained regarding the quantity and the quality of the food. They consider the most important benefits to be the supply of cooked food (*dalia*) instead of foodgrains. In some centres IFA tablets and ORS is also supplied to the villagers.

There is a need of preventive and promotive services such as ante-natal and post-natal care for women, immunization for children. Priority in allocation of funds should be given to improving health care infrastructure at the community, PHC, subcentre and village levels.

Child education

Social development depends on good education. In the studied districts the enrolment of children in the school is there but the attendance is quite low as they are engaged in the household chores or are involved in income generation activity. Lack of importance of education and affordability are the foremost reason for low attendance in the school. The children are considered as additional working hands by parents and in this process all the child rights are being ignored. The parents feel that education will do no good to their child as they lack resources to invest for a child's career. It was observed that the consciousness on the need for education among girls is high. NGOs and media play a very important part in creating and propagating awareness. In spite of all the serious efforts, a majority is still without access to education. For them education is still a forbidden fruit. The reason for this was accounted as domestic duties, employment at home and outside to create an impediment to girls access to education. They are often assigned the duty to look after siblings, as her mother works hard all day to add family income. The main aim of ICDS and non-formal education programme should be to reduce the burden of household duties so that she can attend classes along with her younger siblings and get some education and income earning skills.

During the group discussions the community members opined that the provision of the mid day meal has attracted many children to school, and a direct relationship can be established between the supply of 'cooked food' and school attendance. Irregularity in the supply of food was cited as the most important factor for lower level of school attendance and dropouts. Enrolment is also negatively affected because parents feel that the quality and quantity of food provided is not sufficient for the children. According to them, an increase in quantity and quality of food will attract more children to school. Items requested include rice and milk. An increase in supplies from the present quantity was also requested in most of the communities. The children are also dissatisfied with the nutrients given under the scheme as it doesn't suit their pallet and is contaminated with insects and small pebbles. The parents opined that the enrolment rate would increase if the quality of meal given were improved. The parents expressed that dry grain would be a better option in order to overcome the problems faced in MDM. In addition to this it will also help displacing food insecurities faced at the household level.

The provision of books, dress, financial support in terms of scholarships can also raise the enrolment in school.

6.5 Possible Institutional Roles in Community Development Activities

6.5.1 Women's groups

In the studied districts women are brought together by the initiatives of SHGs. They are engaged in income generation activities and savings. The women who haven't been given an opportunity to form a group want to initiate a Mahila Mandal, develop skills through training and want to get involved in income generation activities. The women opined that they always want to channelize the skills possessed by them in becoming self-sufficient.

The women of Kutch district expressed that they are interested in controlling PDS as it lacks co-ordination and regularity. The women of Banaskantha and Dahod district are interested in forestry activity so that they can earn a livelihood by selling trees of economic importance. Women of Surendranagar district agreed on initiating crèches for taking care of children of working and ailing mothers, as the rate of migration to the Rann for employment generation is quite high.

Women across all the districts want to utilize the SHGs for social and economic empowerment. They desire economic empowerment through income generating activities like handlooms, handicrafts, agro-based activities such as animal husbandry, fisheries and self employment like vegetables or fish vending etc. The villagers of Banaskantha and Surat district expressed a need of agro industry so that the primary resources like cereals can be converted into secondary resources like fortified flour, which could be used as a nutrient in ICDS and MDM. Women across all the districts want to utilize the SHGs in increasing their knowledge about nutrients, which cost low and also improves their nutritional status.

Village Panchayat

Panchayat is a very important political body for the development of village. The developmental schemes for villagers can be implemented if the Panchayat is active. In most of the villages covered under the study joint Panchayat was seen. For the effective working of Panchayat they must be involved at the policy formulation process. Educating panchayat members through

orientation programmes and training programmes to equip them to exercise powers is a must. Women should be involved actively in gram Panchayat. Strengthening of women sarpanchs and women panchayat members can be done through regular training. NGOs can play an important role in facilitating this training. The *panchayat* could be involved in village development in a number of ways:

To mobilize the villagers to participate in development activities.

