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Gender Dimensions of Water Scarcity

Result of a Study in “No-Source” Villages of
Four Districts in Gujarat



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**GENDER DIMENSION OF WATER SCARCITY: RESULT OF
A STUDY IN 'NO-SOURCE' VILLAGES OF FOUR
DISTRICTS IN GUJARAT**

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**Gender Dimension Of Water Scarcity:
Result Of A Study In 'No Source' Villages Of Four Districts Of Gujarat**

Jayshree Sonny

Introduction

Gujarat experiences drought every third year. Despite five decades of planning and more than a decade of "Drinking Water Missions" there are many "No source" villages and their number is growing constantly. Most of Gujarat's 18000 villages had own reliable drinking water source when the state was carved out of the Bombay state in 1960. Only 1500 villages were without adequate source of drinking water. But today 15000 villages of North Gujarat, Saurashtra and Kutch regions are facing acute water shortage. According to the records of the state water supply and Sewage Board, 700 villages in Bhavnagar district, over five hundred villages in the Amreli and Jamnagar regions and more than three hundred villages in Kutch, Sabarkantha and Surendranagar districts are in need of immediate redressal of the problem of water shortage. As per the official record, 85% of its underground water has already been extracted and areas like North Gujarat, and Saurashtra have been declared as 'Dark Zones'.

How did this water crisis emerge? The current water crisis of Gujarat highlights the hydrological climate and topographical diversity of the state causing skewed distribution of water across space and time. Until 1960, Gujarat was heavily dependent, on rainwater for its agriculture. After 1970, water demand for irrigation accelerated. In the absence of perennial rivers, North Gujarat, Kutch and Saurashtra regions started meeting their water demand for irrigation from underground water. This led to over use of ground water over a period of time. Of course over use of underground water has been on the increase at the national level too, but Gujarat is way ahead. Gujarat also increased its water demand by consuming and in the process polluted a large amount of fresh and sweet water. Industrialisation and urbanisation also played a role for increasing water consumption. Rising population, irrigation, industrialisation, and urbanisation are major water users of underground water from deep aquifers resulting in the drying up of shallow aquifers. The systematic development of water resources for irrigation since independence has led to a severe imbalance in the distribution of water causing scarcity in several parts of the state.

A significant aspect of the water scarcity is that the burden of bringing water from distant sources has fallen on women, irrespective of age. Women in several rural and even in urban households have to face hardships because of lack of easy access to water for cooking and other household purposes. It is clear that ensuring access to safe drinking water to all has not been a priority in our planning.

Water and Women

Women, as the prime water carriers, managers, end-users and family health educators are directly affected by availability or non-availability of water. Women and young girls often spent five to six hours a day for water fetching from distance place. They are also responsible for preparing and cooking food, cleaning utensils, washing

clothes, child rearing and cattle. By virtue of their domestic functions, they are in constant contact with water, and therefore women have chances of being affected. Particularly in developing and underdeveloped countries women's role is well established as a main water supplier. Women and girl and child often spent five to six hours a day for water fetching from distance place and come in close contact with water. When the distance is even greater, animal power or auto vehicles are put to use for transporting water and particularly when men manage water collection, but not when the distance is covered by foot and the water is carried only by women. Such hardships adversely affect her time, energy mental hygiene, her status and her development.

During recent decades, awareness has been increased for rational use of water resources all over the world. The United Nations General Assembly at its 1980 session proclaimed the period 1981-1990 as the "International Drinking Water Supply and Sanitation Decade", during which member states were to assume a commitment to improve substantially the standards and levels of services of water supply and sanitation by the year 1990. At the Rio-De-Janeiro summit of 1992 on "Environment and Development" the UN Members also agreed to improve different environmental aspects on the global agenda. The Earth Summit in 1992 also emphasised sustainable development by declaring Agenda – 21 as the plan of action for sustainable development for the twenty-first century. This plan included a separate chapter on "Women".

