

Adaptive Strategies for Flood and Drought Mitigation

Cooperative Agreement: 367-A-00-02-00211-00
 Institute for Social and Environmental Transition

Third Program Performance Report
 to

U.S. Agency for International Development – Mission to Nepal
 April 1, 2003-June 30, 2003

COMPARISON OF ACTUAL ACCOMPLISHMENTS WITH GOALS ESTABLISHED FOR PERIOD

As outlined in the original proposal, the project timeline is given in the table below:

Project Time Line: Years	Year 1				Year 2	
Phases	Phase					
Assuming the start is October 2002.	Oct-Dec	Jan-Mar*	Apr-Jun*	Jul-Spt*	Oct-Dec*	Jan-Mar*
Harvesting International Lessons						
Global Experience Review & site visits	Yellow	Yellow	Yellow	Light Blue	Light Blue	Light Blue
Development of Guiding Framework	Grey	Grey	Grey	Grey	Light Blue	Yellow
Field & Regional Institutional Documentation and Implementation Activities						
Initial visits to identify partners	Yellow	Yellow	Grey	Grey	Grey	Grey
Project initiation meeting & finalization of partners	Grey	Green	Grey	Grey	Grey	Grey
Coordination and Training Meetings	Grey	Grey	Green	Grey	Grey	Grey
Coordination and Document Production Meeting	Grey	Grey	Grey	Grey	Green	Grey
Field & Institutional documentation by Partners	Light Blue	Light Blue	Yellow	Yellow	Yellow	Light Blue
Major Dissemination Activities						
Major regional dis. and training conferences	Grey	Grey	Grey	Grey	Grey	Blue
Local (pilot area) dis. and training meetings	Grey	Grey	Grey	Grey	Yellow	Yellow
Major Report Milestones	Grey	Grey	Grey	Grey	Grey	Red
Month end of period	3	6	9	12	15	18

Legend:

- Periods of intensive activity
- Periods when work continues at a low intensity
- Internal project meetings
- Major conferences
- Major report milestones



In line with the original timeframe given above, April through June was a period of intense activity which included reviews of global experiences to harvest international lessons on flood and drought adaptive strategies, site visits in India and Nepal, field and regional institutional surveys and documentation, and coordination and training meetings.

Attached to this report are progress reports, workshop and field visit write-ups for the period April through June 2003 from all field partners, and one PowerPoint presentation as an email attachment. Also included are the field survey questionnaires and other materials used for flood and drought field survey sites. For the interest and documentation of including these latter attachments this particular progress report to OFDA is rather large. However, questionnaires and other fieldwork materials will not be repeated in future reports unless there is new material to present. The next, fourth, quarterly report will have fieldwork photographs included.

The field teams and their respective reports/field materials are:

VIKSAT – Nehru Foundation for Development: Survey of drought site in northern Gujarat, India.

Attachments: Progress report; preliminary analysis; drought field survey questionnaire and checklist.

IDS – Institute for Development Studies, Jaipur: Survey of drought site in Rajasthan, India.

Attachment: Progress report.

PU – Panjab University: Survey of flood policy and management, India, and involvement in flood sites fieldwork. Link to Indian Oceans Research Group (IORG).

Attachment: Progress report.

ISET-Nepal: Survey of trans-boundary flood sites along the Rohini and Bagmati Rivers, Bihar and Uttar Pradesh (UP), India, and Nepal Terai.

Attachments: Progress report; Bihar & Nepal Terai field visit; checklist for group discussion; gender checklist; guidelines for surveyor; survey questionnaires.

Sara Ahmed: Gender dimensions and cross-regional parallels in droughts and floods, Nepal and India.

Attachments: Gender and adaptive strategies in the context of drought (ppt.); workshop on conceptual and methodological understandings of gender relations in the context of drought.

In summary, activities during the reporting period were as follows:

April 9-11: Training workshop for VIKSAT and IDS with Sara Ahmed.

April 16-22: Bihar (India) and Rohini and Bagmati Rivers (Nepal) site visits by ISET and ISET-Nepal members.

June 4-6: Three-day training for flood site field teams from India and Nepal with senior team leaders, Sara Ahmed and the Project Director.

April-June: Field surveys and site visits; literature and policy reviews by all field teams.

REASONS WHY ESTABLISHED GOALS WERE NOT MET (IF APPLICABLE)

Not applicable

OTHER PERTINENT INFORMATION INCLUDING STATUS OF FINANCES AND EXPENDITURES INCLUDING ANALYSIS AND EXPLANATION OF COST OVER RUNS OR HIGH UNIT COSTS.

The project is proceeding as anticipated with no cost over runs or high unit costs.

Detailed accounting on the project for the period from April through June 2003 has already been submitted through the required SF 269 accounting form and faxed to concerned persons on 11 July.

Progress Report from VIKSAT:

Adaptive Strategies for Floods and Droughts
Vikram Sarabhai Centre for Development Interaction (VIKSAT)
Nehru Foundation for Development
Gujarat

Reporting Period: April to June, 2003

VIKSAT started the research project in the month of April 2003 with an orientation to the team formed for the purpose of carrying out field studies. The team consists of staff from three field offices viz., Bhuj, Bhiloda and Satlasana, under the overall coordination of one staff of the Head office and the Director providing guidance periodically. As has been shared with ISET, the research field areas consist of five villages each in Bhiloda and Satlasana talukas covering sample survey of 100 households each and ten villages in Bhuj Taluka covering 200 households. In all, the research studies cover 20 villages and 400 households.

Strategies adopted

The following strategies are being adopted for the survey purpose:

1. Sample survey in each village covering all categories of Castes
2. Sample survey in each village covering different professionals including landless labourers
3. Village selection is based on the extent of Drought affected, which is indicated by more migration, loss in agriculture in the Kharif & Rabi seasons of 2002, vulnerability to getting labour work, programme under drought relief either not taken up by the Govt. or at a minimum level etc.
4. Team consisting of both male and female staffs
5. Data collection through discussions with family members at household level and in a group at community / gender level and conducting PRA exercises

Activities carried out so far:

1. Team Formation
2. Orientation to team members
3. Training to the team on understanding of Gender
4. Field testing of the checklist
5. Review of the checklist based on the field testing
6. Field data collection
7. Quality Checking of the collected data
8. GIS map preparation

Activities in detail

1. Team Formation:

The team formed consists of both male and female staffs selected from all the three field offices viz., Bhuj, Bhiloda and Satlasana. Four teams have been formed from ten staffs.

An experienced person having experience in this type of data collection is heading the team. To start with, all the four teams have been carrying out the survey work, two teams in each of Bhiloda and Satlasana Field areas. The Programme Coordinator from the Head Office is closely monitoring and guiding the teams by continuously staying in the field offices. It is planned that all the four teams will simultaneously carry out the survey work in Bhuj after completing the work at Bhiloda and Satlasana areas.

2. Orientation to team members:

One-day orientation workshop was organised to the team members on 9th April. The staffs were oriented on the objectives of the project and the expected output from the field studies. A detailed discussion took place on the criteria to be adopted for the selection of villages and the methodology to be adopted for carrying out the field studies. The checklist received from IDS, Jaipur for the field data collection was studied by the team members and reviewed according to the Gujarat drought conditions.

3. Training to the team on understanding of Gender:

On 9th and 11th of April, Dr. Sara Ahmed facilitated the team members on understanding of Gender and its perspectives under the drought conditions in the family and also in the community / Society. The vulnerability to poorest of the poor or marginalised community and in particular to women headed families, Widows, Women with disabilities, malnourished women and oppressed women during calamities / disasters were discussed. The impact of drought on the gender, economy and social vulnerability and its coping mechanism were also discussed.

4. Field testing of the checklist:

On 10th April the checklist was field tested by carrying out a few family survey in two villages in Satlasana area. The team was divided into two to interact with the family members. Village group discussion was also organised to get information on the village profile and community level coping mechanism during drought situations. Dr. Sara Ahmed also accompanied the team to guide in the data collection and village discussions. The team members felt the need for reviewing the checklist as per the field experience and according to the situation.

5. Review of the checklist based on the field testing:

Three members of the staff undertook the responsibility to review the checklist and made appropriate modifications in the checklist. The modified checklist was shared with Dr. Sara Ahmed.

6. Field data collection:

Field data collection started from 1st June at Satlasana area. At first, all the team members of Satlasana area jointly visited a few houses to get first hand experience on the process of data collection. Later, the team was divided into two for visiting different villages. Village profile survey was also carried out simultaneously. By the reporting date the teams have covered 80 households in 3 villages. PRA exercises have also been carried out

in 3 villages for village social mapping and resources available within the village. The Field Office Supervisor and other field office staffs have arranged for household survey and village meetings.

In Bhiloda area the survey work started a little later i.e. 16th June. Here also at first the team visited a few houses jointly and later divided into two teams. By the reporting date 80 household survey has been completed and 3-village profile survey is completed. PRA exercises need to be done in all the 5 villages.

It is expected that the survey work at both Bhiloda and Satlasana will be completed by end of June and all the teams will take up survey work in Bhuj area. It is planned to complete all the field survey work by 15th July.

7. Quality Checking of the collected data:

The Programme Coordinator has been camping in the field to guide the team members and smoothen the data collection process. The data collected by the teams are being scrutinised by the Programme Coordinator for quality information and as per the expected outcome of the studies. There are cases of revisiting the villages to enhance the quality of information and crosscheck with others who have not been consulted earlier.

8. GIS map preparation:

Cadastral maps of all the 20 selected villages have been acquired. Each map is scanned and digitised using IDRISI / Cartalinx. So far four maps of Satlasana area and two maps of Bhiloda area have been digitised. The maps from Bhuj area need to be digitised. The topology of all the digitised maps have been built and are ready for data linking. The map digitising will be completed by 15th July.

Conclusion:

The field study and data collection in two areas went on smoothly with quality information needed as per the objectives of the project. The team members are confident of covering Bhuj area as scheduled. There were some limitations encountered during data collection such as some families going out for labour, and advent of monsoon. The survey timings were accordingly adapted by visiting them at evenings or during early hours.

Preliminary Analysis from VIKSAT:

Field Documentation of **COPING AND ADAPTIVE RESPONSES TO DROUGHT IN GUJARAT**

*A Preliminary Note on Perceptions and Coping Responses of the People
based on Data Collection in North Gujarat*

INTRODUCTION

VIKSAT is one of the collaborating partners in the research project on *Adaptive Strategies for Responding to Floods and Droughts* in South Asia, financed by U.S. Office of Foreign Disaster Assistance and the U.S. State Department through USAID, Nepal. This research project has been initiated by the Institute for Social and Environmental Transition (ISET), Boulder, U.S.

VIKSAT is carrying out the Gujarat study in three field locations:

- 5 Villages in Satlasana Taluka, Mahesana District;
- 5 Villages in Bhiloda Taluka, Sabarkanta District; and
- 10 Villages in Bhuj Taluka, Kachchh District.

The study areas were selected based on the diversity in resource endowments, geo-climatic variations and cultural characteristics as follows:

- *Satlasana*: High intensity of drought impact; extreme groundwater depletion; high natural resource degradation; and inhabited by non-tribal communities. Drought frequency: 3-5 years in a 10-year cycle.
- *Bhiloda*: Medium intensity of drought impact, groundwater depletion, degradation of natural resources and inhabited predominantly by tribal communities. Drought frequency: 3 years in a 10-year cycle.
- *Bhuj*: Chronic droughts; longstanding examples of how people coped with and adapted to water scarce conditions; poor endowment of natural resources; and inhabited by heterogeneous mix of communities. Drought frequency: 5-7 years in a 10-year cycle.

The ongoing primary survey consists of study of sample households (see questionnaire for household survey in Annex-1) and information gathering through participatory methods (see the checklist for PRA work in Annex-2). A total of 400 households will be interviewed (at the rate of 20 households per village in 20 villages from across three field locations). The secondary data and information are collected from the government sources at the village, taluka and district levels (see format for collection of village level information in Annex-3). The field surveys in Satlasana and Bhiloda talukas are completed. Fieldwork in Bhuj has already started.

This note presents some of the preliminary findings regarding people's perceptions on changes with respect to natural resources and the coping responses to drought and depletion of groundwater in Satlasana and Bhiloda areas.

PERCEPTION ABOUT CHANGES IN NATURAL RESOURCE SITUATION

People in the study area perceive drought primarily as the result of failure of rainfall. Some attribute the failure of rainfall to vagaries of nature (which no one could influence they believe) and some others perceive it to be manmade. Those who feel that it is man-made, reason it to the loss of vegetative cover in the region. People recall that the Aravali mountain segment seen in Satlasana, for example, was covered with good forest cover 20-25 years ago with a rich diversity of fauna (including tigers) and flora. They realise and recognise that all that has vanished due to the widespread cutting of trees for various purposes. They also recollected the presence of perennial rivers and streams that

originated from these hills. Groundwater was accessible at 5-10 feet depth even during summer. Even though there were cyclical failures of rainfall in the past, it never affected the livelihoods of the people. Agriculture was the mainstay of rural livelihoods and this activity was expanding in terms of cropping intensity, area under cultivation and other activities it supported such as animal husbandry.