To form specific women groups for IGA activities in the villages. These groups could be trained given the availability of local resources for income generating programmes. In some of the studied villages in Churu, women were employed on a rotation basis in village development work.

Specific sub-groups could be formulated or the existing village development committee could be assigned to undertake need based development activities.

To execute and monitor on-going activities and implement future programmes.

For village development, the SHGs could mobilize people to contribute voluntary labour in the creation of assets (common property resources) such as pond digging, road construction, construction of school building etc.

To organize and manage village grain and seed banks.

To fulfil some of the functions of the Fair Price Shops so that food supplies are more regularly available at the local level.

To manage watershed activities, utilizing DRDA / DPAP funds for these activities.

To motivate parents to send their children to schools.

Local NGOs

They are actively involved in the developmental programmes at the grass root level with specific target groups. The NGOs can be involved in various other activities like:

They can be involved in social action through capacity building and strengthening support agencies.

They can contribute further in proper access and functioning of community institutions

They can be involved in setting up the food security nets by community support and participation.

NGOs can involve people in bunding, contouring and watershed management programme.

NGOs can implement the concept of non-formal education through group formation.

NGOs can be used in the enhanced involvement of women in economic activities, additional income and control over it, leading to upgradation of standard.

Integration of women into social mainstream, especially in the areas of control over and access to finance, including credit from institutional and other sources.

NGOs can be used to promote awareness of nutrition, health, hygiene, family welfare, home management and child care among adolescent girls.

NGOs can guide women for proper institutions of credit and help them in linking with the markets so that they are abstained from the exploitation of traders.

Public Distribution System

The objective of PDS is to provide grains at affordable prices. Across the studied districts it was observed that people use PDS mainly for buying Kerosene. The services of PDS are under-utilized as the quality of grains is inferior and quantity is also limited. In the study it was observed that PDS has failed to meet the needs of food at the household level. The people added that in PDS they don't get preferred grains so its services get weakened. The lack of hard

cash and frequent migration adds to the problem of its accessibility further. Improved provision of grains in regularity and within the affordability of the vulnerable groups from the PDS will help the community in the time of food shortage and also increase their dependence on the programme to support the household level food security even during the normal time. The utilisation of PDS is comparatively better in this state in comparison to Rajasthan and hence if the bottlenecks in the distribution will be checked it will go a long way in helping the vulnerable households in strengthening their food security base.

CHAPTER VII

TARGETING FOOD INSECURE HOUSEHOLDS AND PROGRAMME RECOMMENDATIONS

The characteristics and location of vulnerable households emerging from this analysis will assist in targeting the most food insecure households and persons.

The poorest areas with the most food insecure and vulnerable households in the studied districts are clearly in the rural areas. The following paragraphs describe the characteristics of the vulnerable households.

More remotely located households: Distance and access to public infrastructure is closely linked to asset levels and vulnerability. Distance from a health sub-centre, ICDS centre and PDS outlets are strong indicators of households that are not able to access services. Govt./IFAD/CRS/MSSRF/UNICEF/WFP and their partners should attempt to target their activities to more distant areas. While Kachchh is a sparsely populated district in Dahod and Banaskantha the terrain is hilly and there are villages, which are not only remote but also having a population that is less than the norms for operating an Anganwadi Centre or a PDS outlet.

Landless households and those with marginal land holdings and few assets: Landless households are completely dependent on labour demand and are highly vulnerable. When agricultural production fluctuates, especially under extreme drought conditions, many are forced to migrate. This is again true in case of communities, which lack irrigation, and there is hardly any cultivation during the Rabi seasons. Households with marginal land holdings are also equally food insecure. With hardly any production of food grains, the households are forced to diversify their sources of income and primarily depend on labour opportunities in nearby town areas and drought relief work (known as scarcity work) organised by the government. These households have high rates of migration and low levels of skills. Govt./IFAD/CRS/MSSRF/UNICEF/WFP and their partners can assist in increasing their consumption levels, and contribute to their asset base by providing employment opportunities and supporting the development of an improved productive environment.

