

Women And Water



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CHAPTER 1

Executive Summary

Rapar, the eastern region of the Kachchh district is one of the most marginalized areas in the region. The adverse climatic conditions, lack of sustainable livelihood options, its social ethos, and adding to all the drudgeries are the natural calamities, like, earthquake and drought has resulted in disruption and deterioration of the fabrication between human and environment. All this has lead to poor socio-economic condition causing drudgeries to the people of the region.

Water has been always one of the prime issues in Rapar. The region fall under rain shadow zone, average rainfall is only 232 mm/year. The finding shows that, out of 13 years, 7 years yearly rainfall has been below average. And on an average there are only 9 rainy days. Thus, water scarcity is one of the most dreaded issues across villages. To top on the severity of the issue, desertification, salinity ingress, ground water over draft, neglected surface water bodies and increase in fluoride content are some of the water related concerns of Rapar. Adding to it, the disaster situation has made the problem more severe hitting the lives of the people from all the corners.

Under such conditions it is natural for the community to depend on multiple options for fulfilling the requirement of drinking water. The traditional water harvesting systems (*Virdas*, *Talavs*, Step wells etc.) are time and again tested and promoted by local initiatives as alternatives to costly and mis-managed systems. Break down of traditional institutional mechanism in water management is also perceived as another hurdle in the process. Though piped drinking water networks found to be easy option to fetch water compared to wells and village ponds, this system of management led to complete neglect of community resources. Water might improve if a balance is made between the traditional water harvesting structures reserved for supplying drinking water and new technology for distribution of water.

There is significant increase in dependency over piped water supply, as it is perceived that water availability becomes certain. In the last three years, disasters like cyclone, droughts and earthquake have worsened the situation. For the last couple of year people are completely dependent on external water sources.

Condition of women is challenging in earthquake affected regions, threatened by frequent drought. Drudgery and drinking water share common meaning in this region. Domestic water supply and management is though seen as 'women's' domain, seldom they are involved in its management decisions. Gender asymmetries in water resources management are rarely perceived as gender asymmetries. Men tend to ignore women special need and interest in formal institutions. Traditionally women are kept away from decision-making in water management.

There is need for gender sensitive program management framework at institutional level to ensure changes in 'practices' at community level. It requires Sensitisation, institutional frame works, capacity building and awareness activities should be intensified. The study reveals that the level of awareness among community members is far below the level of acceptance. Hence any social change could only be successful with increased awareness and conscience.

CHAPTER 2

1. Background

It is rather apparent that women have not benefited equally with men from development efforts. Present gender system is detrimental to women as it hinders women's access to resources and infrastructure and hence the situation related to them exercising control on resources and the benefits accruing from those is worse. In some cases their status further deteriorated and they are overburdened. Mediocrity is evident in Technological advancement, new management practices and economic development when it comes to gender inequalities. Women gradually and systematically lost access and control over resources. Domestic water supply and management is though seen as women's domain, seldom are they involved in its management decisions. Their male counterparts often dominate development plans (even in bottom up plans) and the resulting burden and drudgery is left to women to bear with. Traditionally women are kept away from decision-making in water management. They are only assigned to take care of drinking water needs of family. The community (read men) is the one that decides on water management.

Kachchh faced a devastating cyclone in 1998, two continuous years of drought in 1999-2000 and still worst earthquake in January 2001. Especially Rapar block out of other blocks affected badly due to the drought situation. The situation worsened by the January earthquake. Government, voluntary aid agencies and international donors mooted various relief and rehabilitation measures. As a result even a single family in remote village received aid for shelter. Post earthquake, various long term disaster coping and livelihood restoration strategies have been adopted. Problems and prospects of scattered villages of Kachchh are debated.

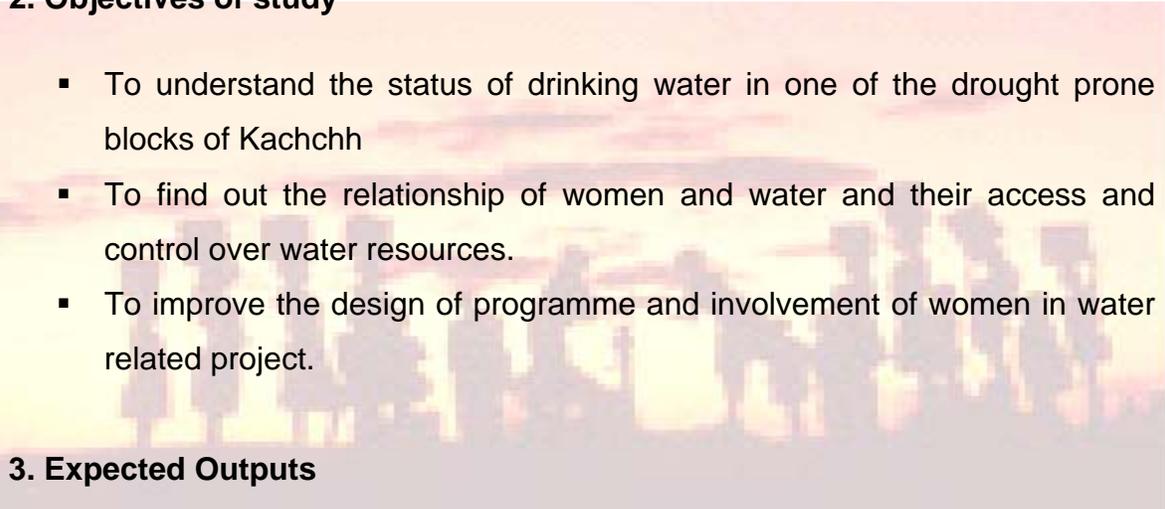
Many villages of Kachchh are facing severe problem of water scarcity. They still do not have any permanent source of drinking water. Women often have to walk

many miles to collect a pot of drinking water of dubious quality, adding to the drudgery of their harsh life.