During the last decade the concept of significance of women in relation to the sustainable development of natural resources has received much attention worldwide. After the Summit it is widely accepted that, the economic development exploited not only the poor but women and nature too. The Earth summit also raised the point of role of women in "Environment and Development" and discussed the absence of women in development process. "Despite the demographic majority and substantive work performance at global level, women continued to be considered as a marginal components of the world economy. This devaluation of her work has resulted in devaluation of her status also, which led to practice such as gender discrimination in food and wages" (Krishna Patel, 1995).

From this discussion two issues have emerged: "women" and "environment", which are affected negatively by development process. The joining of both can produce sustainable development for all. Today both these exploited components have merged into what has come to be called as "Eco-Feminism".

As far as specific topic of water is concerned, the relevance of women has become apparent. As the economic value of water has increased, due to shortage, the economic return to investing in domestic water supplies is undervalued because women are located in the traditionally invisible domestic area and insufficient quantity and quality of water for domestic use are also borne by women. These costs are (1) more time in water collection, (2) less water for drinking and other purposes, (3) loss of income from water intensive activities, (4) poor quality of water for domestic use which increase incidents of diseases, (5) loss of educational opportunities. These are the costs of development paid by women at present in some regions, particularly drought prone areas like Gujarat. Changing practices of resource management have similarly affected men and women but the inputs are different in

terms of physical labour as well as in terms of their status within the home and society. The close association between women and natural resources is more valid and primary in rural context, while urban women are not conscious about ecological issues.

Therefore the subject of this paper leads to a discussion of one of the most important issues affecting our lives – depleting of water resource and emerging water scarcity. The aim of this study is to understand the relationship between water resources and women at micro level and in detail.

Objectives

The aim of this paper is to find out how water scarcity affects the status of women in the family as well as society. Questions of our inquiry are

- How has water scarcity emerged?
- How are water resources and women related?
- How does the condition of water resources affect women's life in terms of her daily routine, her social interaction, her economic role, her health and her educational development?

Study Area

As part of the project “Water and People” (with special reference to women's emancipation), carried out by Centre for Social Studies, Surat, this researcher had an opportunity to visit the interior drought prone areas of four districts of Gujarat, namely, Ahmedabad, Amreli, Bhavnagar and Rajkot. The author of this paper stayed at all eight study villages and came in close contact with people, particularly the women. This paper is an out come of her field experience of the eight villages.

Condition of Water Resources

For this study, we have divided these villages into two groups in terms water resources and the condition thereof. First one is the average category; the second one is a worse category. At the time of our fieldwork January – June 2001 all villages except Praladgad of Bhavnagar district depended for their water requirement on an outside source, particularly Gujarat Government Water Supply and Sewage Board. As mentioned in table – 3, before drought and in normal days, these villages had their own source of water. No doubt, drought has already become a permanent phenomenon in north-Gujarat, Saurashtra and Kutch regions. Here, the purpose is to show that before drought every village had its own original source of water, which is now disappearing. According to the people, at that time, water could be fetched at the time convenient to them, although there was no tap connection available then. But after the disappearing of all water resources of the villages and entry of Government Water Supply and Sewage Board, people have to collect water according the convenience of the water supplier, which is extremely inconvenient. Experience shows that any welfare or beneficiary schemes had lose their significance when typical government body enters the scene. Though water is the first and prime need of people, the work schedule of the whole day totally depends on water availability, no regularity in arrival of water tankers was found in villages. They have only one excuse of delaying and cancellation of water tanker that is failure of power supply.

In a village like Otaria, during a normal monsoon, with people's participation, the leader of the village tried to fill up all the three ponds, which were disappearing, and due to effective local contact with government department, water supply to the public Hoj was quite regular. However, the amount of supply and quality of water were not satisfactory. Moreover out of 215 households, 80 households have their own under ground water tank to store the rain water was provided by government at subsidised rates. People use this water for drinking and cooking purpose. Some families of Lauva Patel, Rajput and Koli have this facility. In the absence of rainwater, people try to fill up the under ground water tank by purchasing water from Dholera, a nearby village. In fact, this village is a major wheat producer, called "Bhalia", which has brought prosperity to some people. At the time of our fieldwork, after two years of failed crops, some people could maintain their standard of living. Families of this group, purchase water from outside the village. The real hardship was faced by marginal farmers, landless labourers, SCs of the village.