Scheduled Caste (SC): Households from scheduled castes have lower asset levels, and from the survey it is clear that many of them are discriminated against in access to services in villages. The difference in the quality of land owned by SC communities and upper castes was observed during the survey. Most of the lands leased out in the name of SC households as a part of land reform are degraded, fallow and undulating. It was also observed during the survey that due to lack of resources and high indebtedness these households leased out their land or else mortgaged them to the moneylenders or the big farmers.

Scheduled Tribe (ST). The survey data also confirm general findings that households in Scheduled Tribe communities are associated with lower assets, poor access to health and nutrition services and high food insecurity. Most of the STs are either Pastoralists (Rabari) or Salt Pan Workers (Koli). In two Talukas, Mandvi and Nakhatrana, it was observed that Rabaris have shifted from their traditional occupation of animal herding, which was highly migratory in nature, to farming. With the availability of irrigation water on rent and share cropping system with large landholders, Rabaris of these two Talukas have become an integral part of the mainstream Hindus. The Rabaris of the eastern Talukas, however, have remained pastoralists. Their livelihood security is extremely jeopardised because of the acute fodder crisis. The other

major ST community, Koli, living in Anjar, Bhachau and Rapar talukas in Kachchhh and Surendranagar district, is primarily engaged in the hazardous occupation of salt production. As Kolis live mostly away from their villages, in the salt pans, they are deprived of most of the services necessary for leading a healthy and normal life. Moreover, most of them are highly indebted and are almost working as bonded labourers. The STs in Surat are mostly landless and entirely depends on labour activities. STs in Dahod and Bansakantha although own small plots of land mostly depends on labour activities as the lands own by them are unirrigated and highly infertile.

Minority Community: Farming, Casual labour and livestock rearing are major occupation of these households. Mostly the households are marginal farmers with unproductive patches of land without irrigation. Migration is low among them. The women are involved in household work, which restricts the income that could be generated from other sources. They don't go out of the house to earn because of the cultural construct so they are involved in income generation activities like embroidery. Muslims constitute a significant proportion of the population of the district. Those who live in the Northern part of Bhuj Taluka (Banni and Khavda areas) are primarily animal breeders and fully dependent on selling milk, milk products and animals (goat, sheep, buffalo, cow, bullock etc.). Increasing pressure of livestock coupled with acute crisis of grass and fodder for the animals have made these communities highly vulnerable. Muslims in other areas of the district were either landless labourers or marginal landholders. Very few Muslim farmers were found to own land beyond 5 acres.

Disadvantaged Head of Household: All villages surveyed identified those households with handicapped persons, diseased household heads, elderly heads of households, and female-headed households (where the woman has been widowed, divorced or abandoned) as being particularly vulnerable. Female-headed households generally represent a small percentage of households, though in areas of migration this can be higher. Female-headed households should be targeted with income-generating activities or food for work, and they should be given priority for supplementary feeding programs for themselves or their children. There were complaints of diseases like Tuberculosis, stiffness of legs/joints, short sightedness etc. from men and women engaged in salt pans and bauxite/lignite/coal mines in Surendranagar and Kachchhh districts.

Vulnerable Women and Children: Many rural women in the studied districts are underfed and undernourished, and this is particularly so in crisis years. In times of crisis, they are worse off than other household members are because they deprive themselves of food (to sacrifice limited stock for the children and the men), and yet work harder. Women and children in all of the above households merit targeting. As an extreme coping strategy adopted by the vulnerable households, many children in the age group of 10-14 years have dropped out of their schools and are working to earn daily wages for their families. These children are from all social groups and work even in government supported drought relief programmes.

Recommendations for Sectoral and Sub-Sectoral Priorities

Priorities for improving food security through asset creation

The evidence provided in this report underlines the extent of village and household vulnerability in the districts surveyed. The state experienced drought for two consecutive years, preceded by a cyclone, apart from the recent devastating earthquake. Many households have resorted to extreme coping measures to meet basic needs such as deep indebtedness, food intake reduction, household migration, child labour, extended months of work in hazardous salt pans, bonded labour practices etc. A significant number of households are undermining their long-term food security.