In regions where water is a scarce commodity, there are all the more reasons that users participate in its management. Though a wise management principle, it is not accepted by traditional orthodox communities, new governments and new technologists.

This paper attempts to bring out the status of “Water and Women” in one of the drought-prone blocks of Kachchh, Rapar.

2. Objectives of study

- 
- To understand the status of drinking water in one of the drought-prone blocks of Kachchh
 - To find out the relationship of women and water and their access and control over water resources.
 - To improve the design of programme and involvement of women in water-related projects.

3. Expected Outputs

This paper attempts to bring the following outputs

- Better understanding of relationship between women and water.
- Directly and indirectly affecting women social, political and economically and the context that shapes them, and the significance of these impacts to women status.
- Recommendations and learnings for organisations to involve women into water-related programmes.
- How strategies can be formulated to ensure women participation in water programmes for their maximum benefits.

4. Research questions

The key questions on which the research analysis is based are

- What are the issues of women related to water?
- How women define their role in the family and in community?
- How women see the problem of drinking water?

5. Methodology

The study was carried out in five cluster of Rapar block (Rapar, Balasar, Ahdesar-I, Adhesar-II and Ramvav) where Cohesion has been actively involved after the earth quake. A total of 55 settlements were covered. Stratified random sampling was used and 10 percent of the total population of the study area was selected as study sample. Information was collected through several methods that included interview schedule and PRA techniques like focused group discussion, gender analysis, etc. A wide variety of tools have been incorporated so as to gain a clear picture of the women relationship with water in the area. Household data was triangulate in group discussions. The information collection team includes local interviewers having experience of working in social sector with competencies including participatory appraisal, consultation, and analysis of quantitative and qualitative data.

Limitations

- ↻ The area of the study being diverse, the selected sample may not represent accurate figures for the whole area as presented in the study.
- ↻ The presented information is based on approximation as suggested by the village communities.

CHAPTER 3

1. Characteristics of the study area

Kachchh located on north western part of Gujarat, with an area of 45,652 sq. km. Kachchh is an arid region that receives the lowest average rainfall at 330-mm. Kachchh district is chronically drought prone. The average rainy days are about 15 days in a year with a high coefficient of variation. Destructive flash floods are also common here. Temperature varies from 40°C to 50°C during summer to a minimum of less than 1°C during winters. As a result, evaporation rates are high in village ponds and other surface water bodies.

Basic Information on Rapar

Total Number of Villages: 97

Villages damaged during earthquake
(70% damage): 18

Villages damaged (100% damage): 79

Population: 1,75,000

Main Occupation: Farming, Animal
Husbandry, Embroidery, Charcoal,
wage labour

Literacy Rate: 43.30%

Infant Morality: 71

Maternal Mortality Rate: 9

Agriculture Land (Hectares):144853

Kachchh district is a saline tract, with stray hills. The *Rann* of Kachchh, covering practically the entire district, is a vast expanse of tidal mud flats flanked by saline efflorescence. With this potable ground water is a scarce commodity.

The groundwater resources of the district are of limited potential due to variable water quality, quantity and depth of aquifers. The quality of water is mainly saline.

Intensive use of tube wells for irrigation, groundwater withdrawals have exceeded recharge. As a result

of continuous overdraft the water table has declined steeply and many open wells have become dry. This has resulted in the deterioration of ground water

quality in inland and coastal areas. In the coastal areas, fresh water tables are depleted resulting in seawater intrusion.

On the other hand surface water bodies are neglected. They are silted, covered by weeds, *Prosopis Juliflora* and the waste weirs are more or less in useless condition. With this their capacity has drastically reduced. These water bodies nonetheless in use for a limited period by community for domestic as well as supplementary irrigation. As a result they are in a position to serve only for few months in a year against their compatibility to serve round the year. Though statisticians believe that their capacity is limited due to population growth, they can still play vital role in driving away the water scarcity once renovated.

Potential water availability data¹

- Total area of Kutch region is: 45,652 Square Kilometers
- Total catchment in Kachchh: 11,663 Square Kilometers
- Total rainfall: 3800 MCM
- Average annual rainfall: 326mm
- Total runoff:
- At 50% dependability: 648 MCM/year
- At 60% dependability: 424 MCM/ year
- At 75% dependability: 206 MCM/ year
- Total human population of the area: 1582759 (Census 2001)

Thus, if the sources of water are managed and natural water is conserved, the problem of domestic water can be solved to great extent.

2. Rapar block of Kachchh: (Study Area)

Administratively Rapar block of Kachchh is one of the most marginalized regions. Many parts of Rapar fall under rain shadow zones and water scarcity is one of the most dreaded issues across villages. Desertification, salinity ingress, ground water over draft, neglected surface water bodies and increase in fluoride content are some of the water related concerns of Rapar. Following table shown land use pattern.

Land use pattern

Table-1

Sr. No.	Particulars	Rapar
1	No. of villages	97
2	Total Geographical area	2,972 sq.km
3	Forest Area	227 sq.km
4	Unirrigated agriculture	1,335 sq.km
5	Area under irrigation	121 sq.km
6	Culturable waste	289 sq.km
7	Area not available for cultivation	1,060 sq.km

The process of desertification now engulfed Khadir that was once a very prosperous area. It has become a desert island. The soil erosion in Khadir, Rapar and parts of Bhachau is also very high.