Sangasar village falls in the second that is worse category. In normal days the village pond used to be the main source of water. It was filled up by people themselves during monsoon. The pond water was enough for domestic consumption of entire village. But at the time of our fieldwork, the pond had dried and the source of water was the public Hoj, filled up by Water Supply and Sewage Board of government. Sangasar is a interior and remote village, away from Otaria to 10 km. Sangasar is not as lucky as Otaria in terms of getting water from the water supply Board. Water is made available, not according to the need and convenience of the villagers but that of the Board. Intervals of two-three days between consecutive water supply is common, and it is already accepted by people too. Here also, some big farmers of Koli, Lauva Patel and Rajput have built up underground water tanks. Real hardship is faced by other marginal and weaker groups who have no power to store or purchase water from outside the village. Women of this group always are in search of sources of water. Helpless people try to steal water from the nearby village Ontaria, creating tension between women of the two villages. Whenever, these groups of women meet, they start quarrelling on this issue. This has led to bitterness between the two groups.

Villages like Babapur and Dudhalabai of Amreli district were dependent on the water supply board of the government for its water requirement. In both the villages' water tankers come and people collect water from the tankers. The difference between the two villages, however, is, in the frequency of water supply. Moreover, in Babapur Sarvodaya Ashramshala has its own bore well, with reasonably satisfactory good level of water due to the efforts of Shree Gunvantbhai Desai. His knowledge about water recharging and farsightedness has led to conservation of some amount of water in their well. Sometimes people come and collect water from Ashramshala, too. Moreover the awareness of the people of this village forced the Water Supply Board to maintain the time and frequency, which is not happening in Dudhalibai village. This is why Dudhalibai is in a position worse than Babapur. In normal days, the bore well in Babapur is the main source of water while in Dudhalibai a hand pump is the main source of water. In both the villages, in normal days people have enough time for water collection, which was not the case during drought years, particularly at the time of our fieldwork.

In Bhavnagar district, Prahladgadhi village of Gadhda taluka comes in the average category of water condition, while Kanpar of Vallabhipur taluka falls in the worse category. In Prahladgadhi, river Kalubhar, a hand pump (public and private), and a bore well are the sources of water. At the time of our fieldwork river Kalubhar was dry and the level of under ground water of hand pump had also gone down making the hand pump dysfunctional. The only water source was a private bore well, but the water level in the bore well had a peculiar characteristic. All farms of Prahladgadhi are divided in north-south part of the village. Because of Kalubhar dam lying at north part, the bore well from in the north had good amount of water while the one in the south had not. The entire village was dependent on a private bore well for their drinking and other domestic water consumption. The owner of the borewell, who is a leader and the sarpanch of the village, so he allowed all people for their water demand. People have stated worshipping him. During our stay, we also experienced his kind heartness. Though all water sources had dried, people hardly felt as helpless as people in other villages. This condition places Prahladgadhi in the average category, which is totally different from another village of Bhavnagar district like Kanpar.

In Kanpar, the sources of water were four government wells, a public water tank provided by the water supply Board of Gujarat and 95 private bore wells in normal days. At the time of our field work, due to drought all water resources had disappeared, except the public water tank, and out of 95 private bore wells only twenty bore wells had some amount water; out of twenty bore wells, only five bore wells had substantial amount of water, which was available for only two-three hours a day on a distant farm. Here also, though the public water tank is the main source of water, the time and frequency of water tankers are not regular, which add to the hardship faced by the people.