The survey results showed that there are some consistent priorities across villages. The overarching need is to address the shortage of water (for drinking and irrigation) and shortage of grass/fodder for the animals. Agencies should work to identify the means to support village development of water harvesting facilities. For development of water harvesting facilities, watersheds should be the basis for targeting instead of villages.

Lack of markets and income-earning alternatives are common constraints felt by the communities. Agencies should seek means to support programmes that can help in upgrading the skills through training and development of market linkages.

The three main priorities identified by the community can be categorized as:

- Water harvesting structure and management
- Soil conservation and management
- Livestock productivity including increased fodder availability through development of grasslands/pasture and grazing lands

Watershed Development: Watershed development has vast potential. Development Support Centre (DSC) of Ahmedabad, headed by Anil C Shah, carried out a study of the impact of watershed development in May-June 2000 – a year of very severe drought – in eight drought-affected districts of Gujarat [Shah 2000]. The study compares drought in a village in each district with the benefit of watershed programme for the last four to five years, utilising at least 70 per cent of the total budget allocated under the programme, with adjoining village without the benefit of watershed development programme. The study analyses access to drinking water, area under crops in kharif (monsoon) and rabi (winter) seasons, yields of main crops, fodder and animal husbandry, milk yield, local employment, migration and food security.

The findings show that the incidence of drought is less severe in watershed villages as compared to the adjoining non-watershed or ‘control’ villages. The study concluded that the “overall impact is not only positive but also impressive...to a large extent the participatory watershed scheme launched in 1995-96 by Ministry of Rural Development has been found to mitigate the impact of drought.”

Amita Shah and Gani Memon conducted a quick review of watershed development projects being implemented since 1995-96 in Gujarat. They examined their initial impact at the household level based on a primary survey covering 120 households in four micro watersheds selected from Rajkot, Surendranagar, Amreli and Bharuch [Shah and Memon 1999]. Even though the project had barely completed 4 years of its implementation, irrigated area almost doubled since the project intervention. Since increased irrigation had been used mostly for

growing cotton during kharif, which gets extended up to rabi season, there is, in effect, an increase in cropping intensity. Increased irrigation had led to a substantial rise in average yield per hectare from all crops combined. Thus the total net returns from all crops increased by 63 per cent. As many as 87 per cent of the households reported that the project had direct benefit on drinking water facility (in Surendranagar and Bharuch, this response was echoed by all the respondents). The majority of landless households (71 per cent) reported increase in availability of employment opportunities, mainly on the project activities.

The many benefits of water harvesting structures, soil conservation measures and development of pasture/grazing land are –

Arresting the run off and harvesting rain water.

Use of the harvested water for drinking (with some purification measures) and irrigation purposes.

Recharging the ground water, which is otherwise extremely depleted and is confined to only certain pockets of the districts.

Arrest topsoil erosion and holding water for longer duration.

Generation of local employment opportunities for labourers so that the incidence of distress migration is reduced.

Increase in agricultural productivity, increased availability of grass/fodder, increase in milk production, increased availability of biomass.

Restoration of natural resource base that is conducive to sustainable development.

The challenge lies in identification of areas for intervention. A village-based approach often ignores some or many villages coming under a watershed, and hence the village based watershed development only partially improves the watershed. Agencies planning to implement watershed projects should try to select all the villages falling within a watershed to develop a plan that would replenish the water and land resources of the entire watershed.

There is another important angle in the village-based approach. It has been observed that if the main village or the village where the Sarpanch resides does not fall under the project, the involvement of the Gram Panchayat gets minimized. The survey team came across villages that are 3 to 5 km away from the Gram Panchayat and hence hardly receive any development inputs through the Sarpanch. These aspects should be kept in mind while selecting villages or cluster of villages for watershed development.

Watershed development should be taken up as food for work activity. Food Aid agencies can provide food grains as a component of the labour work required for the constructions. The cash and material components can be provided by DRDA under their watershed programmes. If directly implemented through the NGOs, the cash and material components will have to be arranged by them from other funding sources.