3. Water Resource status

Community depend on multiple sources for drinking water. According to 1991 census, out of 97 villages, more than 85 villages have at least two sources of drinking water, while about 57 have stand posts in the villages. Condition on the ground in 2001 suggests that many of the villages have stand posts, piped water supply schemes, but very few villages actually get drinking water. There is significant increase in dependency over piped water supply, as it is perceived that water availability becomes certain. In the last three years, disasters like cyclone, droughts and earthquake have worsened the situation. Existing main and distribution lines were damaged in some parts and in others they were completely up-rooted. With this for the last couple of years people are completely dependent on supply by 'Tankers'.

Analysis of hourly rainfall in Rapar shows, rainfall average is only 232 mm/year. Maximum rainfall in a day since 1983 is 124 mm/day, while maximum rainfall intensity is 43.5 mm/hr. Out of 13 years (for which hourly rainfall data is available) 7 years yearly rainfall is below average. On an average there are only

9 rainy days (rainfall > 5mm/day). Though there are multiple sources for drinking water, most of the local sources depend on 'localised' precipitation rates. There are high levels of uncertainties involved in rain fall pattern and intensity. Under such conditions it is natural to depend on multiple sources for water conservation.

However benefit of new technologies for localised water harvesting are not explored fully. Though *viridas* and wells are dependable sources to an extent, in consecutive drought years such sources generally remain dry. Hence there is need to improve these local resources to serve scarcity periods.

4. Scarcity of water and its availability in Rapar

The socio-economic structure of the society is largely based on the caste system. People who are socially and economically backward are by and large from lower caste. In case of drought, they are the most vulnerable, as they neither have money to purchase water from outside, nor do they get any livelihood opportunities. The only option for them is to migrate to other regions.

Drinking water definitely needs special treatment for the very basic role that it plays in human society. It should be treated as separate entity in water resource planning not only because of its critical relevance to the life support systems but also because the current management practices carry significant negative impact on its status.

Current rate of per capita supply (actual) of drinking water through piped network is below 40 liters. Even if the amount of water supply is increased, its distribution and related problems need to be addressed thoroughly.

Classic case of Khirai village: Stand posts

- Water pressure is perennially low resulting in insufficient supplies.
- The water is supplied on alternate days. Hence the supply is on every 48 hours.
- It is supplied for half an hour causing high social tension while fetching water. (Root cause of 'water deaths' in villages).
- The time of water release on the alternative day is often not fixed. This creates panic in the village when released.
- If you could not fetch water on that day your turn will be after three days or you have to depend on other source.

For example, Deshalpar village is totally dependent on community well that is near the village. Drinking water is available through out the year. Khirai villagers face uncertainty in water supply though connected with pipeline network. The case is classic and you find such cases in every second village of Kachchh. Vanoivandh village also suffers with water supply related issues. Women say 'Tankers and pipeline are not reliable source here'. Villagers say that even if they lodge a complaint at Bhachau distribution office the situation does not improve. They say 'the supply remains regular for a week after lodging the complaint but sooner it retains its originality'. Water tankers too follow the suit.

Lakhagardh is also connected with pipeline network and free from supply related issues. Sukhpar has a well and village pond. In monsoon village pond gets submerged. At that time women fetch water from well located in far off farms. Here women said, as the drinking water well is located in the middle of pond, they walk long distance for drinking water from July to September. By October, the pond generally gets dried up and they again access well.

Table-2 indicates that none of the study villages have sustainable drinking water systems. Though there are village tanks and drinking water wells, they are not fool proof. However the local water resource systems are in control of village. Where as the centralised system is controlled externally and women have lesser control over the availability. This is evident in the case of Vanoivandh. On the other hand as in case of Lakhagarh, the marginalized community women travel far off places to fetch water when compared to her counterparts in other caste groups. This discrimination though not louder, is apparent and such inequities exist in locally managed water resource systems.

Water Resources in study villages of Rapar: Year 2003

Table-2

Villages	Source of water				
	Well	Pond	Bore	Tanker	Pipeline
Vanoivandh		✓ Not used for drinking	✓ Bore located in farm walk 3 Km to fetch water	✓ Supply not reliable (2-3 times a week)	✓
Khirai				✓ Supply not reliable (2-3 times a week)	✓ Low pressure & frequent electricity failure resulting in water scarcity
Deshalpar	✓	✓ Not used for drinking		✓ Supply of water by tankers is not reliable (2-3 times a week)	
Sukhpar	✓ In monsoon wells are submerged	✓ Not used for drinking	✓ Water fetched from bores located in farm in monsoon (3-4 kilometers)		
Lakhagardh	✓	✓ Percolation tank water stay on surface for short period (only 2 months in monsoon)	✓		✓ Water scarcity among Bharvad and Harijan communities.

Seasonal Calendar of Water in Study villages of Rapar: Year 2003.

Table 3

Village	Season		
	Summer	Winter	Monsoon
Vanoivandh	Unreliable supply of water from tankers, severe drinking water crisis.	Irregular supply of drinking water by tanker and pipelines	Largely depends on the rains, the severity is not so high
Khirai	Water supply from pipeline, low water pressure, irregular (alternate days for half an hour)	Irregular supply of drinking water by pipelines	Water problem not so severe
Deshalpar	Well and tanker facility but not able to cater the requirement.	Irregular supply of drinking water by tankers	Water shortage is comparatively less severe
Sukhpar	Water is available in community well situated in the basin of pond (largely depends on the recharging)	Water is available in community well situated in the basin of pond	As community well gets submerged in monsoon, women fetch water from farm wells.
Lakhagardh	Problem of electricity, Wells are dried up in summer	Water problem is not so severe	Water shortage is comparatively less severe

State sponsored schemes for drinking water supply by GWSSB are based on piecemeal approach rather a comprehensive strategy. These schemes suffer from technical, managerial as well as institutional problems and being viewed as environmentally un-sustainable besides having higher financial cost. What is more important is that the system is dependence inducing (Amita Shah GIDR).