The situation has now changed drastically the people emphasise. There have been consecutive droughts in the last 4-5 years in North Gujarat. The extraction of groundwater increased even though water levels dipped rapidly. According to the respondents, the following factors have contributed in various degrees over a period of time to the (hydrological) drought in the region:

- Consecutive failure of monsoon in the last 4-5 years and reduction in natural recharge of groundwater.
- Mechanised land preparation practices reduced recharge to groundwater.
- Increase in demand for irrigation water.
- Cost effective and efficient technologies for groundwater withdrawal which enabled farmers to tap water from deeper aquifers.
- Inefficient water use practices in irrigation.
- Thriving market for irrigation water leading to increased withdrawal.
- Lack of any government regulations regarding the use of groundwater.

The year 1999-2000 was a turning point of sorts. The water levels began to dip drastically. The immediate response of the people to this groundwater depletion was deepening of existing wells, drilling boreholes and drilling radial boreholes in the already deepened wells. All these eventually met with little success. It is reported that there are instances where some farmers have drilled up to 600 ft. depth but have failed to trace any water and even when they did, the water available at that depth was not suitable for human/cattle consumption or for irrigation (a case in Mota Kothasana village. *We are investigating further by collecting water samples*). Everybody is anxiously looking forward to a good rainfall (which has incidentally begun), which they hope would solve many of the drought related problems.

COPING RESPONSES AND MECHANISMS

The following were the multi-pronged responses by the people to drought over the years:

Agriculture:

- ***Use of past savings and borrowing:*** Many people have used up past savings and borrowed heavily from banks and moneylenders to finance the drilling of boreholes and deepening of dug wells.
- ***Adopting water efficient irrigation technologies:*** Some people have resorted to water saving technologies such as sprinklers and drip irrigation.
- ***Changes in cropping pattern*** from say, groundnut and tobacco, to less water intensive food grain crops such as *jowar* and maize with available water.
- ***Reduction in area under irrigation*** of crops and finally confining to irrigating only fodder crops.
- ***Family members contributing labour*** to carry out agricultural operations so that they could save money which otherwise would have been paid to hired labour.

Animal Husbandry as the major source of livelihood:

- Increased dependence on animal husbandry as the main source of livelihood during drought.
- Pawning or even selling jewellery to purchase fodder.
- Women travelling to distant places (as far as 6 km one way) to collect fodder (either green or dry). They have already used up whatever foliage available in the nearby hill areas.
- Depositing cattle with relatives in nearby districts where fodder is still available.

- Keeping cattle in *Goshalas* (cattle camps) for a minimum amount towards maintenance. These cattle would be taken back after advent of monsoon.
- Letting cattle loose so that they won't starve and die in their premises. Many people have abandoned their cattle in the forest areas.

Meeting Contingencies:

- Selling of trees to meet contingencies such as expenses on childbirth, marriage, death and other rituals.
- Selling of land at lower price.
- Selling of cattle as a last resort to raise money.

Alternative Sources of Livelihoods:

- ***Migration for non-farm employment:*** Many people have migrated to nearby towns and distant cities (Satlasana, Surat, Ahmedabad and Bombay) in search of non-agricultural jobs such as diamond cutting and polishing.
- ***Migration for sharecropping:*** Migrating to adjoining districts (Sabarkanta and Banaskanta) where water is still available, for sharecropping.
- ***Wage labour:*** Working as wage labourers in construction sites and taking up other menial jobs.

Consumption Expenditure:

- ***Reduction in consumption expenditure:*** Many people have reduced the number of items of food consumption and in some cases quantity of essential cereals and pulses. Expenditure on rituals and festivals reduced drastically as also on clothing.
- ***Dependence on CPR:*** Excess dependence on nearby forests to collect fuelwood, as farm wastes is not enough now.

Social Effects:

- ***Cultural change:*** Many women in Darbar community (perceived to be higher up in caste hierarchy) began to work as wage labourers outside their own farms. In normal times, this is unimaginable and socially unacceptable.
- ***Effects on Children:*** There is an increase in school dropout rates. Children have been put to work in construction sites. This would have been a taboo in normal times.
- ***Effect on girls:*** Normally girls are married when they are around 20 years old. Due to drought, for those who have more than one girl child, the marriage age has come down to 13-15 years so that they have sufficient time to gather money for marrying off other children. The other reason for reducing the marriage age of girls is to avoid paying huge amounts as dowry if the girl is married at a later age.
- ***Reducing social visits*** (for marriages, community functions, relatives) as there is no money left in hand. People are expected to contribute either in cash or in kind.
- ***Neglect of the aged:*** Some have left the aged people back in the village while they migrate with their families as there are no facilities to accommodate them in the cities. In a few cases, it was observed that the aged were left to fend for themselves through begging (in Harijan settlement, Vasada village).

OWNERSHIP AND USE OF LAND

Land Category	Area (in hectares)	Survey / Plot Number	Type of trees	Number of trees
Total Land owned				
(a) Cultivated				
Irrigated				
Unirrigated				
(b) Uncultivated				
Grazing				
Barren				
Others				
Land Leased-in				
Irrigated				
Unirrigated				
Land Leased-out				
Irrigated				
Unirrigated				

Area of land in the name of female members in the household:

Terms and conditions of leased-in and leased-out land (give details):

Have you purchased / sold land during last five years: **Yes / No**

If yes, give details

a) To Whom :

Type of Land :

Price (Rs. per ha) :

Reason for sale :

b) From Whom :

Type of Land :

Price (Rs/ ha) :

Reason for sale :

Assets Owned and Liabilities

Type of Assets	Number	Type / HP / Other	Present Value (Rs.)	When Acquired (Year)	Asset sold because of drought (Rs.)
I- Dwelling House and Buildings a) Residence - Kuccha - Pucca b) Animal Shed c) Other Structure (specify)					
II- Irrigation Structure a) Dug Wells b) Bore Wells c) Dug cum bore wells d) Others (specify)					
III- Implements and Machinery a) Major implements b) Minor implements c) Tractor and tractor drawn implements d) Pump set e) Bio gas plant f) Others (specify)					
IV- H. H. Durable Goods a) Means of conveyance b) TV (BW / Colour) c) Others (Specify) e.g. Furniture, Fridge, Sowing Machine					
V- Financial Assets					

Give details on assets owned by female members in the household:

Loans obtained:

Sr. No.	Source	Purpose for taking loan	Amount borrowed (Rs.)	Interest per annum	Terms and conditions (if pawned mention the articles)	If loan repaid give details
1...						

Ownership of Livestock

Type of Livestock	Number	Present Value (Rs.)	Change during the year [number sold / died / born / gifted]	Number sold because of drought	Number of animals died because of drought
Cow					
Bullock					
Calf					
Buffalo					
He-buffalo					
Calf					
Goats					
Sheep					
Camel					
Others (specify)					

Give details death of animals because of drought:

(ii) Give details Livestock owned or purchased by female member in the household:

Agriculture Activity: Area under Crops / Production & Value in Rupees

Survey / Plot Number of land

Crops and variety	Kharif Season					Rabi Season					Summer season				
	Area	Total yield	Quanti ty sold	Price received	Home consu mption	Total yield	Area	Quan tity sold	Price received	Home consu mption	Total yield	Area	Quan tity sold	Price received	Home consu mption

- (1) If crop is irrigated give details about area irrigated and crop separately.
- (2) Give details on crop conditions i.e. very good / good / poor / failed; and why?

Monthly Consumption Expenditure Pattern (Average)

Reference Year: April 1, 2002 – March 31, 2003

Item	Normal Year				Drought (this year)			
	From own field		Purchased		From own field		Purchased	
	Qty.	Price (Rs.)	Qty.	Price (Rs.)	Qty.	Price (Rs.)	Qty.	Price (Rs.)
Food Items								
Wheat								
Jowar								
Bajra								
Rice								
Tur dal								
Mug dal								
Spices								
Other (specify)								
Oil								
Vegetables								
Milk								
Ghee / Butter								
Fuel and Light								
Fuel Wood								
Kerosene								
Gas								
Electricity								
Others								
Toiletries / Cosmetics								
Clothing								
Health/Medicine								
Education								
Tobacco								
Liquor								
Recreation ¹								
Rituals (related to Birth & Death)								
Festivals								
Others								

¹ Like cinemas, theatre, video etc.

Note: Give details on discrimination in food in case of female and girl child in the household, particularly in drought conditions

Income from Livestock

Reference Year: April 1, 2002 – March 31, 2003

Type of animal	Number	Expenditure on feeds/fodder		Main Product (Rs.)	By Product (Rs.)	Home Consumption (Rs.)	Sale (Rs.)
		Quantity	Value (Rs.)				
Cow							
Bullock							
Calf							
Buffalo							
He Buffalo							
Calf							
Goats							
Sheep							
Camel							
Others							

Migration of people and Livestock

Reference Year: April 1, 2002 – March 31, 2003

Human Migration

Number of persons from your household migrated outside during last year (April, 2001 – March, 2002) :

April, 2002 – March, 2003

:

Plans during April, 2003 – July, 2004

:

- a) Year of Migration:
- b) Who migrate in the family (nos.): **Male:** **Female:** **Children:**
Total:
- c) Where migrated:
- d) Purpose of migration:
- e) Duration of migration:

Livestock migration – April, 2001 – March, 2002 **Total Number:** **Type:**

April, 2002 – March, 2003

Human Migration with Animals

- a) How many family members migrated with animals :
- b) Where migrated:
- c) Duration of migration:

Problems faced during migration

Wage Employment

Reference Year: April 1, 2002 – March 31, 2003

S. No.	Name of family member	Worked as wage labour other than drought relief					Worked as wage labour in drought relief	
		Within village		Distance (km)	Outside village		No. of days	Wage Rs./Day
		No. of days	Wage Rs./ Day		No. of days	Wage Rs./ Day		
1.								
2...								

Note: Give details of member commuting daily from residence.

Income / Receipts (for entire year)

Sr. No.	Source	Receipts / Income (Rs.)	
		Drought year	Normal Year
1	Agriculture		
	Main Produce (all crops)		
	By-product		
	Income from Share cropping		
2	Livestock		
	Sale of milk		
	Sale of milk products		
	Sale of animal		
	Sale of Cow dung		
3	Salary / Business		
4	Wages (in kind and cash)		
	Drought relief work		
	Wage labour within village		
	Remittances from outside		
5	Income from hiring activities		
	Leased out land		
	Hiring out bullock		
	Hiring out tractor		
	Hiring out bullock cart		
6	Others (specify)		
	Sale of assets		
	Sale of land		
	Sale of trees / tree products		
7	Household and cottage industries		
	Other		
	Other		

Give details on cash income contribution of female members in the annual household income: Amount (Rs.)

Savings:

Sr. No.	Type	Where saved	Mode of operation	Terms and conditions	Intended utilisation
1.					
2...					

Add savings with SHGs, banks, and other sources.

Benefits derived from government programmes and Drought Relief Measures

Particulars	Received during 2002-03	Received before 2002	If Yes, in either years		
			Agency	Whether satisfied	If No, nature of problem
Subsidy Received on					
Irrigation well					
Lining of channel					
Land improvement					
Pump set / oil engine					
Implements / sprayer / duster					
Bullocks / Camel					
Bullock / Camel cart					
Cow / buffalo / goat / sheep					
Seed					
Fodder					
Fertiliser					
Insecticide / Pesticide					
Feed / Concentrate					
Free Supply Received					
Fodder					
Seed for fodder					
Mini kits					
Tree plants					
Others					
Exemption on Land Revenue (1999-2000)					
Deferment of Short Term Loans					
Deferment of Term Loans					
Indira Awas Yojana					
Supply of equipment for subsidiary occupation to family members					
Sewing machine					
Handicrafts					
Any other					

Perception about Drought and Coping Strategies

1. What do you understand by drought?
2. Types and intensity of drought, as you understand:
3. Frequency of drought (your experience about drought):
4. What reasons do you attribute to drought?
5. In the event of crop failure what are the different strategies you have adopted to cope with drought and survive?
 - i- On credit
 - ii- Past savings (types)

- iii- Sale of assets (type)
- iv- Reduce consumption (specify item)
- v- Livestock
 - a) Sale of livestock
 - b) Sale of livestock products
- vi- Changing to other livelihood strategies, e.g.?
- vii- Sale of trees or mortgaging of trees:
- viii- Others (specify in detail)
Such as Relatives / Migration / labour work, etc

6. What is your perception about government drought relief programmes such as

- a) Employment generation (No. of days of employment received for male and female)
- b) Asset distribution
- c) Food grain distribution (quantity/quality)
- d) Fodder
- e) Water distribution

7. Differences in benefits derived when implemented through contractor and through People's Institutions /NGOs

CHECKLIST FOR PRA WORK

RESOURCE MAPPING: resources in the village (including land, forests, water sources, grazing land, farms, other)

SOCIAL MAPPING: People - caste groups locations, social and economic infrastructure (services and facilities) present in the village.