SEWA has initiated a noble effort of conserving every drop of rainwater for domestic purposes through **Roof Rain Water Harvesting Structures**. These structures at the community level and individual levels are constructed depending upon availability of community infrastructures, number of *pucca* houses, settlement pattern etc. These structures were also observed to be storing water supplied by tanker everyday in some villages. Promotion of these structures can generate employment during construction and at the same time creates lasting asset for the community to cope with the severe water crisis.

Apart from watershed based activities through DRDA and NGOs, the ongoing Tribal Development project through forestry activities should continue. The only hindrance could be the norm of tribal population laid down jointly by WFP and the state government, in case of districts like Kachchh, Surendranagar, Patan etc. where ST population is not high. Moreover, the forest covers in these districts are very low. Apart from forest development through Joint Forestry Management, the Forest Department can also become a partner in the initiatives of the development of the grasslands/pasture land in the state.

The micro plans being funded by State Level Coordination Committee (SLCC) out of the generated funds are implemented in eastern districts of Gujarat. Either NGOs or Forestry Department implements these micro plans. The 73rd Constitutional Amendment had given Village Panchayats the power to mobilize resources over and above what they receive from the state government. SLCC should explore funding some active Panchayats for implementation of micro plans under the close monitoring of the forestry department. The forestry department can also transfer the fund to DRDA/Zilla Panchayat who in turn can allocate the money to the village panchayats and can monitor the work through its network of grass-root functionaries.

Priorities for improving nutritional status of children and women

Many documents on food insecurity in India indicate that health problems of women and children, experienced by vulnerable households, can be partially addressed through basic behavioural changes brought about by nutrition education, health facilities, provision of supplementary nutrition and other social services. For example, many illnesses can be prevented through better sanitation practices, deaths of children can be reduced through improved maternal feeding practices, and health of children can be improved through vaccinations, vitamins, and oral rehydration therapy (ORT) etc. The village surveys indicate that knowledge regarding good nutrition and health practices is limited across all vulnerable households regardless of location or specific characteristics. Many women and men do not know that basic behavioural changes can significantly improve their wellbeing.

The most promising entry point for promotion of better health and nutrition messages and providing supportive services are the ICDS centres.

The survey indicates that ICDS centres do not exist in every eligible cluster (village or habitations). Even where there are ICDS centres, concerns about the quality and accessibility of the services were expressed by the communities. Access to the centres can be restricted due to distance or social barriers, therefore currently a considerable number of very vulnerable women and children are not able to avail of services. Some AWCs were also found to be not functioning for several years.

Some possible solutions to improve the services are –

The uncovered areas/Anganwadis could be handed over to NGOs who have experience in running childcare centres (e.g., SEWA).

In those villages where the Anganwadi Workers had resigned efforts should be made to immediately appoint new workers, preferably from the same village. In many villages, the communities were found to be passive about reopening centres, as they had never received good services from the AWWs. Re-motivating the community in these villages is going to involve some effort, for which local NGOs could be used.

Pre-school education is an important component, which is not working properly. Organizing training for the AWWs and provision of pre-school materials to the centres would be useful in improving the service. Food incentive to the AWWs and the helpers could also be explored to improve/expand the services.

In Surendranagar district, SEWA has opened several Crèches and Childcare centres for the children of the salt pan workers. Thus, children do not go with their parents to the extremely hazardous salt pans. This effort should be replicated in other districts where men and women migrate for labour work during crisis months/years.

In almost all the villages, women have handicraft skills in Kachchhh. In other districts the women show their interest to start alternative income generating activities after getting training. Forming thrift cum income generating groups and linking them with AWC could improve the functioning of the centres. Active AWW can become resource persons for all these initiatives and can in turn get extra incentives. The Director of DRDA of Kachchh showed his willingness to provide an incentive of Rs. 1,000 per year to each AWW involved in mobilising women's group.

To lessen the problem of inaccessibility, adolescent girls or women from areas, which are not covered by any centre, should be registered under the AWC. They should be trained and given responsibilities to provide selected ICDS services, especially nutrition, to the beneficiaries in the communities to which they belong. In order to create interest they can be given food grains as an incentive for service. The lessons learned from Intensive Intervention Projects in Jhabua, Banswara and Koraput will be useful in designing an appropriate strategy for outreach activities.