Revival of the traditional water harvesting systems (Virdas, Talavs, Step wells etc.) are time and again tested and promoted by local initiatives as alternatives to costly and mis-managed systems. However their inability to meet the ever-increasing drinking water requirement (human and livestock) is sited as their biggest limitation. They are considered as success stories in isolation.

Break down of traditional institutional mechanism in water management is also perceived as another hurdle in the process. Though piped drinking water networks found to be easy option to fetch water compared to wells and village ponds, this system of management led to complete neglect of community resources. Water might improve if the traditional water harvesting structures reserved for supplying drinking water.

At present, most of these structures serve multipurpose users like washing cloths, cattle cleaning, drinking water, bathing etc. As a result, water quality deteriorated. This occurred as the community shifted to stand posts from village ponds and wells. The local community water bodies are used more for secondary purposes and never maintained.

One cannot ignore the fact that the precipitation in Kachchh is very less and hence the water bodies never received enough water. Added to this, high evapro-transpiration rates and inappropriate use of water bodies resulted in perpetual water scarcity in villages. It is naïve to blame the failure of system alone. Rapid changes in life style and technological advancement did influence water needs.

The same technologies could be put to use to conserve water where it falls '*in situ*'. These alternatives for water conservation are traditional as well as re-invented and designed to address the water scarcity on a larger canvas. What seems to be needed is to make people aware that they can solve the problems on their own by taking initiatives.

Roof top rainwater harvesting is used in Gujarat for centuries and is also now promoted by GWSSB and by other development agencies. It is redesigned, experimented and widely accepted. Community based mechanism should be evolved with such technologies that are transformed to suit the changing society.



Chapter 4

1. Impact of scarcity on women

The predominant division in water supply, domestic and productive is suicidal. Gender disparities are strikingly visible. The domestic water supply and management is though seen as 'women's' domain, seldom they are involved in its management decisions. Though they contribute significantly in activities related to productive water use, there too their role is insignificant in management. Women in Kachchh are equal contributors in economic sphere of family. This is evident in many studies. But their status in society is limited as 'user' but not 'manager'.

Kutchh is a multi-caste area, with social and economic inequity among these different castes. There are strong inter-caste conflicts. The major castes, described as higher in social status, are *Darbars*, *Patels*, *Ahirs*, *Rabaris* and *Ghadwi*, while the disadvantaged section includes *Kolis*, *Harijans* and *Muslims*. Both *Darbars* and *Gadhvi* men are considered to be the local bullies and the most aggressive. There are inter-caste conflicts between these two higher castes and the disadvantaged castes, leading even to murders on certain occasions.

Patels, *Rabaris* and *Ahirs* enjoy high status and do not get involved much in conflicts. Kutch has a sizeable scheduled caste, which is 11% of the districts total population. Some of major Scheduled castes are, *Bhanbhi(chamar)*, *Bhangi*, *Garoda*, *Dhed* and *Maghwal*.

The literacy rate of Kutch is much lower than the state average, which is 61.29% for Gujarat and 52.75% for Kutch. Within this the literacy rate for SC is just 35.40% and rate is still lower for SC women, which is 6.06%, this is among the lowest in the state. *Harijans* are considered to be the most disadvantaged group from social perspective. They are untouchables even *Kolis* practice this with them. They are neither allowed to enter houses nor temples by the higher castes. The next socially disadvantaged group is of *Kolis*. They migrate for about 6-7 months a year. The total population of ST in Kutch is 6.95% and most of them

belong to *Koli* community whose main occupation is salt manufacture. The literacy rates among them are very dismal, 10.39% among male and 1.44% among female.

2. Condition Of women

It is interesting to see that the women of the most empowered community i.e. *Darbars* are equally disadvantaged as they have no access to resources and no control. They are not allowed to go out of their houses and no exposure to society in general. In contrast, *Rabari / Maldhari* women are confident and stronger as they handle the household as well as external environment. Men folk being away on animal husbandry it is women who often takes care of entire family. The *Kolis* and *Harijan* women do have some say in decision making at family level. But at community decision-making level it is generally men who occupy all the seats.

The frequent and continuous droughts mean scarcity of food, fodder and fuel. Women usually are sufferers for these shortages. Women have to walk a long distance to collect these essentials. The chronic water shortage puts an added burden on them of having to fetch it from long distances. Kutch is also an area where traditionally female infanticide was practiced. This practice is called '*doodh piti*' and female infants are drowned in hot milk.

Among *Maldhari* women, when men migrate for wages or with herds, those who stay at home manage the children and the aged as well as the animals left behind and also have to carry the responsibility of their farms. When they migrate along with male they too work as casual labourers or walk with the herd walk all day, cook, tend to the animals and stay awake to watch over the animals when the men folk sleep.

Most commonly ignored aspect of water scarcity is its impact on based public health. The risks due water scarcity and poor sanitation should be identified and addressed by village committees and members. Women's health is highly impacted due to water related sanitation and hygiene issues. Public health awareness and training on issues of clean drinking water, its storage, usage,

waste disposal, sanitation, drainage, and maintenance of water supply and storage systems is needed. Such efforts should be adapted as part of comprehensive water conservation and management program. And should not be treated as dovetailed activities.

3. Why women are vulnerable

Geographically this region has a very harsh conditions and this has implications on status of women as they have to bear the brunt of vagaries such as shortage of water, food, and fodder. These conditions put extra pressure on women. When migrates with their men she is not only responsible for all the family chores but she works as casual worker along with her husband. Women do not have access to education. Girls are not encouraged to study and are preferred to put up at home and help their mothers.

Their health conditions usually are very poor as they do not get medical care but they do not get enough to eat. They are the last in the families to get food after every family having food and usually it happens that there is no food or not enough food remaining for her.

Social, economical and cultural factors influence the status of women right from her childhood. Six-year-old child is taught to fetch water for her family along with her mother where as her brother playing with peers. These over the years led to a mental condition where women cannot even think of their rightful status.