MOBILITY MAP - where do people go to access various services and occupations - purchases, jobs, schools, health and other services? Use different hatching patterns for each of the service. Specify if there are community-wise differences in mobility.

VENN DIAGRAM: Key institutions and individuals in the community and their relationships and importance for decision making. Use:

- (a) Separate circles to show no contact;
- (b) Touching circles to show information flow between institutions;
- (c) Small overlap indicates some co-operation in decision making; and
- (d) Large overlap indicates considerable co-operation in decision making.

PERCEPTIONS about and experience of DROUGHT (detailed discussion)

SEASONAL CALENDAR (Add: temperature; livestock; income generating activities; labour demand for men, women and children; diseases; migration; debt)

IMPACT OF DROUGHT ON CHILDREN: incidence of child labour - boys and girls; school dropout rates.

DEPENDENCY on Common Pool Resources (e.g., village water bodies, forest, grazing land) as an impact of drought - dependency for what and when?

MIGRATION as a STRATEGY to COPE with drought [human; animal; whole family with animals. DISTRESS MIGRATION (migration as a last resort to survive).

LAND and LABOUR MARKETS

Land prices (irrigated, unirrigated)
Wages for various occupations

MORAL ECONOMY: Transactions not based on market principles of give and take. – E.g., household, community and caste groups helping the vulnerable members of their respective groups. What are the other social networks? Does it help people in crisis and tide over impact of drought?

GOSHALAS where people keep their cattle at a nominal price

What are the arrangements? Are there such Goshalas in the study area? Anyone kept his or her cattle there?

Keeping animals with relatives who live in areas where water is still available.

WATER MARKETS: How evolved? Have the rates for water for irrigation and drinking changed over time? Free access for drinking purposes from private sources during drought. Earmarking wells exclusively for drinking purposes? Pressurising government to get tanker water.

ASSESSMENT OF NGO- and GOVERNMENT INTERVENTIONS: Problems in operating short term drought relief measures and the suggestions to improve performance and effectiveness.

PERCEPTIONS: households' / groups' perceptions and ideas as to how to survive drought and build long term survival and livelihood strategies - what are the adaptive strategies in this context?

TIMELINE of development in the village

TIMELINE of the household's asset base to see how it has changed over time as a result of drought and other economic factors.

- A few vulnerable individuals [1 family each] who have been severely affected by drought.
 - Landless
 - Marginal Farmer
 - Small Farmer
 - Artisan Groups
 - Others

LIVELIHOOD changes over generations. Changes in household coping strategies

- Proportion of earnings / composition of various sources of livelihood - changes over time
 - Landless
 - Marginal Farmer
 - Small Farmer
 - Artisan Groups
 - Others

WOMEN'S GROUPS

DAILY ROUTINE diagram

Daily routine of men and women - before and after

What do men and women do for 24 hours a day across seasons

Select a few cases from various groups

CHANGING ROLE OF WOMEN when men migrate. Do they gain greater control over decision-making? Detailed discussion and bring out good examples.

SELLING JEWELLERY: At what critical point do people decide to sell/pawn jewellery? When every other source is dried up?

WOMEN'S PERCEPTIONS

- (a) Women's drudgery for getting water, fodder and wage labour, takes care of land while man migrates
- (b) Women's access to and control over assets
- (c) Possibilities of women's initiatives in mitigating drought
- (d) COLLECTIVE ACTION possible?

DOWRY SYSTEM – norms about the amount of money given and taken. Decrease in age of marriage. Reduction in sex ratio - number of women per 1000 men?

SEX RATIO - Births and Deaths in the last five years (collect from Anganwadi Teacher?)

FOLK SONGS / STORIES about drought, survival strategies.

DAIRY information

Quantity of milk production since 1998 - trends

Number of members since 1998

**Research Project:
Field Documentation of Coping and Adaptive Responses to Drought in Gujarat**

VILLAGE LEVEL INFORMATION

1. GENERAL INFORMATION ABOUT THE VILLAGE

Village: Taluka:..... District:

1. Distance from the Village to:

- a. Nearest Railway Station:
- b. Nearest Bus Station:

2. Total Number of Households:

3. Total population (2001) / Present date: Total: Male: Female:

4. Basic Facilities and Services:

Amenities	Number	Distance from Village
Education:		
Primary School		
Secondary School		
Higher secondary school		
College		
Health:		
Dispensaries		
Primary health sub-centre		
Primary health centre		
Private doctors		
Veterinary clinics		
Drinking Water:		
Stand posts		
Household piped water connection		
Others (specify)		
<i>Havado</i> (water tank for cattle)		
Post & Telegraph Services		
Private telephones		
Public telephones		
Bank, Cooperative, etc.		
Electricity		
Domestic connection		
Commercial Connection		

5. Occupational Pattern of the Village population:

Occupations	Number of males	Percentage	Number of females	Percentage
Cultivators				
Livestock Rearing				
Agricultural Labour				
Other labour				
Service				
Business				

Artisans (Handicrafts)				
• Carpenter				
• Blacksmith				
• Potters				
• Others				
Housewives				
Students				
Others				
Others				
Non-workers				
Total				

6. Human Migration (give details on short and long-term migration):
- Who migrates:
 - Purpose of Migration
 - When migrates:
 - How many migrates (Number of households):

7. Livestock Migration:
- Type of animal:
 - Number of animals:
 - Number of households involved (give caste wise detail):
 - Migration period (date of start and return):
 - Place of migration:
 - Route of migration:
 - Why migration (if because of drought, give details):

8. Type of Houses in the village: (Give per cent by type)

2. IMPACT OF DROUGHT

1. Who are affected in the village (rank them):

Impact of drought	Caste/Asset Group	Number of Household	Population
Worst			
Medium			
Not Affected			

2. Livestock affected:

Type of livestock	Number affected	Number died	Number left	Migrated Out
Cows				
Bullocks				
She-buffalos				
He-buffalos				
Camels				
Other (specify)				
Other (specify)				

3. Impact on Trees, Vegetation, CPR's, Wildlife etc. (give details):

4. Impact on Groundwater and other water sources (give details):

3. SHORT TERM DROUGHT RELIEF MEASURES ADOPTED IN 2002-2003

Employment Programmes:

Name of programme	Number of person-days of employment generated through drought relief works this year		
	Male	Female	Total

Fodder distribution:

Fodder made available through	Type of fodder	Quantity in quintals	Expenditure	Number of families benefited
Government programmes				
NGO programmes				

Animal care:

Number of animals of this village kept in livestock camps	Number of animals	Name of Agency	Month of commencement	
Within the village				
Outside the village				

What are the general conditions for keeping animals?

Describe the type of assets created during famine relief works this year.

4. DRINKING WATER PROBLEMS:

Does the village have a drinking water problem? Describe the magnitude of the problem with respect to human and livestock consumption.

In which period of the year shortage is minimal?

How was the water supply last year? Compare it with the situation in normal year.

DROUGHT PROOFING WORKS UNDERTAKEN IN THE VILLAGE

Particulars	Unit	Coverage up to 2002	During 2002-2003
I. Soil Conservation Measures			
Area covered by strip cropping, contour bunding or gully plugging	Ha.		
Anicuts constructed	Ha.		
Ponds village ponds constructed/disilted	Ha.		
Number of river / lakes in the village			
II. Agronomic Practices Introduced			
Improved tillage	Ha.		
Inter cropping	Ha.		
Sowing adjustment	Ha.		
Seed rate adjustment	Ha.		
Weed control	Ha.		
III. Improved varieties and new crop introduced			
Maize	Ha.		
Jowar	Ha.		
Bajra	Ha.		
Paddy	Ha.		
Udid	Ha.		
Moog	Ha.		
Wheat	Ha.		
Barley	Ha.		
Mustard	Ha.		
IV. New Fodder Crops and Varieties Introduced			
Jowar	Ha.		
Bajra	Ha.		
Lucerne	Ha.		
Oats	Ha.		
Others (specify)	Ha.		
V. Ground Water			
Deepening of wells	Nos.		
Recharging on wells			
VI. Forestry			
Afforestation	Ha.		
Fuel wood plantation	Ha.		
Pasture development	Ha.		
Shelter/wind breaks	Km		

DROUGHT PROOFING WORKS UNDERTAKEN IN THE VILLAGE (CONT.)

Particulars	Unit	Coverage up to 2002	During 2002-2003
VII. Animal Husbandry			
Crossbred cows	Nos.		
Improved buffaloes	Nos.		
Improved goats	Nos.		
Artificial insemination	Nos.		
Fodder development programme	Ha.		
Crossbred-rams distributed	Nos.		
Sheep units started	Nos.		
Camels supplied	Nos.		
Poultry birds new units	Nos.		
Members of milk cooperatives	Nos.		
VIII. Horticulture			
Number of fruit plans planted	Nos.		
New area under vegetables	Ha.		
IX. Mechanization			
Number of tractors in the village	Nos.		
Number of thrashers	Nos.		
Number of pump sets	Nos.		
Diesel operated	Nos.		
Electric operated	Nos.		
X. Fisheries			
Area developed	Ha.		
Fish catch	Qtls.		

ROLE PLAYED BY RURAL SOCIAL INSTITUTIONS IN MITIGATING EFFECTS OF DROUGHT OF 2002-2003

Name of Institution	Measures undertaken
Gram Panchayat	
Village cooperative	
Religious groups	
Voluntary agencies	
Individual social workers	
Government departments (specify)	

PROBLEMS AND SUGGESTIONS

Through discussion with group of villages, assess the problems faced by them in operating short term drought relief measures. Also give suggestions.

- Corruption
- Payment of wages
- Measurement of work
- Difficult to identify right person/beneficiary (who and how decided)
- Who are the most sufferers of drought and why?

PRICES IN THE VILLAGE OR NEARBY PLACE

		2002-2003 (Rs.)	Normal (Rs.)			2002-2003 (Rs.)	Normal (Rs.)
1.	Seed main crops Rs. per kg.			6.	Livestock Rs. Per unit		
	Kharif			i.	Cow in milk		
i.				ii.	Buffalo in milk		
ii.				iii.	Cow dry		
iii.				iv.	Buffalo dry		
iv.				v.	Goat		
	Rabi			vi.	Sheep		
i.				vii.	Camel		
ii.				viii.	Bullock pair		
iii.				ix.	Poultry chick		
iv.				x.	Hen		
				xi.	Bullock		
2.	Fodder prices per quintal						
i.	Maize/Jowar Karbi			7.	Land prices per acre/hectare		
ii.	Dry grasses			i.	Irrigated (Rs.)		
iii.	Wheat straw			ii.	Unirrigated (Rs.)		
iv.	Green Chari						
v.	Beersem/Lucerne			8.	Consumer goods per kg/l		
vi.	Loom (khejri leaves)			i.	Wheat		
vii.	Pala (ber etc. leaves)			ii.	Rice		
viii.	Other (specify)			iii.	Jowar		
				iv.	Maize		
3.	Feed per quintal			v.	Bajra		
i.	Mustard cake			vi.	Pulses split		
ii.	Til cake			vii.	Milk		
iii.	Groundnut cake			viii.	Deshi ghee		
iv.	Cotton cake			ix.	Vegetable ghee		
v.	Gram churi			x.	Edible oils		
vi.	Urad churi			xi.	Sugar		
vii.	Gua Churi			xii.	Gur		
				xiii.	Potato		
4.	Farm Yard Manure (Rs. per quintal)			xiv.	Onion		

				xv.	Kerosene		
5.	Hiring Charges				Others		
				xvi.	Diesel		
i.	Male labour Rs/day						
ii.	Female labour Rs. per day			9.	Prices received by farmers		
iii.	Bullock/Camel per day			i.	Bajra		

		2002- 2003 (Rs.)	Normal (Rs.)			2002- 2003 (Rs.)	Normal (Rs.)
iv.	Tractor per hectare			ii.	Maize		
v.	Tractor per hour			iii.	Jowar		
vi.	Thresher per quintal			iv.	Wheat		
vii.	Thresher per hour			v.	Barley		
viii.	Irrigation water/hour			vi.	Gram		
ix.	Irrigation water per unit			vii.	Mustard		
x.	Diesel pump per unit			viii.	Moog		
				ix.	Moth		
				x.	Guar		

POPULATION AND MIGRATION

1.	Demographic features	Male	Female	Total
1	Total Population (latest census)			
2	Scheduled Caste			
3	Scheduled Tribe			
4	Others			

2.	Occupational categories	Male	Female	Total
1	Total main workers (more than 180 days of work per year)			
2	Cultivators			
3	Agricultural Labour			
4	Household industries			
5	Other workers			
6	Marginal workers (less than 180 days of work per year)			
7	Non-workers (less than 90 days of work per year)			
8	Total number of households			

3.	Migration	Year 2002			Normal year		
		Male	Female	Total	Male	Female	Total
	Out-migration						
	Number of persons commuting for work						
	Number of persons shifted to other areas for work						
	Number of families migrated for work						
	In-migration						
	Number of persons commuting for work						
	Number of persons shifted to other areas for work commuting for work						
	Number of families with animals shifted to this village for work						
	Number of livestock migrated						
	Cattle (cow, bullock and calf)						
	Buffaloes						
	Goat						
	Sheep						
	Camel						
	Month when migration started						
	Month of return						

Where do people normally migrate?
What are the purposes of migration?