To generate interest among the beneficiaries, a regular supply of food and other services has to be guaranteed. Awareness campaigns regarding the importance of IFA tablets, Vitamin A etc. should be undertaken as mere supply of these items is not enough to guarantee utilization. It was observed during the survey that women do not use the IFA tablet as they have a misguided notion of negative effects.

Migration limits many women's ability to consistently use the ICDS services. Efforts should be made to ensure that migration does not impede access to ICDS services. One option could be to provide cards to migrating women and children so that they can access services where they migrate. This could be difficult to implement in cases of inter-state and district migration. A more challenging solution might be the provision of seasonally mobile ICDS centres especially functioning in the most important places of migration.

Caste problems do exist and hamper optimal utilisation of ICDS services in some villages. This is a sensitive issue, and has to be considered on a case by case basis. In general, the problem seems to be the non-utilization of the service by the upper caste community as a result of SC staff (the reverse also occurs). Service of the registered adolescent girl from the same community could be explored to increase coverage.

Mothers' meeting should be held regularly, preferably monthly, to generate awareness on the benefit of the use of IFA tablets, consumption of nutritious foods and on mother and childcare.

Priorities for investing in human capital through women and girl's education

Many households in the surveyed districts do not value education for their girl children. Girls get engaged for marriage at a very young age and after that they are withdrawn from the schools. A girl, who is engaged, cannot attend the school if her fiancé also goes to the same school. For the last three years, due to drought, women members have started working outside the village and this has led to withdrawal of their girl children from the school to look after their younger siblings and also for performing household chores.

There is some evidence from the survey that demand for functional literacy (and numeracy) on the part of women exists and is stimulated further as women are engaged in activities, like, embroidery, tie-dye, beads-work, thrift groups etc.

Mid-day-meal (MDM) scheme for the school children is not functioning satisfactorily. The coordination between the teachers and the *sanchalak* is lacking and hence the programme implementation is far from satisfactory. In many villages the community suggested dry ration to be provided instead of cooked meal to increase the enrolment. Some women also suggested extra ration as additional incentive for the girl child to enable her for attending classes.

The children of the Rabari and Koli communities migrate with their families and hence remain out of school for the majority of the months.

It is worth noting that any programme aimed at the improvement of women's status cannot be successful without an accompanying plan to sensitise the other half, i.e., men, the decision makers. In other words, programmes on women's empowerment should always have an IEC component to sensitize the community on gender issues.

The following recommendations could be considered for improving the education services.

An effort should be made to provide cooked food regularly in schools. Any interruption in the service adversely affects the objective of the scheme. As there is demand for dry ration in many villages, the decision for the service type might/should be flexible and be left to the village community to decide.

Special hostel based education system should be explored for the ST children (Rabari and Koli) families who generally migrate for livelihood.

Supplying fortified food to the school children might/should be actively considered. It is worthy to mention that the Govt. of the neighbouring state (Madhya Pradesh) is actively considering passing an order for the fortification of

wheat flour with Soya flour for the whole state. To implement this at a similar scale needs substantial effort and resources. However, one could experiment with in one or two talukas. Fortification of wheat flour with locally available Pearl Millet (Bajri) and Soya Bean can also be explored to increase the micronutrient base of the food. WFP promoted India Mix can be another alternative fortified food.

In order to increase the participation of the community in the education process, motivator groups should be formed at the village level for girl's education. The teacher of the village can be the leader of the group. Village Education Committee should be formulated to monitor the Mid Day Meal distribution and regularity of functioning of the school. The Village Education Committee could also help in awareness creation on the need of education among the community, especially the girl child. If these committees already exist, efforts have to be made to strengthen them.

To facilitate the MDM scheme, many schools do not have adequate storage facilities. A good supply would facilitate continuity in distribution. Some of these structures could be provided through food for work.