4. Increase in work load of women

Women work at home, share work with husband at farm or carry wage labour. Her work involves fetching water, collecting firewood, taking care of the family (including husband, parents and children). For doing all this, her day start as early in the morning at 3 'o' clock, with fetching water, feeding the cattle, preparing food. Not only that, she has to commute up to the working place by walk. It is observed that on an average women in Rapar put up 18 hours of labour per day in all the above activities. These amounts to more than two

working days in 24 hours. The condition is worst in lower caste community women as they compulsorily put up wage labour to feed her family.

Table 4.1

Ethnic group	Working Hours (<i>in hours</i>)						
	8	9	10	11	12	13	14
Patel			6	3	7		
Harijjan			3	4	1		
Rabari			1	2	1		2
Koli	1		6	9	1		2
Muslim		1	3				
Ahir			2	6	3		
Others			3	6			
Darbar	1						
Total	2	1	24	30	13		4
Percentage	3	1	32	41	18		5

Against to the common belief that a working day is around 8 hours, Table 4.1 reflects that the average working day is around 11 hours for women in Rapar. The daily wage rate is around Rs.50. About 91% women put up 10 to 12 hours of work when they are on daily wages. About 5 percent put up even 14 hours of work. When compared to men what they earn is too merger against what they labour.

Table – 4.1A

Ethnic Group	Distance traveled by women (%) for work (KMs)		
	More than 3	2 to 3	1 to 2
Patel	44	13	44
Harijjan	75	13	13
Rebari	67	17	17
Koli	53	11	37
Muslim	0	0	100
Ahir	91	9	0
Others	78	22	0
Darbar	0	0	100

Women from lower caste communities travel greater distance to fetch labour. Upper caste communities manage to gain employment locally, where as lower caste communities travel far off places in search of labour. This puts up higher pressure among women to meet their daily chore in the morning and also walk longer distance for labour. About 60% women still travel more than 3 kilometres to gain labour.

5. Distance traveled to fetch water for the family

Against the popular belief that increased sources of water has reduced the burden on women to fetch water, 93% women in Rapar still travel 1 to 2 kilometers to fetch water. About 5 percent women travel more than 3 kilo meters to fetch water. This is higher among *Muslim* and other community women.

Table 4.2

Distance traveled for fetching drinking water (Kms.)	Percentage
0-1	50.0
1 – 2	43.2
2 – 3	1.4
More than 3	5.4

Women travel long distance to fetch water from irrigation bore wells. Their number is also limited. Most of the women travel 2 to 3 km. It takes around 1 to 2 hours per trip to fetch water every day for 365 days. It is not just once in a day but with the family size and requirement frequency of fetching water increases. In summers they spend more than 6 hours per day in fetching water.

6. Time consumed in fetching water

Table 4.3

Time taken to fetch water in normal days (hours)	Percentage
0-1	85.1
1.-2	14.9

Table 4.3A

Number of time going for fetching water (in hours)	Percentage
1 – 2	59.5
3 – 4	28.4
more than 4 times	12.2

More than 59 percent women carry 1 to 2 trips to fetch water for the family. About 28 percent women carry 3 to 4 visits. At the rate of 1 to 2 hours per visit, this amounts to 3 to 6 hours in a day to fetch water alone. To compensate this time to adjust other activities women are generally on the run to catch up with daily chore.

7. Time spent on daily Chores

About 90% women wake up between 3 to 5 'o' clock in the morning to attend their daily chore. This they carry alone. This indicates that around 90% of women starts the day between 3 to 5 in the morning and ends up around 9 to 10 in the evening resulting in 18 hours of work. As women have to cook for her family and take care of children, aged and feed the livestock in the evening, their day remains totally engaged. Resulting in no time for participating in any community activities or even in decision making at family level. This puts men in complete advantage to take many decisions on their behalf. Refer to table 6 and 6A.

Table 4.4

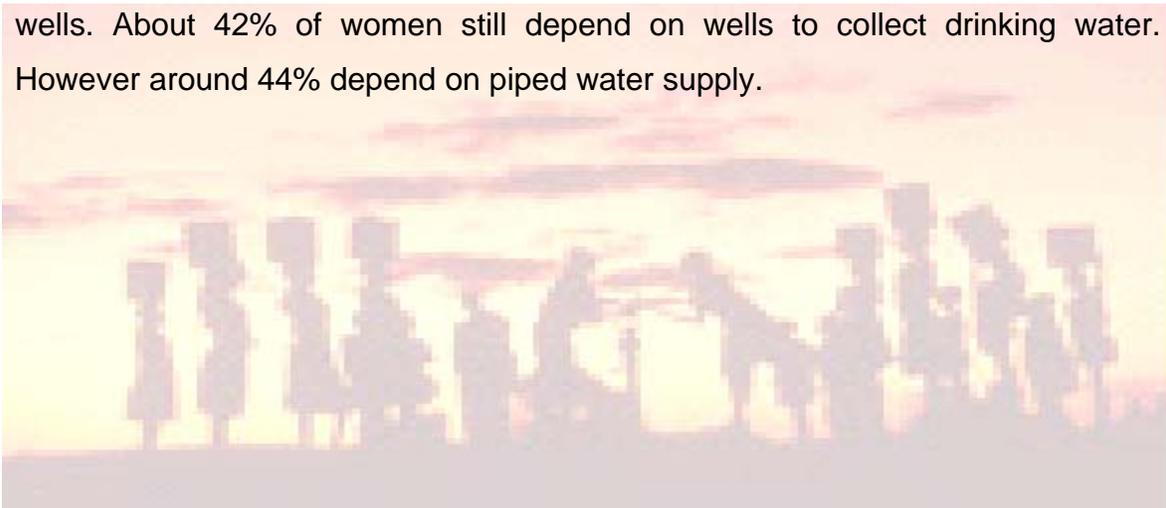
Time of wake up and starting of daily chore				
Cast	3:00-5:00	5:00-7:00	7:00-9:00	after 9:00
Patel	16			
Harijjan	8			
Rabari	6			
Koli	17	2		
Muslim	3		1	
Ahir	11			
Darbar			1	
Others	6	3		