LAND UTILISATION, CROPPING PATTERN, SOIL & RAINFALL

1. Land Utilisation for the year.....:
(From Talati Records)

	Land use	Area (ha)		
a)	Total geographical area according to village records			
b)	Area under forests			
c)	Area not available for cultivation			
	Land put to non-agricultural uses			
	Barren and uncultivable land			
	Total			
d)	Other uncultivated land excluding fallow land			
	Permanent pastures and other grazing lands			
	Miscellaneous tree crops and groves not included in net area sown			
	Cultivable waste			
	Total			
e)	Fallow lands			
	Current fallows			
	Fallow lands other than current fallows			
	Total			
f)	Irrigated Area			
	Source	Number	Area (ha)	in-use/out of use
	Wells			

	Tanks				
	Canals				
	Other sources				
	Net area irrigated				
g)	(i) Net area sown				
	(ii) Area sown more than once				
	(iii) Total cropped area				
	(iv) Total cultivated area				

2. Type of land tenures and area under various types of tenancy (from Talati Records)

- (a) Ownership :
- (b) Sharecropping :
- (c) Leaseholds :
 - a. Lease government lands (specify purpose) :
 - b. Lease private lands (specify purpose) :
- (d) Other (specify) :
- (e) Other (specify) :

3. Changes in cropping pattern (from Talati Records)

Crops	1998-99			1999-00			2000-01			2001-02			2002-03		
	Area			Area			Area			Area			Area		
	Kh	Ra	Su												

Note: Kh = Khariff; Ra = Rabi; Su = Summer

Describe the crop rotations usually followed in the village:

4. Area under irrigation

	1998-99	1999-00	2000-01	2001-02	2002-03
Area irrigated					
Area unirrigated					
Total					

Describe sources and types of irrigation

5. Rainfall:

- i. Place of the nearest meteorological station:
- ii. Distance from the village:

Rainfall during the last five years

Months	Years				
	1998	1999	2000	2001	2002
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					

November					
December					

HISTORY OF WATER RESOURCES

Ask about changes in water use pattern both for domestic and irrigation purposes during last 5 years, 5-10 (since independence), before independence. Also ask about the introduction of new water using technology in the village, such as, pumps, motors, sprinklers, etc.

Progress Report from IDS:

Adaptive Strategies to Drought in Rajasthan

Work Report as on 30th June, 2003

The Adaptive Strategies project is designed to document and flash out concepts and opportunities for more effective approaches to water management and drought mitigation through a in depth study in Rajasthan. The focus of the study is to document:

1. Nature of drought related disaster and its linkage with long term water management issues.
2. Existing coping strategies followed by communities in drought affected areas.
3. Larger patterns of social and economic change in case study areas that influence vulnerability of livelihood to drought condition and the opportunities these patterns may contain for reducing drought vulnerability or mitigating long term water management problems.
4. To identify physical options for reducing drought impacts or meeting long term options that are adopted to the dynamics of hydrologic and social systems and that do not require forms of knowledge or organization that are unlikely to be available in current field contexts, and
5. Options for mitigating droughts and long-term water management concerns through indirect policy mechanisms including retargeting of existing water management and drought mitigation programmes currently being implemented by the government, NGO's or other actors.

In order to achieve these objectives a methodology for conducting field survey was evolved. Rajasthan is divided into four broad agro-economic and cultural zones namely, Desert Region, Northern Region – Shekhawati Region, Eastern Region, Southern Region – Tribal Region (Table enclosed). The differences in agro-climatic zones and prevailing culture is largely responsible for adoption of different natural resource management and drought mitigation and coping strategies. To capture these diverse coping strategies, it was decided to conduct studies in 19 districts of Rajasthan falling under different identified zones. From each district one tehsil was selected and from each tehsil one village was selected randomly as a representative village. A questionnaire was prepared covering all dimensions mentioned in the objectives. It was pre-tested and the research team was trained for conducting the survey. A gender Sensitization training was organized at VIKSAT, Ahmedabad for the research team. The fieldwork was started in the month of March, 2003 in adverse climatic conditions with temperature ranging between 42^o to 48^o centigrade. By the end of June 30th the team could complete survey in 13 selected districts. Now 6 more districts are to be covered in the month of July, 2003. While collecting primary data from the sample villages, research team was also engaged in collecting secondary information from Panchayat, Tehsil, District headquarters.

After each village survey a detailed note was prepared and discussed with the team members as well as team leader. As per our hypothesis that coping mechanisms and adaptive strategies vary in different zones is coming out true. The field observations confirm that people with different economic and social background and availability of natural resources are adopting different strategies to fight with drought situation.

Sampling Plan for Selection of Households

Regions	Districts	Number of Sample Village	Number of Sample Households @ 20 per village
Desert Region	Barmer Jaisalmer Bikaner Jodhpur Nagaur	5	100
Northern Region Shekhawati Region	Churu Jhunjhunu Sikar	3	60
Eastern Region	Alwar Bharatpur Sawai Madhopur Tonk Dausa	5	100
Southern Region Tribal Region	Bhilwara Chittor Rajsamand Udaipur Banswara Dungarpur	6	100

Sample Households by Region and District

Regions	Districts	Name of Tehsil	Name of Panchayat Samiti	Name of Sample Village	Number of Sample Households
Desert Region	Barmer	Barmer	Barmer	Ramderiya	25
	Jaisalmer	Jaisalmer	Sum	Konee	30
	Bikaner	Nokha	Nokha	Hiyadesar	
	Jodhpur	Osiya	Osiya	Baran Khurd	
	Nagaur	Jayal	Jayal	Khanwar	
Northern Region Shekhawati Region	Churu	Sardarshahar	Sardarshahar	Meetasar	20
	Jhunjhunu	Nawalgarh	Nawalgarh	Niwai	30
	Sikar	Fatehpur	Fatehpur	Nayabas	30
Eastern Region	Alwar				
	Bharatpur				
	Sawai Madhopur	Bauli	Bauli	Bapui	30
	Tonk	Malpura	Malpura		25
	Dausa	Lalsot	Lalsot	Dholawas	
Southern Region Tribal Region	Bhilwara	Banera	Banera	Besakalai	20
	Chittor	Bhadesar	Bhadesar	Parliya (35)	30
	Rajsamand	Rajsamand	Rajsamand	Phiyawari (32)	20
	Udaipur	Jhadol	Jhadol	Kochla (122)	20
	Banswara	Banswara	Talwara	Umrai (70) Bhachariya (74)	-
	Dungarpur	Sagwara	Sagwara	Gara Bejaniya (106) Peepla Gonj (122)	25

Progress Report from ISET-Nepal:

Adaptive Strategies for Flood and Drought Mitigation Program ISET-Nepal

Interim Progress Report

April - June 30, 2003

The following activities were completed as part of the Adaptive Strategy (AS) study in Nepal and India for flood mitigation. The progress report covered activities completed until June 30, 2003.

April 16 – 22, 2003

Members of ISET and ISET Nepal visited AS sites in Nepal and India. The team included Marcus Moench, Ajaya Dixit, Eva Saroch, Sanjaya Chaturbedi, Ngamindra Dahal, and Sonam Bennett-Vasseux. The team met with field coordinators in Nawalparasi and Rautahat in Nepal and Shiraz Wajih in Gorakhpur India. The team identified some of the potential sites for the study. After the field visit, Eva spent about a week in Kathmandu collecting secondary information for the study.

Two rivers, Bagmati and Rohini, which are known to create flood problems in Nepal and India, and where we had some prior experiences from our previous studies, were selected for AS study. There are some local level groups working in flood related activities in both river basins. We have had good relation with local level groups, which will be necessary to conduct extensive cross border studies.

April 26, 2003

Ajaya Dixit and Madhukar Upadhyya had one day meeting with Ram Kumar Sharma, senior socioeconomic analyst of NWCF to develop criteria on site selection. It was decided to select the study sites based on parameters, including population, ethnic composition, settlement, and frequency of floods. In addition, it was also decided to include one village where flood victims have been resettled. The same criteria were used to select sites in India, except that there were no villages with resettled flood victims. Topographic maps were used to delineate the potential villages. Census report of 2001 was used to find out the population size. Based on the population, sample size for each of the settlements was fixed.

May 20 – 22, 2003

Madhukar and Ram Kumar visited these villages in the districts of Nawalparasi in Rohini and Rautahat in Bagmati river basin. Field Coordinator, Krishna Gurung joined us in the field in Rohini basin. Similarly, Krishna Adhikari, another coordinator, joined us in Bagmati basin. The team held number of discussions with local elites, local NGOs, and flood affected communities in number of locations from head to tail strata of the basin in Nepal. The basic criteria used for the selection of study areas were:

- Head, middle, and tail strata of the basin
- Settlement pattern and ethnic representation
- Flood prone zones such as *Duwab, Majhar, and Kachhar* areas.

In the meantime, we stayed in constant touch with partners in Gorakhpur in selecting study sites. The overall study in India is being coordinated by Shiraz of GEAG. Tariq Rehman is managing the study in Uttar Pradesh. Paras Nath Singh manages fieldwork in Bihar. Altogether, four sites, two in Nepal and two in India, will be studied. It was decided to interview about 1500 households in Nepal and similar number in India. Likewise, three focus groups, including one women group will be interviewed in each of the 28 Wards in Nepal. A total of about 40 focus groups will be interacted with. The same number of groups will be covered in India. The details about Indian sites are awaited.

Field crew of three enumerators (including one women) and one coordinator was identified for each of the four sites.

June 4-6, 2003

Following the site selection, a three-day training was organized in Kathmandu to orient the field crew. Four field coordinators and twelve enumerators, which included four women, from Nepal and India took part in the orientation. Pratibha Manen, Kanchan Dixit, and Ngamindra Dahal, the field researchers, also were present in the training session.

- Ajaya Dixit briefed about the flood problems in South Asia and the shortcomings of conventional approach of flood mitigation.
- Marcus Moench discussed the role of ISET and briefed about the importance of AS of people to cope with floods. Marcus also mentioned about similar study being carried out by ISET in Rajasthan and Gujarat on drought mitigation.
- Ram Kumar Sharma explained about various techniques including PRA tools to be used for AS study. Social and resource mapping, ethno history of flood, focus group discussion, key informant survey and seasonal diagram for flood events, mitigation were discussed in length.
- Sara Ahmed, a gender specialist of ISET, was a key trainer. She briefed the field crews about how gender perspective in development has evolved over the years. It helped the participant to realize that how AS should attempt to understand the gender role rather than conventional women's role. She helped to incorporate gender aspect in the overall study and guided the field crew in conceptualizing gender component.
- Sujan Ghimere, local gender specialist, presented the set of questions for focus group and for women's group interaction for discussion.
- Madhukar Upadhyya moderated the training.

One of the aims of the training was to modify and finalize the questionnaire and question for focus group. The questionnaire was translated into Nepali and Hindi languages. June 20 was set as tentative time to start the field study. The questionnaire was pre-tested and some changes were made accordingly. A separate guideline for the enumerators was prepared to facilitate the fieldwork. The guidelines explained some of the questions in detail to avoid multiple meaning.

Final questionnaire was sent to press on June 22. It was sent to field on June 25.

The field crews left for field on June 26 in Nepal. Crews in India were in the field a few days later. Currently the teams are surveying in two VDCs in both basins.

Problems encountered

It took longer than expected to finalize the questionnaire and checklist, therefore the fieldwork could not be started on 20 of June as expected. Several visits had to be made by field coordinators between Kathmandu and field for field-testing. As the monsoon has already begun, some of the villages have come under floods and it has slowed the progress in the field.

In some cases it has taken about two hours to complete one interview. Some villagers cannot afford to spare so much time because of rice planting season. We hope that the progress will be faster as the crews get used to the type of work they are doing.

Currently the field crews in all sites are working in full swing.

Bihar and Nepal Terai field visit report from ISET-Nepal:

Bihar and Nepal Terai field sites visit, 16-22 April 2003

(Temp. in north-eastern U.P. about 38 degrees; temp in southern Nepal about 36 degrees)

16/4 Marcus, Ajaya, Nabindra & Sonam: KTM-Gorakhpur by road (9 hr trip)
o/n Bobina Hotel (to be avoided!)