A systematic approach is needed to identify the cost associated with the household activities that young girls perform. Some approaches to substituting for these labour activities include either developing alternative services to meet the needs such as village crèches (located near primary schools) or providing sufficient compensation for girls' labour. Special incentives to girls, such as 8-10 kgs of cereals for 80 percent of days of attendance should be provided to serve as an incentive to send the girls to school on a regular basis. This approach already had been tested in IIP districts (Jhabua and Banswara) and the results are very encouraging.

To improve the enrolment and the attendance of the girl child with the added responsibilities of taking care of the younger siblings, crèche facilities should be provided in the village. To run these crèches the services of the older disadvantaged women in the village, who at present are not engaged in any gainful employment, could be utilized with the provision of incentives in terms of food grains. As an alternative, the establishment of AWCs either near to the school or within the school building could be considered.

Non-formal education centres can be used as an alternative to the formal education system, especially for those children who are either engaged in gainful employment or looking after the household chores. This would apply especially to the girl child. The instructors in these centers could be supported by food incentives.

The women, who are engaged in income generating activities, have expressed their willingness to pursue functional literacy. Literate Anganwadi Workers could be motivated to undertake literacy classes for the women and food grains can be given to her as incentive. This initiative will also help the Anganwadi Worker in getting a forum for imparting Nutrition and Health Messages.

Priorities for investing in women's training

Some programmes for women's income generating activities and enhancement of their knowledge for more active participation in community decision making activities could be explored through food for work activities.

Self Help Groups (SHGs) should be encouraged to enable the women to engage themselves in alternative economic activities, and get training related to health, nutrition. SHGs can also be utilized to provide short term financial assistance to needy members to help them avoid traders and moneylenders. Existing and newly formed SHG could be supported with food at the initial stage of formation and a linkage could be established for the formation of the grain/fodder bank at the village. Most of the SHG in the studied villages have their own generated fund but it is necessary to address the requirement of the group as a whole. Hence, additional food support should be given to strengthen the viability of these groups in addressing the difficulties of the deprived groups.

From the survey, it was revealed that there is tremendous scope for alternative economic activities in the study area. The women in these areas have skills in embroidery, tie-dye, beads work etc., which can be strengthened by suitable market support for the products. Considering the interest of the women in this area, alternative economic activities have a lot of untapped potential.

By virtue of the 73rd Constitutional Amendment, the Gram Panchayats of all the villages of India now officially should have one-third women members. In Gujarat, the five-year term of the Gram Panchayats ended in 2000 and fresh elections are yet to be conducted. Most of the elected women members are actually a proxy for their male counterparts and hardly get any opportunity to actively participate in community development. Recognizing this as a bottleneck, agencies should design comprehensive plans to increase the capacity of women so that they can be fully engaged in the development process. This should start with literacy classes that aim to impart functional literacy on management issues related to ICDS, Mid-Day Meal, and special programmes on income generation for women etc.

The next step could be handing over the supervisory responsibilities of these programmes through government orders. CRS/WFP can use food as the leveraging agent for training and orientation of these women Panchayat Members. A collaborative effort between WFP/CRS/UNICEF and the Ministry of Rural Development in evolving a replicable model will definitely assist government and UN commitment towards creating efficient democratic institutions for local governance.

Grain Banks / Seed Banks / Fodder Banks

The concept of grain banks is new for the communities. Grain banks can promote food security for these households, especially the vulnerable groups, during times of crisis. Currently these households have to either borrow food grains from the traders or buying from the market at unfavourable price (after the earthquake, the communities have received free food grains from the government and non-government sources).

Agencies also should explore the possibility of supporting seed banks as a sub-component of grain banks. Building the capacity of the community to store and preserve the best suitable seed varieties would help the community to continue their cultivation activities without heavily relying on market forces. A proper storage of seeds also would prevent from its losses arising out of pest/rodent attacks and also from consuming them during the months/years of stress. Institutions like M.S. Swaminathan Research Foundation can provide the necessary technical inputs for promoting the concept of seed banks.

In Gujarat, the concept of fodder bank is being promoted to address the fodder crisis. A well-planned and executed fodder bank will generate maximum response from the communities in the villages where dependence on livestock is very high. Linking fodder bank with the development of pasture/grazing land can provide sustainable solution for the families whose livelihoods primarily depend on livestock.