Table 4.4A

Time to wake up and starting of daily chore	Percentage
3.00 – 5.00	90.5
5.00 – 7.00	6.8
7.00 – 9.00	2.7
after 9.00	0.0

8. Drinking water sources and dependence.

In *Khirai* and *Lakhagardh* people use pipeline as a major source of drinking water. In *Deshalpar* and *Sukhpar* major source of drinking water is community well. *Vanoivandh* is totally dependent on tankers, pipeline and irrigation bore wells. About 42% of women still depend on wells to collect drinking water. However around 44% depend on piped water supply.



Source of Drinking water

Table 4.5

Source	Percentage	Impact
Well	41.9	Due to sub-surface salinity the source can not be over exploited.
Pond	0.0	Earlier ponds are regularly maintained by community efforts and water is used for drinking purpose. Well are only used as contingency when ponds get dried up in summer. But now the resource is neglected due to dependency on piped water supply, which is now not reliable.
Bore	4.1	Generally located in farms, 3 to 4 kms away from settlements. High TDS levels found in deep bores, where water is not recommended for drinking purpose.
Tanker	9.5	A temporary arrangement to address scarcity periods has become a permanent feature. As tanker fetch water again from wells, where the source is limited and hence irregular in supply.
Pipeline	44.6	Water supplied from distant places with high infrastructure cost. Though the source is in abundance it is seldom regular, due to damaged net- work, social issues and poor electricity availability to lift water and supply.

9. Shared responsibility in fetching water

The social system since ages has imbibed that fetching water is a wholesome responsibility of women of the family. Only in *Darbars* this custom is not followed as due to social restriction in the community, where it's considered to the duty of the male of the family. But, in other communities under certain specific circumstances (viz., during the illness of the women) the male will fetch water. In most of the case women are helped by her daughter in the family.

Table 4.6

Work Sharing (fetching water)	Percentage
No one	13.5
Male	14.9
Daughter	70.3
Son	0.0
All	1.4

Response of men in fetching water

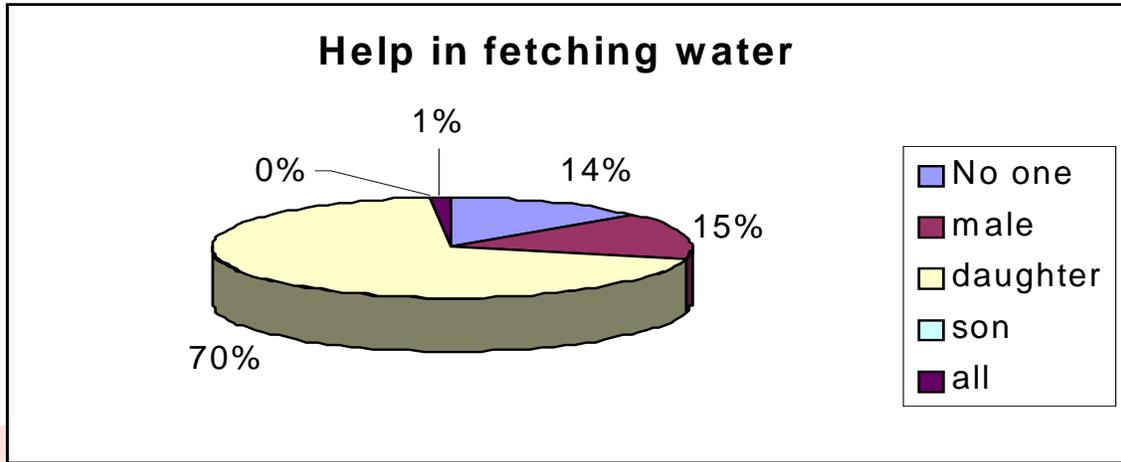
About 23% women felt that men should not fetch water for the family and said "it is not possible". Some says they though they feel good if men do so but found it is impossible. The responses indicate the strong cultural frame work with in which women are compelled to fetch water and men do not share the job.

Table 4.6A

Feeling of women, regarding fetching water by male	
cant be possible	12
feels good but not possible	6
not their work	11
male are fetching water	1
no feeling	5
yes they do	1
Its our responsibility	1
help us when we are ill	1
we have social restriction not to go out	1

Girl child fetching water: a social norm

Figure 4.1



The social norms suggest “the duty of the female to fetch water”. A girl child starts accompanying her mother to fetch water at the tender age of 5-8 years. Thus her responsibility to serve family begins at a tender age. The observation suggests that a girl child of 5 to 8 years fetches around 5 to 6 liters of water a day irrespective of their capacity. This leads to increasing workload on the girl child and also depriving her from enjoying the innocence of her age. The girl is devoid of education and other facilities that a male child enjoys.

Table 4.7

Starting age of daughter to fetch water	Percentage
5 – 8	49.0
8 and above	51.0

Mothers generally did not find it good to take her daughter for fetching water. But about 28% women felt its normal to take her daughter for fetching water. They said that this is a practice that is continued for centuries and would continue. However about 71% women felt that they do not find it OK to take her daughter but helpless.