17/4 Sanjay Chaturvedi & Eva Sarosh arrive Gorakhpur by flight.

Meet with Shiraz Wajih at GEAG office, (Tariq Rehman withheld in Delhi) Discuss GEAG's participation in Adaptive Strategies Project: new insights in water management and disaster response. Floods in Rapti/Rohini basin, especially adaptive strategies taken after 1998 massive flood – surveys, documentation (field level & larger institutional context), analysis, coordination meetings, chapter on flood policies & legal structure in U.P. and participation in final joint write-up.

Three study sites:

- Bramapur area, Kachar zone – siltation, little infrastructure, flood prone
- Geruyee Khurd village, left bank of Rapti, Kachar zone – perception of floods coming from Nepal
- Deoria – sand cultivation due to floods, shift in livelihoods.

Visit GEAG's field office research site in Campiergunj – seed diversity, composting, organic farming, greenhouse cultivation, soil testing laboratory, natural pest management (neem). Promoting sustainable agriculture in 74 villages. Area not flood prone but risk exists. May use site for comparative study?

Dr. Pandey informed that the key focus of their activities was on sustainable agriculture. In all about twenty villages (with approximately 100 families each) were covered. The self-help groups formed under the program, with special attention paid to organic farming, comprised small marginal farmers and women. Some of the key points that emerged from the discussion were (a) the need to pay special attention to civil society space in every village; (b) the needs, priorities and perceptions of small and marginal farmers; (c) dependency of the farmers, especially small farmers, on various inputs into their livelihood strategies on the market (d) the importance of making the notion of adaptability intelligible to various communities; and (e) resistance to adaptation in certain communities and the need to understand and overcome the factors and forces behind such resistance.

Visit Geruyee Buzurg and Geruyee Khurd villages on left bank of Rapti, talk with village pradhan's husband (head of the Panchayat is his wife, Basmatiji - this is a reserved constituency for women) & others. Prevalent perception of floods impacting their immediate area as a result of release of water from Nepal.

- Population of two villages- 1,600. Number of widows- between 30-40.
- Number of houses in each village: Geruyee Buzurg- 165, Geruyee Khurdh- 120

Embankments constructed by the state in 1981 in Geruyee Khurdh. According to farmers, more embankments has led to more flooding.

There are 12 hand pumps, all non-functional. During floods, villagers have to drink muddy water.

Few men leave their homes during floods. Mostly they go to Farinda town in search of labour.

Conversation with widow Sharda: Shardaji's husband died because of some disease. She has to support her family of two children (a boy and a girl), and mother-, father- & sister-in-laws. High caste people do not help the low caste people during floods. When asked where the floods come from, she replied from Nepal, that locally there is little rainfall. Her sister-in-law added: 'Please tell the Nepal government not to send floods to us, allow us to stay in peace'.

O/n Park Hotel, Gorakhpur.

- 18/4 Visit Bramapur area, south of Gorakhpur – devastated by 1998 flood. Sand casting over very large area. Huge loss of people, animals, homes. Initial relief aid, then no support. Some out-migration to Middle East, those families better off.

Talked to Parash Nath Yadav, in his 70's, living with 11 family members in a crumbling house: lost 25 bighas of land from sand casting after that flood. There was 50% migration after the flood. Those who migrated were skilled labourers. He grows Arhar once a year but pests damage the crop. Also grows sugarcane. His 11-member family needs Rs. 1,000 a month to meet the minimum food requirements, which the family cannot afford. Families who lost relatives to floods were given no compensation from the state.

Visit Rudarpur village near Deoria, large pontoon bridge over Rapti and collection of stones for building a new solid bridge. Discussion with Paras Nath,

head of Deoria based NGO, Yuba Chetna Samuha (Youth Awareness group) – layout of the land and embankments, roads, levees in the area and the ‘politics of embankments’. Yuba Chetna Samuha works in 30 villages. The NGO created a new cropping methodology ‘Balua par Kheti’. Extensive water-logging because of embankments. Go to Deoria to the NGO office – small but valuable resource centre on impacts of floods in the area, maps, detailed records of livelihoods, households, etc. NGO sponsored by Oxfam only, slowly pulling out. No other funding source in view, but no active search either.

O/n Park Hotel, Gorakhpur.

19/4 Breakfast meeting with Shiraz on logistics. NWCF to send him methodologies and other info by email.

\$25,000 available for the study area as a whole. Study to be at two levels:

- macro - institutional landscape
- micro - how people adapt/cope. Identify points of leverage (non traditional engineering/humanitarian relief) to build greater resilience.

Sara Ahmed and Eva Sarosh coming to Gorakhpur in June 2003. Sara will ensure cross-cutting consistency in drought and flood survey methodologies as well as gender focus.

Objective: doable projects to build resilience; village-specific pilot activities. Importance of integrated team.

General discussion: operation of combine harvesters cheaper than labour – consolidation of land. Wheat crop not subsidized but preferential access to market for larger landholders. Grain storage facility essential – destruction of homes with '98 flood had a major impact on this facility. Good point of entry for AS Project: building of elevated homes.

Population density of the area: 1,100/km square

Oxfam has been providing support, but gradually pulling out and leaving vacuum behind.

Schools are used for shelter when needed. Shelter homes were also constructed, but located outside the village and never used. Hence importance of multi-purpose use shelters with daily use combined.

Larger Gorakhpur area receives 90% annual rainfall in 2-3 monsoon months. Monsoon clouds back up on Siwaliks, dump here.

Current highest structure in UP = Relief Commission – mindset must change to foresight, effective information flow. Currently, information flow from village level up to higher institutional levels non-existent.

Dep. Gorakhpur for Butwal, Nepal, 4hr trip.

Visit Tinau basin – river diversion, abandoned barrage that never functioned because of natural diversion of the Tinau. Social upheaval due changes in land holding

structure, water management and water rights from multiple irrigation projects from different donors with no local participation or collaboration between projects. Huge failure of aid.

O/n Hotel Siddhartha, Butwal.

20/4 Nepal Bandh. Stuck in Butwal. No incidents.

21/4 Butwal-Hetauda.

Visit Rohini basin area, Nawalparasi district ('Rampur Kharona' Block Development Council, Ward No. 8, Village Madhuwaliya, Group no. 10), with K.K. Gurung & Bhumi Maya Rana of Campaign Service Centre - CSC (only NGO dealing in flood issues in district). Community credit group meeting in progress in village - meets once a month, about 65 members. Most of the pooled money is withdrawn for weddings and medicines. We joined in and discussed flood impacts. Large inundation area. Border with India just on other side of shallow river. Very porous border – smuggling of sugar, wheat. District with highest rate of girl trafficking in Nepal. --according to some estimates about one thousand girls per year. To quote a young villager, "we have become water worms!"

Population: 462 (261 women) in about sixty-six households. Typical marginality of the border village economy quite visible. Equally obvious was the difference made by the 'location' of these communities in the borderlands - defined as sub-national areas whose economic and social life is directly affected by proximity to an international boundary. While such areas are sometimes viewed strictly in relation to the specific nations (in this case India and Nepal) on whose sides of the border they have been located, their status as inherently binary communities underlines the importance of adopting trans-national or cross-boundary perspectives. Such a perspective becomes far more relevant for our project given the 'open border' between India and Nepal on the one hand, and the imperatives of achieving trans-border cooperation on flood related issues on the other.

As many as fifteen men from the village are working abroad (especially Saudi Arabia, Malaysia and India), with a majority falling into the semi-skilled category.

Group discussions revealed that what the communities in the village had received under so-called 'flood relief' in the past was at best a blanket, a cooking pot, old clothes and NRs. 50 per person. One elderly person recalled that this too was about ten years ago! Virtually no boats were provided during the flood. Obvious mismatch between the desire to adapt and the capacity to do so.

Visit Bagmati basin area in Rautahat district with Rural Service Organization – RSO, based in Nijgadh, Bara district. Flash floods from Churia hills frequent. Embankments further south cause inundation. Early warning system by miking has prevented loss of life during floods. Riverbed rises with every flood.

Both CSE & RSO funded by Oxfam, Oxfam gradually pulling out. However, several funding options exist in Nepal, contrary to India.

Some key questions/points (Sanjay Chaturvedi):

1. Who does (or does not!) adapt, when, where, how and why?
2. The dominant prevalent approaches or governmentality to flood 'management' and 'control' are by and large reactive rather than pro-active.
3. NGO-NGO or, for that matter, Government-NGO cooperation leaves much to be desired.
4. Legal issues seem to be missing in popular awareness or, for that matter, in NGO strategies on floods. It was pointed out during one of the discussions by a member of a local community that politicians often discourage people from going to court!
5. There is a widespread feeling among affected communities and the NGOs concerned that structural measures provide a false sense of security and should be planned and implemented (if they must!) with great care. Yet the structural approach is hegemonic.
6. The criticality of building partnerships at various levels and among various actors in order to work out long-term, sustainable adaptive strategies.
7. The layered nature of marginality in these villages caused by the boundaries of class, caste, and gender. It will be quite useful to map these out to the extent possible.
8. It appears that the issue of the cost and benefit of adaptation, as calculated by various communities themselves, is also important.
9. It might be useful to map out sensitivities and abilities of various communities to adapt and explore the degree to which adaptations are possible in practice, process or structure. Adaptations can be spontaneous or planned, and can be carried out in response to or in anticipation of changes brought out by floods.

Checklist for group discussion from ISET-Nepal:

Checklist for Focus Group discussion/ Key informant survey

1. What is their opinion about the floods?
2. Is there any way to know that the floods are coming?
3. Or are they notified about the floods?
 - Who notifies them and how?
 - How are these messages communicated in the village or outside the village?
4. Are there some organizations, programs that discuss matters relating to floods with them?
If they do then what are these organizations and what do they discuss with them?
5. Do they have some prior experiences of the floods?

- If yes then do they themselves take precautions to save their families, houses, lands, livestock, cash, agricultural products, foods, jewelry, clothes, utensils and other things?
 - If yes then what do they do? For e.g. change the crop type to be grown, build houses in more protective way, store food for later use, keep cattle in such a way that they can use the products later in times of floods etc.
6. Are they aided by others besides the family members in carrying out these activities?
 7. If yes then who helps them and how? And if no then why not?
 8. Is the help they receive sufficient? If it is not then how do they think they should be helped?
 9. Are there some sites in the area identified as shelters in case of floods?
 10. When/How did he/she come to know about the flood?
If it was some days before then what types of works were undertaken
If some physical structures were built then who told them what they should build
Example community leaders/political leaders/organizational personnel/
Which family member did what kind of works?
Did they collect cash/kind to build the shelter?
 11. Where was the shelter? And what kind of shelter was it? (e.g. individual shelter, collective, community shelter)
 12. Was there enough time for the members to go to some safe place?
 13. Who decided where to go?
Example family members including the elderly and the children, cattle, livestock, cash, jewelry, utensils, stored food.
 14. What did they prioritize as valuable, list according to them
 15. How long did they have to stay in the shelter?
 16. Is there a tendency of the people to migrate before the floods?
If yes, then who migrates and where?
 17. Are there some materials kept in the house that can be used during the Emergency period?
If yes then what types of materials and where do they keep them?
 18. When did the floods occur? What were the household members doing?
Were some members swept away instantly? If yes then who?
 19. A list of losses - human lives, animal lives, property, land, cash, jewelry, utensils, stored food, etc.
 20. How were they rescued? Who rescued them?
 21. Where did they take shelter? Who were with them? How long did they have to be in the shelter?
 22. What types of arrangements were available in the shelter?
 23. How did they meet their daily needs?
Where did they get water from?
What types of food did they eat? Was it distributed? Who, distributed? Where was it distributed? If it was cooked then who cooked the meals where and how? Did they have enough to eat?
Was their clothing adequate? If not how did they meet the needs of clothing?
What were the sleeping arrangements? Who slept where?
Where were the toilets located? How did they take bath? Wash/change their clothes, utensils etc.
 24. Was medical aid provided?
 25. Were there some different facilities for meeting the needs of
 - disabled people

- sick men and women
 - elderly men and women
 - small children
 - menstruating girls
 - pregnant women
 - lactating women
 - new mothers
26. How did they move about during the floods?
 27. How did they communicate with the people inside and out side the flood area?
 28. How was the education of the children affected by the flood?
 29. Was there some provisions made for the victims who could not attend school for a longer period because of the floods?/
 30. Who were involved in the rescue operations (besides the family members)?
How did they interact with the victims?
Example: formal/informal, helpful/arrogant etc.
Their attitude towards the young girls/women, boys/men etc.
Example: Cooperative, dominating etc.
How are the domestic and agricultural works of men and women affected while living in the shelters?
 31. Is there more or less tension in the household?
 32. Do/do not families break up?
 33. What happened to their jobs, if they had any?
 34. How do the men and women go to their respective office?
 35. Do they get leave or certain consideration from their respective work place?
 36. If yes then what types of?
 37. What happens to agricultural farming?
 38. Is there buying and selling of lands? If yes then who conducts and where?
 39. Are there transactions of selling of livestock and jewelry/other valuable assets? Who conducts and where?
 40. Are there land renovation activities? If yes who conducts and where?
 41. Are the people involved in activities as skill development, adult literacy or any other credit providing associations?
How do these associations help/do not help during and after the floods?
 42. Do they try to get loans? If yes then from whom?
 43. What are market situation after the floods?
Do market prices fluctuate?
How does it affect the victims?
 44. Do some members migrate in search of income?
If yes then who goes where to do what kinds of works?
 45. How do the men and women aspire to save their families from floods in the future?
 46. What do the men and women prioritize?
 47. Example: selling their land and migrating, building protective structures in the river, building their houses in more protective ways (list according to them)
 48. What according them should be effective activities that should have been implemented by the concerned relief providing organizations?