Some villages of Rajkot also fall in the “No Source” village list. Virnagar and Chitaliya villages of Jasdan taluka come as samples of this study. As per our criteria Virnagar comes as an average village and Chitaliya comes as a worse village, in terms of water resources. In normal days, water supply in Virnagar was provided through taps from house to house by Water Works operated by the local Gram Panchayat itself. A private bore well was also at the farm. At the time of our field work the level of water works borewell had touched the rock level of the land and extraction of water by electric motor was already stopped. Water supply provided by the water supply Board was the only source of water. At the time of our fieldwork twenty tankers provided water instead of ten, which was the case earlier. By submitting a memorandum to the local and district level authorities and following a strong agitation by women group, the district and taluka level government bodies took some steps and increased the water tanker frequencies. Awareness of people forced the government authority to add to the number of water tankers. Of course twenty water tankers were not sufficient for the population. But Chitliya village, which is only five km away from Virnagar, does not fall in the average category. Its water condition places it in the worse category. In a normal situation too, this village has poor water availability. Only two three private bore wells were the source of water, which had dried up in drought years. At the time of our field work the water tanker was the only source of water. It is not necessary for water tanker supplier to come everyday. As a norm, the water tanker comes once a day at the interval of two-three days. This hardship creates serious tensions between the upper castes and SCs.

This is the condition of water resources of eight drought prone villages of Gujarat, which also come under Narmada Command area. What is the reason behind its water scarcity? A simple answer is mismanagement and indiscriminate use of water. Except Otaria and Sangasar, all other villages of this study have a bore well for irrigation, which is the major user of water in this area. This has created drinking water scarcity. Those, who utilise water for irrigation, have prospered compared to the weaker sections of the village. Today also, by using money and influence a small group of people try to meet their drinking water needs, but actual hardship comes to the weaker sections of the society, though they are not responsible for this overuse.

Emerging Scenario

After studying the two types of villages through fieldwork, it has been found that the women belonging to villages of the average category have more access to water that has a positive influence on their overall life style. Women from Otaria, Prahlagadh, Babapur and Virnagar, for instance, seem to have a better status and more awareness in thinking in comparison to those from Sangasar, Dudhlabai, Kanpar and Chitliya, seem to suffer from an inferiority complex, looked helpless and had a lower standard of living. Of course this is a result of gradual development and not only a result of the past two years of drought. However, what is significant is the immediate changes between two types of villages. The overall impression leads us to recommend that creating and conserving water resources in rural areas is now a must for gender justice, and sustainable development.

Water Resources and Status of Women

Any scarce item influences social structure and gets distributed in accordance with power of groups: caste, class and gender. All the three types of stratification systems of society have a strong relationship with water. In the area of water management the role of women is that of “a provider” at household and community level. As a main water supplier of the family, it is she who decides which water source should be used and stored, how to transport and carry water, etc. In a situation of scarcity, she has to walk long distances to fetch one pot of water. Carrying water from distant places takes away much of her time and energy. Clearly playing the role of a provider, women suffer most severely due to depleting of water resources.

But does this hold true for women of all categories? It is necessary to look more critically at different categories of women. The diversity among women: rural and urban, upper caste and lower caste, upper class and lower class, educated and illiterate, women from developed countries and women from underdeveloped countries differ from one another so much so that a general categorisation is difficult. Of course there are some common problems and characteristics that all women might share, but at the same time there are some differences in priorities and roles of women across time, space and classes. Therefore the process of development does not affect all women in the same manner.

This is applicable to this study region. As per the local social hierarchy, ownership of a private well, power to purchase water, a water tap and a water tank are found in a descending order of status. Women from the ownership of well are top in the status pyramid. Naturally women of this group enjoy more comfort compared to the rest of

the groups. In all the eight villages, families from upper strata of economy have their own source of water like a well or an underground water tank. Most probably they use the same water for drinking and other domestic purpose. This comfort has increased their status the village. Women of this group do not go outside for water collection, which is the reason for their higher in the society. But this is a luxury only of five-six families of each village.