SHGs can be encouraged and trained to start the grain/seed/fodder bank, and manage it for the members who are interested.

There may be need to create awareness on the advantages of this concept among the community members.

Agencies should contribute at the initial stage of formulation of the bank. The contribution should be according to the preference of grains by the local people and also be based on the capability of the people to contribute the type of grains.

Grain banks could be successful in the villages from where the Fair Price Shop is at some distance and bringing food is a problem.

Local NGOs and CBOs should be encouraged to initiate this concept among the communities. WFP/CRS and other interested agencies can work in partnership with them to provide base supplies.

ANNEXURE I
TOTAL NUMBER OF HOUSEHOLDS IN THE STUDY AREA

District	Taluka	Village	Total Households in the village	Major caste groups	
Surendranagar	Dhrangadhra	Navi –kuda	248	Brahmin, Jain, Rajput, Ahir, Gadhvi, Gachi, Suthar, Bajania, Suthar, Lohar, Vagri, Darji, Kuvar, koli, Harijan, Vankar, Sadhu, Nadia, Bawa, Rabari, Bhil	
		Sultanpur	152		
		Jesada	410		
		Sarval	330		
		Patdi	Degam		300
		Jarvala	338		
		Fatehpur	418		
		Surrel	450		
		Halwad	Ajitgadh		405
		Khod	141		
		Enjar	150		
	Juna-Malaniyad	300			
Banaskantha	Danta	Pansa	500	Patel, Darbar, Rajput, Brahmin, Khatr, Gadhvi, ode, Luhar, Darji, Ganchi, I, Nai, Vagari, Bhaat, Suthar, Harijan, Bawa, Bangi, Swami, Gamar, Parmar, Khat, Rabari, Bhil, Jogi, Muslim	
		Khairmal	400		
		Dhanera	Jadia		741
		Nanuda	220		
Dahod	Dhanpur	Dhudhamli	410	Koli, Bhil, Patelia, Rathwa, Nayak, Mohaniya, Varia, Prajapati, Baria	
		Pipero	300		
		Devgarh-Baria	Bambroli		365
		Fangia	187		
Surat	Uchchhal	Kamlapur	72	Vasava, Gamit, Kathud, Vadvi, Kar, Khatod, Dhodia, Chaudhary, Nayak, Rathod	
		Haripur	300		
		Mahuva	Kadiyya		310
		Sevasan	47		

**ANNEXURE II
LIST OF GLOSSARY**

Arinda	castor
Ajwain	omum (Trachyspermum ammi)
Bajra	Pearl millet
Ber Zizyphus	
Ben	a way of addressing women in Gujarat
Bhai	a way of addressing men in Gujarat
Bhaat	rice
Bhedku	a preparation made of coarse boiled in water with a dash of salt in it
Chaura	a kind of pulse
Chutney	paste of dried red chilly chutney eaten with chapati which acts as a substitute for vegetables
Dai	untrained woman who delivers babies in the village.
Darbar	upper caste community
Diwalia	hindu festival in October-November widely celebrated in the Northern and Western India
Dal	a pulse
Gur	jaggary
Isabgol	medicinal plant used as a laxative
Jowar	Sorghum vulgare
Jeera	cinnamon
Khaari Bhaat	a rice preparation salty in taste
Khichdi	a preparation made of rice and pulse with turmeric and salt
Laapsi	wheat porridge (sweet in taste)
Majuri	casual labour
Mung	a pulse
Math	a pulse

Pavdis	spade
Patel	upper caste community
Phadia	cluster of the community inhabited by a particular community
Prasad	part of the offering given to a devotee in temples
Quasi	muslim priest
Rahat kaam	relief work
Rotla	a preparation made by flattening wheat or pearl millet which serves as meal.
Sheera	a sweet dish made of wheat flour, sugar and lots of ghee
Sukhdi	a sweet preparation made by crushing chapati to powdered form
Tagadi	container in which salt is filled and loaded in the trucks
Til	sesame
Vavajodu	Cyclone