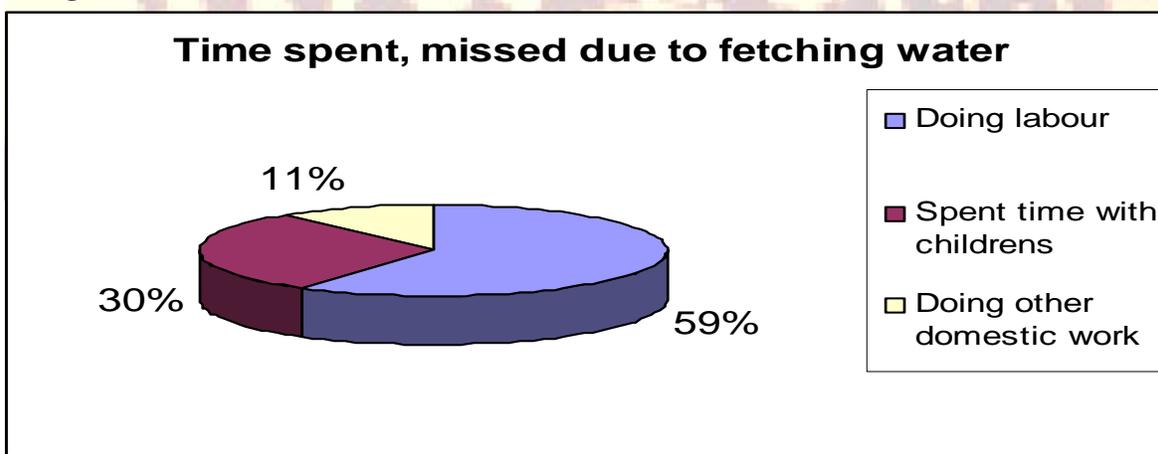
Table 4.7A

Mother feeling about daughter fetching water	Percentage
Felt normal to carry girl child to fetch water for family	28.8
Not felt good about involving girl child to fetch water	71.2

10. Use of spare time by women

Fetching water consumes a lot of time for the women. Response were sought from women regarding utilising the extra time if saved out of fetching water. It is evident that women spend that extra time on earning wage for her family. This lead to increase the workload of women. Woman said that they would like to spend her time saved out of fetching water for economic activity. This time could be spent on carrying labour followed by giving more attention to children and doing the household chores. This indicates that her work load did not reduce with increased water supply facilities. At the same time it puts her as one of the main bread winner of the family.

Figure-2



Fetching water on public place is a group activity. A place where women got time to share her feelings, and know what happening each others family. 93 % women says it help in social bonding.

Table 4.8

Fetching water helps in social bonding	Percentage
Yes	93.1
No	6.9

11. Women decision making status at family and community level:

Table 4.9

Caste	Decisions					
	House hold			Community		
	Male	Female	Both	Male	Female	Both
Patel	8	7	1	13	1	2
Harijjan	4	2	2	3	3	2
Rabari	1	3	2	3	1	2
Koli	2	13	4	4	8	7
Muslim		4		1	4	
Ahir	3	6	2	6	1	4
Darbars	1			1		
Others	4	1	4	5	1	3
	23	36	15	36	19	20

The above table suggests the decision making at family level and community level. If analyzed keeping in view the kind of work the women of the community does it can be inferred that *Patel* and *Ahir* caste women play major role in family level decision making. *Koli* and *Ahir* women also involved in decision making at household level as they are also bread winners. But at the same time *Patel* women have limited scope in decision at community level when compared to their counter parts from *Koli* and *Ahir* community. Reason being the tangible returns to household by *Koli* women and also they are exposed to the external environment which is not the case with the *Patel* women.

12. Contentious issues and Key findings.

- There is increase in dependency over piped water supply but women have no say in its management and their drudgery has not reduced.
- Mostly women perceived that fetching water and other household activity is their domain and men are not made to do such activities. Only in

negligible percentage of cases men fetch water for the family. In case when women fall sick. In Darbar community women are not allowed to fetch water. She remains in close doors for her life. In 80% cases girl child is trained to fetch water at a tender age of 6 years and her male counterpart is not trained.

- Due to excessive work load women spend too less time for themselves.
- Though women have a say in decision making at family level, they have absolutely no say at community level. Where NGOs are working, their level of awareness is higher about issues and developments related to water resources with in the village.
- Women travel as far as 4 kilometres to fetch water in scarcity periods even in villages where piped water network exist. Supply through piped water network has not reduced the time spent by women to fetch water due to supply irregularities, low pressure of supply and frequent short supplies.

13. Engendering water management strategies

There is need for reviving water management strategies. Gender oriented approaches need to be adapted at grass roots level. Though many programs adopt such standards at the program level, their do not get transformed at grassroots. As a result they carry lesser impact on the status and condition of women.

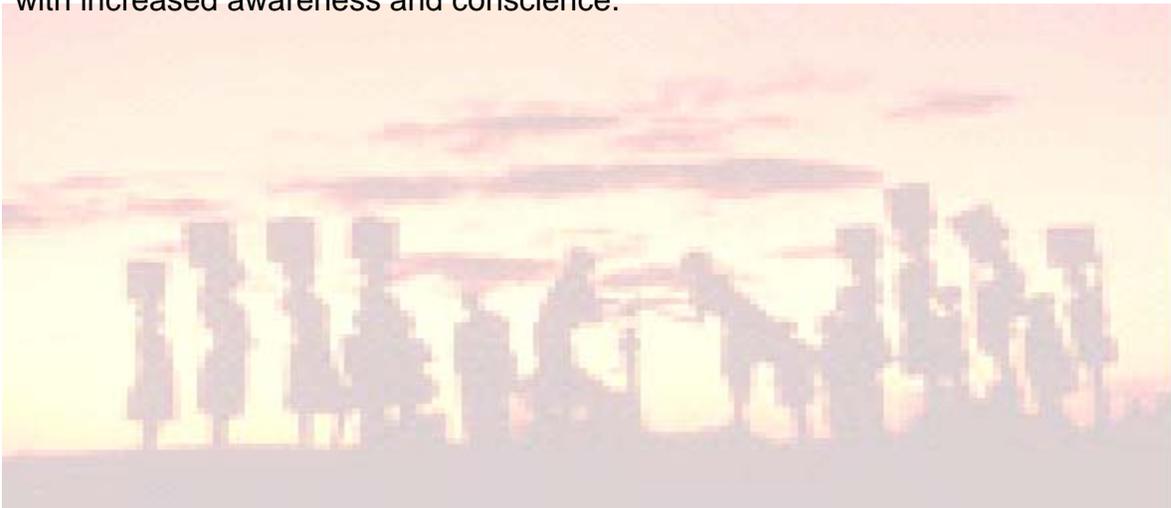
For example, the piped water supply management should understand how its strategies should reduce drudgery of women in fetching water. How the time spent on water collection could actually reduce? How women's participation in its management at community level could increase?