Women of this group, feel lucky. But my minute observation showed another side of the coin. The luxury of not going out to fetch water is seen as a favour to the women by their male counterparts. By providing water at home, many male members say that it is the responsibility of women that men are carrying out. So it is a duty of women to feel thankful for being as born and/or married in such a family. This is only a sign of male dominance of our strong patriarchy society model.

Such a practice is common within the upper class of Koli, Rajput, Lauva Patel, but the condition is reverse in the Darbar caste. As per social custom and tradition, women from Darbar community do not go outside the house for water collection. In the Darbar caste most probably water collection duties are carried out by male and unmarried girls. At first, it looks like relaxation to women, but this does not increase their status. This is also to justify a patriarchal model and male dominance in the society.

Relatives of upper class group enjoy some comfort asking for water with less hesitation. But is it as easy as it looks? No, here the price is paid by women as a special care has been taken to maintain the relations. Whether they like it or not, they have to initiate talk with those families who have status through water. In this sense, women of this group feel inferior, a cause for their status below the upper class group of women.

Water purchasing from outside the village is also a luxury of those families who have some extra saving for survival during the last two years of crops failure, and those families who have a regular and fixed income. A little group of some families from each village manages their water needs by spending some money. Collecting water from outside the home is below status for some upper class families. They do not want to decrease their status by sending women outside the home for water collection. To maintain their social status, in the absence of their own water source, they try to purchase water from outside the village. The reason for purchasing water from outside is different in the middle class and educated families. By paying some amount of money for water, this group wants to minimise the struggle of women. Of course it is a force on women to use less and less water with best of reuse. Women of this group always apply their minds to minimise water use. This type of women also consider themselves lucky, but their number is small.

At the bottom of the hierarchy are those women who receive water from a water tank or a water tanker, on foot after facing hardships. A large number of families fall in this category. Collection of water is a major job for the women and girls of this group. For this group consumption of time and energy are higher, which makes women inferior. Except the females below 8 years and above 65 years, all the women of all the villages directly or indirectly are engaged in the duties of water collection. Though young girls do not directly participate in fetching water, they assist their mother by

standing in a queue for her mother's early turn, which takes away their time for education. As per our age group data, young girls between 10 to 18 are the prime water collectors of their families. One of the hypotheses of this study was that the dropout rate from schools among girls would be high. Field experience also shows that the girls are the prime water carrier, but questionnaire data does not justify the question about drop out data on girls. This led us to check school registers and we found full attendance of girls at school. After a cross check with teachers, the reality revealed was that a special permission is given to girls for water collection at the time of arrival of water tanker. Everybody even school teachers, accepted that the first duty of girls was water collection. In short, though the water scarcity does not make a list of girls drop out in school register, it is an official and granted drop out of girls that is invisible. In my opinion, it is an invisible dropout. In the long term these girls will again come in shadow of male dominance due to educational backwardness perpetuating the present situation.

The caste factor also plays a major role in the status of women in terms of water resources and collection. Experience of all the eight villages, indicates extra hardship and humiliation of this women group. In all the eight villages, during our focus group meeting, the women of SCs demanded a separate water resource for their consumption to avoid quarrels that took place at the time of water collection. In Kanpar village at the time of water tank allotment, there was a separate tap allocated to the SCs; it has been functioning for some years. When, women of other castes noticed the advantage of the women from the SC group, that is due to their small number they got more water in less time, the former slowly started to collect water from the tap meant for the SCs, and gradually they started to push them and snatch away the separate tap which was provided only for the SCs. Now it is a general tap, but women from the SCs have to stand aside. Instead of getting water from the tank as their right, now it is an obligation from some kind-hearted women from upper castes.