Questions to be asked to the Women focus group

1. What do they think of floods?
2. Do they have some prior experience of floods? What types?
3. Do they take any precautions to protect their families, land, house, livestock, agricultural products, cash, jewelry, clothes, utensils and other things? If they do then how do they do these works? Who helps them in carrying out these works? Family members, neighbours, villagers, others (specify).
4. Is the issue of floods discussed in any of the programs that they participate? Example: adult literacy programs, rural credit programs etc. What are discussed and how do these programs respond after the floods?
5. How and when did the women come to know about the floods? Did they have some time to take their family members and valuables to some safe place? Which is the place they state as being safe?
6. What do they prioritize as valuables to be taken to some safe place? List according to priority.
7. Was the last flood sudden or gradual did it occur during the day or night?
8. What were they doing when the floods came? What were the other family members doing?
9. What happened and how were they rescued? What were their losses, human lives, animals, property, disease, cash, stored food, jewelry, etc.
10. How and where did they take shelter? Was it an individual shelter, collective or community shelter? Did all the family members take shelter in the same place? If no then why not?
11. What types of arrangements were available in the shelter?
How did they meet their needs of:
Drinking water. Where and how did they get water?
What types of food did they take?
Did they make the food or was it distributed?
What types of food was distributed? If they had to cook the food how and where did they cook the food?
Did all the members have enough to eat? If not give reasons.
How did they meet their needs of clothing?
What were the sleeping arrangements? Which of the family members slept where?
Where and how did they go for the toilets?
How did they take baths? Wash clothes? Clean the utensils? etc.
12. How did they walk from one place to another to fetch water, fuel and fodder?

13. Was medical aid available in the shelter? If it was, then who provided and what types of medicine?
14. Were there different facilities available in the shelter for disabled people, sick people, children, menstruating girls, pregnant women, new mothers, and lactating mothers?
15. What types of security did they have in the shelters?
Was there some incidence of theft or other incidence? What types of? Who were involved?
16. Besides the family members who were involved in the rescue operations? How did they behave with the young girls and women in the shelter?
Were the young girls and women physically and mentally harassed/ exploited? If yes then by whom?
17. Do the women get help from other (inside and outside the family) to carry on their domestic duties?
Who helps them and how?
18. Is there tension in the family after the floods? Are there conflicts between the family members? What types of and how are they resolved?
19. What types of work do the men and women usually do and the women usually do during and after the floods? What happens to their jobs during flood if they had any?
20. Do they get certain considerations or some sort of help from their respective work place?
If yes then what types of and if no then why not?
21. What happened to their children 's education?
22. Do they have to sell their land/ livestock/house /jewellery or the valuable assets? If yes to whom and why?
23. How do they aspire to save their family members from the floods in the future?
24. What according them should be more appropriate steps to be done by any organization that is related with them in matters of floods?
25. Which organization's work did you like? Which one you did not like? Why?
26. Who led rescue and relief works?

Gender checklist from ISET-Nepal:

Gender checklist for households – understanding livelihood strategies in flood prone areas.

Sample suggested: 10% of total households to be covered, about 100 hhs. from different economic / caste categories

1. Gender division of labour

Activities	Share of labor (percentage, or time spent in hours/days/season)				
	Male adult	Male child	Female adult	Female child	Elder M/F
Agriculture					
main crop cultivated					
Land preparation					
Sowing					
Weeding					
Irrigation					
Applying fertilizers...					
Harvesting					
Other tasks					
Household					
Cooking					
Childcare					
Water collection					
Fuelwood/fodder collection					
Washing clothes/utensils					
Care of livestock – differentiate					
Other livelihood related activities					

Questions to think about:

- How rigid is the gender division of labour?
- What are the daily and seasonal variations in labour availability, for e.g., when men migrate?

2. Ownership, Access and Control over Resources and Benefits

Resources	Ownership - legal		Access - use		Control- decision-making	
	M	F	M	F	M	F
Land						
House						
Livestock – types						

Financial – bank acc.			
Human – labor, edu.	Not applicable		

3. Decision-making – benefits and incentives

Activities

Who decides/ who has a role in decision-making process

Purchase/Sale of:

- Land
- House
- Cattle
- Ornaments
- Other assets

Choice of crops: food / cash

Educating children: boys /girls

Medical treatment

Family planning

Participation in meetings

Other

Important to capture how decisions are negotiated – not just who decides, but the *process* and even if women don't take the final decision, they may have an influencing role which is not always visible.

Checklist for focus group discussion with women on gender specific issues

- Pre-flood context:
 - access to information about floods (from/whom?)
 - flood preparedness: training if any?

Guidelines for surveyor from ISET-Nepal:

Guidelines for Household Survey Questionnaire

The following guidelines have been given for the questions where surveyors were confused during pre-test. Straightforward questions have not been mentioned here.

Q 2. We basically want to know if the respondent has migrated within the last fifty years or so. Answers will usually be about the events, which caused them to migrate, or during the time of the event.

Q. 3.2 Only the flood affected areas.

Q. 4. If two crops are grown in the same land at different times, Please make note of all these different crops.

Q. 6.1 Total livestock: Total value of animals. Out of that, mention if any of these are also owned by women. Note it separately.

Q. 6.2. How do the respondents perceive flood? Do not suggest answers, encourage answers from the respondents. The possible answers could be one or several of the following:

- Natural phenomenon.
- Facing the flood just because they are poor.
- Highways have initiated flood.
- Structures like dam, embankments etc have cause flood.
- Clearing of forest in the upper hill caused flood.
- Population growth another reason of flood.
- God is angry or bad omen.
- Some bad clause or loopholes in the policies.

Q. 6.3 One column stating the condition (working or out of order) of the assets has been added.

Q. 7. Two categories have been added namely *Normal year and flood affected year*. In this context, mention:

- (a) Food produced from own land
- (b) Food produced from own land and earned from other sources such as wages, loans etc.

Q. 8. We have added a column stating total expenditure for the each expenditure. Items suggested as education, clothing, communication will not be applicable to own production

Q. 10. The answers can be more than three. They do not have to be limited to a,b,c. only.

Interviewer's remarks: After you finish interviewing the respondents, please write your own impression and experience about the areas, attitudes of the people you met, their views, (not necessarily that of the respondents), attitudes or any other remarks that you think is worth mentioning. Remember, this is your personal remarks, therefore feel free to write it as you wish.

Few other points to remember:

- Names Optional.
- Respondents could be shy/hesitant about answering but try not to suggest answers. Encourage them to speak themselves, this way we will be writing what we hear from them, not what we think could be the answer.
- Do not hurry filling answers. Allow sufficient time to gather enough information.
- In multiple choices, do not assume the respondents answer has to be among/within the given choices in the questionnaire. S/he could have a very different/significant response.

- Questions with Yes/No answers the respondent might be willing to elaborate or explain. Pls make note of all these points in the space given at the end of the questionnaire or in a separate note book.
- If you think that the respondent is drifting away from the main question/actual facts then you have to bring them back to track.
- Some of the questions may not be applicable to all respondents.
- Prostitution /women trafficking have not been mentioned in questionnaires but could come up in focus group discussions. Do take note of this too.

Questionnaires (resettlers) from ISET-Nepal:

Household Survey Questionnaire for Resettlers (Translated into Nepali & Hindi)

River Basin: Bagamati () Rohini ()

1. Introduction of the Respondent

1.1 Name: 1.2 Sex: 1.3 Age:

1.4 District: 1.5 (VDC) Taluk?: 1.6 Ward: 1.7 Village:

1.8 Education: 1.9 Occupations:

2. Demography Detail:

2.1 Family Members (that are using the same kitchen, Excluding Respondent)

Relation with Respondents	Male	Female	Age	Education	Occupation	Annual Earning
1.						
2....						
Total						

2.2 Since how long you have been living here?

If migrated, from where, when, why?

3. Land Holding and Ownership

Ownership Type	Land Area (Bigha)
1.Own Land Operated by oneself	
2. Rented in	
3. Rented Out	
4. Net operated	
5. Landless	

4. Crop and Production

Crop type	Cropped Area Production	
Early Paddy		
Late Paddy		
Maize		
Wheat		
Millet		
Oilseed		
Pulses		
Sugarcane		
Potato		
Vegetables (Specify)		
Others		

5. Food Sufficiency Period (from Self Production):

Coping Strategies to meet the food deficiency:

5.1 Individual Damage due to Flood in the previous location

Loss Type	Loss Unit/ Quantity	Equivalent to Rupees
Land		
House		
Livestock		
Person		
Other (Specify)		

6. Adaptive Strategies

6.1 What types of adaptive strategies you and your family members adopt to cope with these difficulties?

Difficulties	Activities	Who takes charge	Participation of Female Members	Advantage/disadvantage
Ponding				
Food Deficiency				
Diseases (Human)				
Diseases (Animal)				
Drinking Water Problem				
Defecations Practices				
Transportation/Market				
Grazing/Animal feeding				
Shelter				
Cooking Food				
Schooling				
Going to Health Post				

Socio-economic Conflicts				
Increase in Consumer Goods' Price				
Increased Medicinal Expenses				
Other (Specify)				

6.2 What traditional/ indigenous systems exist among your communities to cope with floods? How effective they are?

Strategies?

Advantage/disadvantage?

6.3 What are the direct benefits of traditional adaptive strategies followed for the control of floods?

6.4 Are there any institutions in your area that helped you to cope with the flood last year? Give following details:

Institutions	Support Provided last Year		Type of Support		
	Yes	No	Cash	Materials	
				Type	Equivalent to Rs.
DDC					
VDC					
Red cross					
Lions Club					
Government Agencies					
NGOs					
CBOs/ Self Help Groups etc					
Others (Specify)					

6.5 Which of these organizations are effective in helping you to cope with flood and how?

Organizations	Effectiveness Ranking			Reasons
	Very Effective	Moderate	Poor	
DDC				
VDC				
Red cross				
Lions Club				
Government Agencies				
NGOs				
CBOs/ Self Help Groups etc				
Others (Specify)				

6.6 What type of external support is required to strengthen your traditional adaptive strategies?

7. Participation in Flood Rehabilitation

Is any of your family member has participated in the flood rehabilitations works?

Yes () No ()

If Yes, how:

By contributing labour-----Labour Day in a Year () Male Female

By Contributing Cash Rs ----- ()

By Providing Materials ()- Specify the materials----- Male Female

By being a member of Flood Rehabilitation Committee ()

Other (Specify) ()

8. Have you been benefited by flood? Yes () No ()

If yes, what are they?

9. Any Comments/ Suggestions

Name of the Interviewer:

Date:

Workshop report on “Conceptual and methodological understandings of gender relations in the context of drought” from Sara Ahmed:

**Gender and Adaptive Strategies in the Context of Drought
Workshop on Research Issues and Methodologies
VIKSAT, April 9-11, 2003**

Background

A three day workshop on conceptual and methodological understandings of gender relations in the context of drought was held at VIKSAT for the research teams from IDS, Jaipur and VIKSAT under the Adaptive Strategies research project. The main objectives of the workshop were:

- To facilitate conceptual clarity on gender and gender relations
- To understand how gender intersects with other aspects of vulnerability to structure the impact of drought on poor women and men (girls and boys)
- To understand the factors which shape gendered responses underlying coping mechanisms or adaptive strategies at the household and community level

The first day of the workshop provided an overview on gender and adaptive strategies in the context of drought by Dr. Sara Ahmed, the main resource person and a team member of the AS project. A special session was held in the afternoon with Prof. Gaurang Jani from the Gujarat University to look at sex workers and sex work as a growing livelihood strategy adopted predominantly by *adivasis* as a response to drought. The second day of the workshop was spent on a field-visit to Satlasana block in Mehsana district where VIKSAT has been working since 1999-2000 on natural resource management and livelihood issues. Focus group discussions were held in two villages, Nedardi and Mota Khotasana, with both women and men to understand their perceptions of drought and how they were coping / adapting with the same. On the third day of the workshop participants shared insights and learning from the field, raised critical methodological questions in the context of the proposed surveys and tried to plan their field schedule.