Similarly the comprehensive water augmentation, supply and management strategies should ensure gender equity. There should be enough provisions to involve women at every stage of program management. Women can be easily

organised to make representations to the government, involve the community in the effort to get water through water management.

There is need for gender sensitive program management framework at institutional level to ensure changes in 'practices' at community level. Sensitisation, institutional frame works, capacity building and awareness activities should be intensified. The main assumptions of gender system should be to take biological differences to be the criterion for male female role allocation, access to resources and ideologically determined power position.

The study reveals that the level of awareness among community members is far below the level of acceptance. Hence any social change could only be successful with increased awareness and conscience.



Role	Impact on women	Effect of water and Water related interventions	Importance of women participation	Key interventions	
				Facilitation	Empowerment
Fetching and storing water	<p>Heavy work load, physical stress</p> <p>Health problems</p>	<p>Lot of time is wasted in fetching and storing, not able to do productive role</p> <p>Conflict over common source of water</p>	<p>Primary carriers of water</p> <p>She understands the quality and quantity of water required for her family</p> <p>She has a better idea about time and distance to fetch water</p>	<p>Easy Access of drinking water in terms of distance, time taken to fetch, equity issue over water</p>	<p>Improve the status of women by control on water</p> <p>Gender oriented approaches need to be adapted by organisations at grass roots level</p> <p>Supply and management strategies should ensure gender participation and equity</p>
Daily Household work	<p>Heavy work load, physical stress,</p> <p>Health problems,</p> <p>Not exposed to the external environment</p>	<p>Presence of women in public will expose them from external environment</p> <p>Taking part in the decisions taken at community level</p>	<p>Knows local sources of water, location, availability of water through out the year, problems related to water</p>	<p>Providing easy access and quality of water makes there life easy</p> <p>Helps in reducing the morbidity rate</p> <p>Improve living condition</p>	<p>Sensitization of men and women towards their responsibility</p> <p>Capacity building and awareness activities should be intensified, participate in the water related intervention</p>
Supporting livelihoods of her family	<p>Responsibility of fetching and storing water</p> <p>Heavy work load of doing work at home</p> <p>Due to physical and mental stress</p>	<p>Time saved by easy access to water can be used for earning livelihoods</p> <p>Improve her health status</p>	<p>Participation can ensure there working hours, availability of water at a given time</p>	<p>Easy Access of water in terms of distance, time taken to fetch.</p> <p>Ensure of there working hours and availability.</p> <p>Time saved due to easy access can be utilize for earning livelihoods</p>	<p>Get exposed to external environment</p> <p>Role of women in making decisions in community will improves there status</p> <p>Get recognition in public</p>

	it affects their Health				
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Matrix 4.10 *Synthesis of women status and key interventions*



Annexure 1

Questionnaire for Women and water

1. General Information

1.1 Name of Village

1.2 Panchayat

1.3 Name of Respondent (Head of Household)

1.4 Age

1.5 Sex:

Sr. no	Name	Relationship	Age	Sex	Occupation	Skills	Education	Source of Income	Income / source / Annually
1									
2									
3									
4									
5									
6									
7									
8									

(Note: To analyze the size and gender mix of the household, age distribution among family, how many members of working age, role, skills, education level of individual members of household)

1.6 When you are going for work and came back?

1.7 How much distance you have to travel?

1.8 When you wake up and prepare food for family?

1.9 When and where are you taking bath and do domestic work?

2. Requirement of water

	How you fetch water?	Distance travelled	Time taken
Drinking water			
Bath			
Domestic purpose			

3. Is any body help you in fetching water? How many days you go for fetch water?

(Male members of family help you in fetching water if yes, When)

4. When male fetching water how they go?

5. Any organisation did you know had done intervention in your village for access to and control over water management?

6. How many days you go for fetch water and how many times man go for fetching water?

7. Whose work it is of fetching water from long distance?
(Distinct in days male and female goes for fetching water)

8 Feeling, importance of water:

8.1 If some one says you can get water at your door step for 24 hours, how do you feel?

8.2 If male member of family is having responsibility of fetching water, how do feel?

8.3 Why you fetch water, is it a part of your duty or you enjoying it?

8.4 Did you feel any burden of fetching water, if yes then this access time where you will spent?

8.5 Any time did you miss because of the burden of fetching water?

9 Role and responsibility

9.1 What do men and women do (Productive/Reproductive/Community participation/Community politics)?

	Productive	Reproductive	Community participation	Community politics
Men				
Women				

(Note: On the basis of location, pattern of mobility - frequency, distance and purpose of mobility, daily and seasonal pattern)

10. Power and decision making

What decision making do men and/or women participate in?

Decisions	Household level	Community level	Constraints
1.			
2.			

(Note: Understanding decision making on household level like decision on household expenditure, community level like decision on the management of community resource by gender)

11. How women define their status in family and in community?



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