Moreover when the water tanker failed to arrive in village, or when water supply was in short, sometimes women from upper castes dared to ask for the water to other women, who had some amount of water from their farm and most probably they succeeded receiving water, but lower caste women could not even dare to ask for water. Again women of this lower caste group remain at the bottom of the status pyramid within the women group. More or less, the same has happened in all villages. Due to prestige and educational atmosphere of Sarvodaya Ashramshala in villages like Otaria and Babapur, the upper caste people dare not avoid the SC people and allow them for water collection freely. However, the SCs of these villages have been demanding a separate water source for their community. Virnagar and Chitliya villages of Rajkot district also face group rivalry between the upper castes and SCs. In both the villages, during our focussed group meetings, differences of caste group comes out openly. Both the groups had demanded a separate water source. In Kanpar village of Bhavnagar district, women from upper caste snatched the separate water tap allotted at the time of installation by hook or cook. All these examples lead to derive that caste stratification plays its role within the women group also. It implies that the women, who belong to lower castes, also have a lower social status among women groups.

Water Scarcity and Changing Role of Women

Consecutive droughts of two years have affected economic and social life of people. Crops have failed and there is severe shortage of drinking water. Shortage of cattle feed and water, force the people to reduce their cattle. Before drought, women used to spent most of their time in agriculture and cattle rearing activities, thus contributing to the economy. Their invisible support was a main source of income. But the drought situation led women away from income generating activities and brought them near the water tank and most of their time is now spent in water collection that has no economic value in our society. Reduction in the number of cattle also affects women's life in many ways. It means reduction in milk and milk based diet. As per the Indian customs and traditions, in the family, more nutritious food is first offered to the male members of the family, and then if anything is saved, it is served to women and girls. Moreover, reduction in number of cattle means reduction in cowdung, which is the main source of fuel in rural areas. Now these women have to search for the fuel too along with water. In this list one more hardship is added: the loss of her own exclusive personal things, her ornaments. Surplus buffer stock and savings are already exhausted, due to failure of crops. First, people started borrowing money from the moneylender, co-operative society and from relatives. But after a certain limit beyond which borrowing was not possible, ornaments of women were the only resort to get some cash. In my observation during fieldwork, most of the women were seen few ornaments. It was found that most of the families had sold or mortgaged the ornaments.

Economic crisis affects not only women, but also young girls. Young girls are the prime water collectors for their families. Under the tension and hardship of fetching water, these girls fail to concentrate on their education. In fact, she has to sacrifice the time meant for her development and education, a weak link in our patriarchal society. The theories of tradition and patriarchy still continue their role and girls of this group remain far behind in terms of development, keeping them in the shadow of male dominance.

A positive sign emerging from this water crisis is that more and more young girls have joined diamond cutting and polishing work to earn extra income. At the first glance, it seems to be a bright sign of women empowerment. The darker side of this cloud, however is, that the girls engaged in income generating activities, are the only work force. Constant water scarcity of this area has caused failure of crops. The deteriorating economic condition of families have made these young girls feel worried about their Kariavar and dowry. To avoid bitter experiences in married life in future, girls themselves have started to earn for their Kariavar and family support. Their families also have allowed them to work outside, keeping their male ego aside. At first look one can say, it is a positive sign of women empowerment, but to me, "it is a shifting of responsibilities from male to female shoulder". Though they are working independently, yet their accounts are maintained by their brothers and father, and their household responsibility is not reduced, they still have to fulfill the demands of their future in-laws, which is not a sign of their independent status and empowerment. Let's hope that this increases their status in the family and society.

This is the best example of how tradition and change go together: the society has accepted and allowed the girls and women to work out side. In fact it is a compulsory

and convenient to send their girls for outside work, on the name of “change”, “progress” and “liberation”. This is only hypocrisy for if women’s work outside the home is a sign of progress and change, then why do they have to continue with the Ghunghat? This is not a step towards women empowerment; it is sheer exploitation of women. Here women are victimised not only from natural calamities and traditions but also on the name of so called “change”, “progress” and “empowerment”.