Participants at the workshop included the six-member IDS field-team (4 men, 2 women with varying degrees of experience) and the six-member VIKSAT field team (2f /2m who are field coordinators, and two programme associates, 1m/1f, from the head-office who will coordinate the project). Additional staff members from VIKSAT, including the Director attended various sessions of the workshops as they were interested in the topic and wanted to learn as well as contribute to discussions based on their insights from related projects (e.g., COMMAN).

The following is a brief report on the workshop proceedings and a summary of the insights that emerged from the field-visit on the second day.

Day 1 (April 9, 2003): Rethinking Gender Relations in the Context of Drought

Session 1: began with a self-introduction of all participants in which they briefly shared their understanding of gender in the context of the work they have done (field and research

insights). Most team members were aware of the drudgery of rural women and their significant, but little valued or recognized, contribution to the rural economy. Some had attended gender sensitization workshops in the past and had more clarity on gender as a concept. In terms of VIKSAT's understanding of gender, it was pointed out that VIKSAT did not seek to divide the community but to provide access to equal opportunities for women so that the community could move forward/together on the path to development as a unit.

Moving from this introduction, Ahmed defined gender as an analytical concept – how are our gendered identities as men and women socially constructed and what is the role of different institutions? Although gender defines the social relationship between men and women, much research, analysis and policy prescriptions have inevitably focused on women because of their (comparatively) disadvantaged position in society. A brief overview on the status of women in India – the sex ratio, life expectancies, gender gap in literacy and work participation, infant mortality and the increasing violence against women was shared. To maintain a balanced perspective on gender, we also looked at the privileged position of men vis-à-vis the different types of 'oppression' they experience, for e.g., their lack of ability to voice their emotions, or limited access to male solidarity groups coupled with increasing expectations of their role as breadwinners in a highly competitive and insecure market. (Annexure 1 includes a copy of all slides presented)

Following this overview, the session moved on to look at intra-household relations which determine the gender division of labour, the nature of work and how it is valued (productive and reproductive work), and access to and control over resources and benefits.

Session 2: focused on the gender dimensions of vulnerability – economic, social and political – and how it affects the impact and responses to drought of poor men and women. It was pointed out that not all women, even amongst the poorest, experience drought in the same way and that vulnerability is also mediated by other axis of stratification including, caste, class, disabilities and household composition. (Annexure 2 includes the full power-point presentation) The impact of drought on women's and girls' work both productive (responsibility for farming in the absence of men) and reproductive (water collection) was outlined, as well as increasing economic insecurity – loss of assets (pawning of jewelry) and entitlements (to food perhaps). Women's experience of drought in their own voices or narratives from a study undertaken by SEWA and the Disaster Management Institute (DMI) in Banaskantha were highlighted. The additional social insecurity that dalit women face at the hands of upper caste/class men was also shared.

Coping strategies in the short-term focus on meeting immediate survival needs through a variety of means (the 4 'd's – could be more!):

- Distress migration (usually seasonal and mostly male)
- Daily drought relief work – construction sites, tank rehabilitation, building water harvesting structures (both m/f, work either by GOs or NGOs)
- Diversify livelihood strategies – shift to dairying, less water-intensive agriculture, income-generating opportunities based on traditional artisanal skills (e.g., SEWA's work in Kutch and Banaskantha)
- Dependence on moral economy increases

Adaptive strategies as a long-term, somewhat stabilized response to drought as a key environmental determinant, depends on a variety of other factors, including:

- Access to technology and information
- Organizational capacity of local community – collective action
- Role of different external actors and the larger institutional environment
- Ability and willingness to adopt land management and water conservation practices

Extensive questions and discussions on the significance or otherwise of a gender perspective, what do we mean by a ‘female or male-headed household’ (not to be confused with owner of the house or land), and the difference between coping and adapting meant that the presentation could not be completed in the given time and moreover, there was little time to explore research ‘tools’.

Session 3: Prof. Gaurang Jani from the Faculty of Social Sciences, Gujarat University, made a very interesting and detailed presentation on the changing nature of *adivasi* migration and the increasing trend towards sex work as a means of livelihood for women and young girls in both *adivasi* and other disadvantaged communities. Extensive *adivasi* migration and the trend towards sex work have their root in the drought of the mid-1980s (1985-87) which affected large parts of Gujarat, particularly the *adivasi* dominated Panchmahals district. In addition, the recent amendment to the Land Alienation Act, adopted by the BJP government in Gujarat about seven years ago, allows for the purchase of land beyond the 8 kms restrictive clause as well as the purchase of *adivasi* land by non-*adivasis* or other better off *adivasis*. This coupled with deforestation and the growing privatization of common resources, has reduced the asset base of the *adivasis* and pushed them further into migration and a continuing spiral of impoverishment and exploitation. *Adivasi* women and girls can be found engaged in sex work near famous temples in Gujarat (and probably Rajasthan too), but since their bargaining power is very low they are at more risk from unsafe sex practices which may lead to HIV and other sexually transmitted diseases.

Questions were raised as to how do we ‘research’ or ask questions on this theme, particularly in the *adivasi* dominated field-areas, but there were no easy answers. Often there are close links between families and/or friends who are engaged in sex work, daughters follow mothers or sisters in the same profession with young sons/brothers acting as ‘pimps’. There is nothing ‘new’ about the propensity towards sex work amongst poor women or the risks involved, but in the context of this study we need to probe deeper as to the relationship with drought and the extent to which this is a survival strategy for marginalized families.

Day 2 (April 10, 2003): Field trip to Satlasana block, Mehsana

The field trip to two villages in Satlasana taluka, Mehsana district was designed to provide an exposure to the context of drought in Gujarat for the IDS team members. It was also meant to provide an opportunity for both teams to explore the gender dimensions of the research in the light of the conceptual and analytical insights from the first day of the workshop.

Nedardi village has 90 households and a population of approximately 730 people with two dominant castes – the Chauhans (Darbars?, 12 hhs) and the Thakores (a middle caste, 76 hhs.) There are also two Muslim families in the village. VIKSAT, supported by Oxfam, initiated drought relief work in the year 2000 – deepening of the village pond. Since men refused to participate in the work (why?), it was women who came forward to take a lead role. Today there are five SHGs in the village and a number of vocal women leaders emerging.

Mota Kothasana is a larger village, close to the taluka town of Satlasana. It has 346 households and a population of 1820 people with a diverse composition in terms of caste – 155 hhs of the dominant Chauhan caste and 35 Patel families. While another 100+ hhs. are of a range of middle castes and there are 20 Harijan hhs. VIKSAT started working in this village in 2001 (drought relief, formation of TGCS) and today there are four SHGs here as well as a successful women's micro-enterprise producing and marketing detergent powder.

Given the size of the women's groups which had come for discussions in both villages, we had to break up into smaller groups with 1-2 Gujarati speaking people in each group to facilitate. We tried unsuccessfully to do a time-line and village resource maps, but this requires more time. Though we had envisaged that two members from the VIKSAT field-team would pilot test some parts of the questionnaire again this did not work out as planned. In MK village the interaction had been organized at the village temple which meant that the dalit community could not participate so a small team went to meet them later. Field insights are shared in the summary of Day 3 below.

Day 3, (April 11, 2003): Emerging research and methodological issues

The morning was spent in sharing field insights, first in two groups and then in a plenary where Srinivas also participated. A few opening points common to both villages:

Both villages have recently begun receiving water for domestic purposes from the Dharoi dam, distributed either through household tap connections or community stand-posts. Water comes for about 10 mins. a day on most mornings, though if there is no power, there is no water. Drought is therefore perceived as 'no water in the wells', that is water scarcity affecting agriculture and hence, food security, rather than domestic water needs which for the moment at least, are largely being met.

Nedardi village

An old woman described the abundance of water in her youth – when she came to the village as a young bride she and her friends could literally scoop handfuls of water from the river and wash their faces. If you dug a little hole near the river (a shallow *virahi*) this too would fill up with water in no time. Later with the advent of mechanized agriculture and the extensive exploitation of water, women's water collection drudgery increased and conflicts over water between women were not uncommon.

Livelihood strategies identified by the team included (note, these vary from household to household and are just listed as being indicative of emerging trends, rather than specific details):

- **Changes in cropping patterns** – shift from water intensive cash crops such as peanuts, to 'food' crops like bajra
- **A shift towards dairying** as there is still some amount of fodder security, partly because of the TGCS (tree growers' co-op society, a village institution) initiated by VIKSAT. However, the marketing of milk has meant that less milk is being retained at home, essentially just enough for tea. Animal care is mostly women's work though the marketing of milk can be done by either women or men. Money is collected twice

a month (every fortnight) and ranges from Rs 100-300 depending on the amount of milk sold and its fat content.

Cows that are not giving any or sufficient milk are abandoned so that there is enough fodder for milch cattle. The price of buffaloes has decreased from Rs 15,000 to only Rs 5,000 each while cows cost Rs 3,000. In some cases old cows are given to the 'ghosalas' with a small contribution made towards their maintenance.

- **Migration** is another livelihood strategy though to date only men from about 15 hhs from the village have gone out to work (a few families seem to have left en masse, but it is unclear how many). Places of work include construction sites and the diamond polishing industry in Palanpur (small boys seem to have been sent there too). Women from the Darbar community do not go out to work. A few of the patel hhs. (?) have petty shops in Satlasana.
- **Daily labour at the brick kilns:** this activity provides about 8 months of work in the village when the kilns are functioning ('nomadic' kiln operators, i.e., not permanent residents of the village?). The rate for carrying a head-load of bricks is Rs 1 for 36 bricks. Depending on how many bricks one carry in a day, and therefore how many trips, a woman can earn between Rs 20-40 as daily wages, well below the minimum wage and the current agricultural labourers wage. Women from the Darbar households who do not go out to work earn some money by selling soil to the kiln owners.

Other emerging issues:

- There were incidences of women's jewelry being sold or pawned and the money used for deepening wells, but women were reluctant to talk about this in a large group. (*Critical question: at what point do families decide to pawn/sell jewelry?*)
- Attempts to borrow money and dig wells or bores upto 650 feet proved unsuccessful – no water. Loan rates vary from 4-10%.
- Mortgaging of land as collateral is another practice – in one example a patel farmer had mortgaged 2 bighas of his land in return for a loan of Rs 20,000 which he had to return after 5 years. If he failed to do so the land would remain with the landowner, however, if he sought to return the money earlier and reclaim his land then he would be compelled to pay interest for the entire period. (*Need to look at land and labour markets*)
- Changes in food consumption – vegetables are cooked once a day and stretched for two meals. Grain of a poorer quality are increasingly being used – rather than buy wheat and then have it ground, a lot of families seem to be buying small quantities of poor quality *atta* and using this for *rotis*. (*Need to look at gender discrimination in intra-household food distribution, but this is not easy and most women were denying it – saying that they had to feed their daughters equally otherwise how can they get them married, i.e., she would not be a healthy daughter-in-law, able to work at her in-laws*)

- There is a tendency to pull children out of school who have not done well, i.e., failed, but this is not necessarily linked to the drought and should be seen in the overall context of poverty and dependency on child labour. *(Need to explore if there is gender discrimination here too, i.e., is there a greater tendency for poor hhs to withdraw girls than boy from schools in the specific context of drought? Maybe we could look at school drop-out rates or attendance registers in a few village schools?)*

Mota Kothasana (MK)

The diversification in livelihood strategies is more or less the same as in Nedardi but given the larger size of the village, there are more families who have migrated, some permanently. For example, 10 families have gone to Bombay and another 25 to Surat – they left sometime back in search of work (diamond industry) and their ‘migration’ is not necessarily drought related. Other migrants have gone for a range of work including (about 75 hhs in all):

- Construction work
- Agricultural labourers
- Drought relief work – deepening wells

Other examples of ‘coping’ mechanisms include:

- Mortgaging of land – it seems 10 Darbar hhs. have done this
- Selling of farm trees to meet marriage/funeral expenses
- Shift from cash crops to food crops
- Shift to dairying
- Loans from moneylenders for well deepening, sinking new bores

In the harijan basti, most of the 13 houses had tap connections – the 3-4 houses that did not have piped water could not afford the connection cost (Rs 251 to the panchayat). By far they have very little land and depend on labour work for their survival.

In sum, for most people this drought was the worse in their living memory, worse than the drought of the mid-1980s, and for some the worse since the 1956 drought. During the 80s drought, they felt that there was more government support – relief work, cattle camps, shelter, food-for-work programmes and so on. But this time there seems to be little by way of official drought relief and even NGO efforts are limited. This is partly due to the other disasters which have marred the landscape of Gujarat, namely the Kutch earthquake (2001) and the communal violence (2002), both of which have had an impact on donor funding albeit, differently. Despite the lack of government or civil society support, the rural poor seem to be ‘coping’, e.g., migration, although not as extensive as before (mostly men/boys migrating rather than the whole family) is an important livelihood strategy. A preliminary and very tentative hypothesis would suggest that access to the market or integration with the market has been on the increase and though in some cases this may be very exploitative (e.g., sex work) it is at least providing people with a means of survival in a context where the state and to some extent civil society have failed.

Methodological questions from a gender perspective:

The IDS field team had already pre-tested the survey questionnaire once and not only found it too long (which has already been taken into consideration) but were also wondering how to account for women’s productive work when most of them do not have an ‘income’ as such,

whether from agriculture or other sources. Apart from reiterating the distinction between productive and reproductive work, it was again emphasized that women's contribution to the rural economy is little recognized as it is usually undervalued or unpaid work, despite the long hours that they spend 'working'. For e.g., they may work as self-cultivators on their own land, but since land is largely owned by men, this would be seen as 'his' agricultural income, even in the context of the household. Instead of looking at income *per se* we need to explore how women's workload has increased under conditions of drought as well as the nature of tasks they are now undertaking, for e.g., when men have migrated. *Are they undertaking new roles and responsibilities which are changing or challenging gender relations in anyway? Does this give them greater control over resources or decision-making? Or is drought simply increasing their work-burden and pushing them further into a helpless spiral of impoverishment?*

I suspect that where women are organized, whether through NGO initiatives such as SHGs or mahila mandals formed by other socio-cultural movements like Swadhyay, or self-initiated collective action, their fall-back position in the context of adapting to drought will be stronger. Given the variation in household composition, life cycles, coping mechanisms, access to resources and so on, the richness and reliability of information sought would be better achieved through in-depth, semi-structured case studies of a few households from different categories in each village (e.g., a better-off farmer, a landless family, a female headed household, those who have a tradition of migration, an adivasi or dalit family, etc.). We could for example, do a time-line of a household's asset base to see how it has changed over time as a result of the drought and other economic factors. Or look at a household's changing livelihood strategies over generations (at least three generations would be possible).

This is not to deny the need for a survey, but a survey will only indicate overall trends in a drought-prone village – to understand perceptions, coping and adaptive strategies, etc., we need to probe deeper, taking into account the variety and diversity of households and livelihood strategies even in one village.

Progress Report from PU:

Progress Report on Adaptive Strategy to Flood Management

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April-June 2003

A comprehensive and critical analysis of the Government of India's policy on flood has been undertaken over the past two months. The study primarily draws upon various official reports/documents published by Ministry of Water Resources, Government of India, especially the National Water Policy of Government of India 2002-2003, and the report entitled, "Ministry of water Resources: Performance of Budget: 2001-2002" (Chapter IV: Flood Control and Related Matters). The report by *Rashtriya Barh Ayog* (National Flood Commission), which was set up by Government of India in 1976, which contains 11 point recommendations to evolve a coordinated, integrated and scientific approach to the flood control problems in the country and to draw out a national plan fixing priorities for implementation in the future, has also been critically evaluated and summarized. The other reports/documents that have been examined include "Report of the Planning Commission on Irrigation, Flood Control and Command Area Development"; Ministry of Water Resources, Government of India, monthly summary for the Cabinet for March 2002; the first quarterly report of the project "Disaster Risk Management Programme, 2002", a project jointly undertaken by Government of India and UNDP, to reduce the vulnerability of the communities to natural disasters in identified disaster-prone areas of Bihar, Orissa and Gujrat; and India Disaster Report entitled "Towards a Policy Initiative, 2000", published by Oxford University Press. While preparing the chapter/report on governmental policies for flood relief, we are paying special attention to the law-policy interface.

Since the case studies for the Adaptive Strategies Project are mainly drawn from the flood prone areas of Western Bihar and Eastern Uttar Pradesh, an in-depth study of 'Flood control management' policy is currently in progress. We are aiming to critique Bihar Government's Tenth Five-Year Plan (2002-2007) and Annual Plan (2002-2003); Report on the Emergency Response in Flood Affected Areas of Bihar; Report of UN Disaster Management on the Livelihood Assessment of Bihar, 2002; Report on the Flood and Drainage Sector, 2002-2003, Government of Bihar; and the Report on the Achievement in Flood Protection, 2002; Government of Bihar. We have also made an attempt to draw insights from various reports published by NGOs, including the "State of India's Environment: A Citizen Report on Floods, Flood Plains and Environmental Myths" (1991) published by the Centre for Science and Environment; the two-volume report on "Agony of Flood in Eastern UP: Analysis and Suggestion", published by Oxfam (2000). Reports published by *Barh Mukti Abhiyan*, UP, *Gorakhpur Environmental Action Group*, UP are also being consulted. The key intention here is to synthesize and critically examine the existing literature on flood 'control' and 'management' in Bihar and Eastern UP in the light of the critical perspectives followed by the Adaptability Strategy Project.

In order to explore whether the colonial British "vice regal" system of administration and flood control and management is still being pursued by governments in the post-colonial, post-partitioned South Asia, a study of the flood policy during the British period is also in progress. Apart from Rohan D' Souza's study on "Floods, Embankments and Canals: The

Colonial Experience in Orrisa”, relevant material in the form of articles, chapters in edited books, has been collected from various libraries in New Delhi and beyond.

We are also examining the larger regional and global experiences in the context of water resource management, flood control, and adaptability strategies. So far, we have analyzed and summarized the findings of various studies dealing with the effects of floods in Bangladesh and the policy responses of the government of Bangladesh. In addition to the reports published on flood and relief by the Ministry of Disaster Management Bureau, Government of Bangladesh, we have also looked at the Bangladesh Water Development Board report on flood forecasting, flood management and relief policy. A critical point for our consideration here is the lessons we can draw from the larger South Asian experiences. We have also made an attempt to synthesize the findings of various reports published by World Bank, Asia Development Bank (ADB) and several NGOs, including, “Bangladesh Disaster Report: 1998”, published by Disaster Forum, Bangladesh.

A comparative analysis of adaptive strategies pursued by a number of basin states has also been the focus of our inquiry. We have drawn upon various reports, policy papers, as well as internet sources, including the following: Report published by Italian Agency for the Environment Protection and Technical Survey, entitled, “Adaptation Strategies for Improved Flood Management in the Mediterranean, 2002”; IRMA-SPONG project report on “Development of Flood Management Strategies for the Rhine and Meuse Basins in the Context of Integrated River Management” (2001); ADB sponsored Regional Consultation Workshop report on the “Impacts of Floods, Drought, and Other Water Disaster on the Poor, (2003); Report on “Flood Management and Mitigation in the Mekong Basin” based on the proceedings of a regional workshop organized by Food and Agriculture Organization, UN, the Mekong River Commission Secretariat and the Department of Irrigation of the Ministry of Agriculture and Forestry of the Lao People's Democratic Republic (1999); and the Mekong River Commission Strategy on Flood Management and Mitigation.

On the basis of the maps produced in the *Flood Atlas of India* (1977) and published by Central Water Commission, Ministry of Agriculture and Irrigation, (Government of India), the ones downloaded from official web sites of Government of Bihar and Uttar Pradesh, and those prepared by *Yuv Chetana*, an NGO working in Devaria district of Uttar Pradesh, our cartographer Mr Mohan Singh, Department of Geography, Panjab University, is currently engaged in preparing/updating some of the maps.

A comprehensive bibliography related to various aspects of the Adaptability Strategy Project, including the relevant Internet Sources, Official Documents, Books and Articles, as well as archival material is at a fairly advanced stage. Till now, we have prepared a 30-page bibliography, and are confident of completing it by mid-September. Our approach to the compilation of both the primary and secondary sources is guided by a careful scrutiny of the relevant text and its content.

Gender and adaptive strategies in the context of drought

Why is gender a concern?

- Worldwide, it is recognised that women and children are more vulnerable in the face of disasters, natural or otherwise, *even amongst the poorest of the poor or in marginalised communities.*
- Failure to recognise that vulnerability is structured by relations of gender and power at the household/community level means that our responses to ‘disasters’ such as drought may reinforce inequalities.

Gender dimensions of vulnerability

- Economic:
 - gender division of labour, nature of work
 - access/control of resources, limited rights of women to productive resources, e.g. land
- Social:
 - position of women in given cultural context
 - limited endowments (education, skills)
 - restricted mobility, access to public domain
 - vulnerability to violence, sexual abuse

Gender dimensions of vulnerability

- Political organisation:
 - collective/self-organisation of women, e.g. SHGs
 - access to decision-making forums at the community level, e.g., PRIs
 - access to channels/technologies of information and communication
 - presence of alternative social actors, movements, NGOs – ability to mobilise women

Who are the most vulnerable women amongst the poorest?

- Women heading households – number of dependents, children and elderly
- Widows, women living alone or deserted
- Women within marginalised or socially excluded communities, dalits and adivasis
- Women with cognitive or physical disabilities
- Malnourished women and girls
- Women subject to assault or abuse

Gendered impact of drought

Increased drudgery of water collection:

- More time spent on domestic water collection – distance increases, often water has to be collected at night
- Reduces time available for productive work (varies with socio-economic status of household and their access to water)
- Increasing social conflict – in queues, in physical water collection, e.g., Utthan

Drudgery of water collection (cont.)

- Girls and sometimes small boys too are involved in water collection or looking after siblings if mothers have to walk further
- Impact on access to education, particularly for girls
- Less water available to meet personal hygiene of women, e.g., at times of menstruation, delivery, post-natal care

Gender and economic vulnerability

Increasing economic insecurity:

- Male out-migration puts more pressure on women to manage (degraded) land and look after dependents, old/children, etc.
- Depletion of household assets, e.g. pawning of jewelry, weakens women's bargaining position in the household
- Household entitlements (access to food or income) may be contested

Women of SEWA share their vulnerability during drought

- “We would make holes in the river bank at the right places to chase underground water – cleaner water came out of these holes, but it took far longer. If there was a marriage or death in the family, water was drawn out endlessly for the guests. I never played with the guests, but my brother did,” Sangita remembering drought during her childhood days at home, married at the age of 14 to face the same problems.

- “During the drought of 1985, my husband and I started going to work on the relief sites – digging earth. There was drought for four successive years and we dug earth for four years – there was no other way. All my hair fell out and I went bald,” Bhachiben, married into a wealthy family (35 acres of land), but after her husband’s father had died when he was 5 years old, the land was sold till the family was left with just 5 acres which she convinced them to retain.

- “During the first drought year I was seven months pregnant, but I had to work on the relief sites, otherwise the family’s survival would have been difficult. Regular work was never available – I had to borrow money to feed the family from time to time, the moneylenders would charge 4% interest. Just 15 days after my son was born, I resumed digging – my elder son who was then four, would look after his infant brother,” Puriben (SEWA member).

Gender and social vulnerability

- Dalit women in Patan district, North Gujarat record greater dependence on moneylenders, landlords and contractors during periods of drought for water and other livelihood needs in return for 'sexual favours'. Most of their men have migrated or been forced into bonded labour so they claim to have little option. Despite the presence of NGOs like Navsarjan in the area, women are reluctant to file cases.

The silence of the disempowered

- For the dalit women the exploitation starts at the water taps. In Taranagar village, there are three taps supplying potable water, but the dalits are forced to take brackish water from another one. “The Rabari-Desais will allow us to fill a few pitchers only if a young woman goes begging to them,” says Paniben, age 65.

Gender, drought and vulnerability

- In sum, women's workload increases while her working conditions deteriorate,
- Her ability to 'recover' (economically) is generally slower than men's as in the context of male migration she has an 'expanded care-giving role'
- Social context of seclusion also restricts her mobility and access to other livelihood opportunities

How do women/men cope or 'adapt'

- In the short term: focus on immediate livelihood opportunities to meet survival needs (water, food and income security)
- 'distress migration' (seasonal)
- daily drought relief work (nearby)
- diversify livelihood strategies (access to skills, resources, markets)
- dependence on 'moral economy', social networks / social capital increases

Adaptive strategies (long-term)

- Construction of water harvesting and recharging structures and rejuvenation of traditional water conservation practices
- Improved land management practices (for those who own land), low external inputs
- Organisation and capacity building of women's / men's groups and community institutions – equity and participation
- Strengthening alternative livelihood options – access to information, markets

SEWA's Fodder Security System in Banaskantha as an example of an 'adaptive strategy'

- Reciprocal exchange of fodder, mostly by women, forms an important social network in the construction of social capital
- Livestock are a valuable source of income, particularly for the landless during periods of drought when agricultural work is limited
 - SEWA and DMI worked together to revive milk co-ops in Banaskantha and to ensure fodder security

Fodder security system (cont.)

- Strategy based on 4 steps:
- Purchase of fodder at lowest prices during early phases (depends on demand and local availability)
- Storage of fodder (*purahs*)
- Distribution at the right time in required quantities (based on no. of milch animals and quantity of milk supplied to co-op)
- Recovering costs

VIKSAT