In spite of all, women still remain the prime water collectors, providers and managers of their families. The existing scarce availability of water sources had changed her role in some manner. In the present condition, she is not only the water collector, but also someone in search of water resources. Previously her hardship and burden were limited to collecting water from the nearest available source, but in the changing situation, she has to worry about numerous issues like locating sources of drinking water both for the family as well the cattle and collecting water for other domestic consumption. These are the direct efforts of women in search of water and management thereof. Their indirect efforts are also plenty. Any scarce item has its own high value and in a scarcity value and demand forever goes higher. The owner of the scarce item automatically becomes more powerful which results in a weakness of others. Water is one of most scarce items of the present era; Kanpar village is not an exception. As per the traditional role and household duty of women in terms of water collection, they are trying to maintain relations with those families who are rich in water amount. This compromising situation has caused mental stress to some women. Sometimes they have to bear insults also. As the manager of water, it becomes the duty of women to control misuse of water. Sometimes in doing this duty, there are so many cases of bitterness in the family, at times leading to family break-up. Cases of partiality for water uses create serious quarrels between family members too. For all these incidents, women are blamed.

Recycling water is also an additional burden that follows water shortage. Generally people use the same water two-three times, and try to save clean water. They never use clean water for cleaning and sanitation. After washing the clothes, they never throw the water away; they try to reuse this water in sanitation. Which water should be used for bath? What was the reuse? All these worries keep women always in thought of water recycling, instead of doing and thinking of other meaningful work, which could help them in their development and empowerment. All these are new worries and duties of women that are a direct outcome of water scarcity.

Conclusion

Water scarcity of Gujarat is not a crisis only of Gujarat, but of national and global level. It is a serious issue of environment, of development process, and of gender justice. Water scarcity affects social and economic life of people, particularly that of women. “The active participation of women, who comprise approximately half the world’s population, is critical for ensuring sustainable human development through their actions on environmental management” (Cecilia Tortajada, 2000). Even after 55 years of independence of India, many regions do not receive safe drinking water. Politicians and bureaucrats are to be blamed for environment and natural disasters like drought. But our experience and facts are different. It is a widely held view that lack of attention on development in rural areas is fuelling unsustainable development; it is increasing the demand of water and water related services, regardless of whether the

demand is satisfied by more efficient use of existing supply, or by increasing level of supply. The water demand per unit of gross domestic product is dependent on how these two components of economic growth are combined.

This is what exactly has happened in the north part of Gujarat and Saurashtra region. Rapid growth of irrigation extracted ground water on one hand and, on the other hand neglect of conservation of water has caused the crisis. "In 1960, a large majority of Gujarat's agriculture was rainfed. Even-by 1970-73, only about 14 per cent net area was sown under irrigation. Gujarat, being a semi-arid region, does not have many perennial rivers. Ground water is therefore the major source of irrigation. By 1970-73, ground water already contributed to about 78 per cent of all irrigation sources. In 1993-96, the area under irrigation was 31 per cent and ground water's contribution was about 80 per cent. Ground water exploitation has been increasing at the national level also. Its contribution was 24 per cent in 1970 and 53 per cent in 1992-93. Compared to all India figures, Gujarat was way ahead in 1970 and continued to do so even in the 1990s" (Sudarshan Iyengar, 2000).

This is what has exactly happened in Kanpar village too. Rapid rise in exploitation of ground water has adversely affected the drinking water sources. High increase of demand for water in agriculture led to a severe stress of drinking water. More and more exploitation of ground water from deep aquifers has resulted in drying of shallow aquifers which was used for drinking purpose. Nobody thought about, it would be dried and empty one day. Thoughtless and indiscriminate steps create water scarcity, which ultimately affects women's life. Of course, the whole family is seriously affected by water scarcity but there is a difference between lives of men and those of women, due to traditional social norms and customs, due to lack of far sightedness, and due to male oriented point of view planning. Study of these villages clearly indicates how women become victim, not only due to natural calamity like drought, but also due to indiscriminate use of water and lack of water conservation planning. Increasing demand of foodgrain and concept of green revolution of other states has brought more and more land under cultivation. Here women are not responsible for the enormous waste and overuse of natural resources, but now they are suffering, they have to carry extra burden of water fetching, they are suffering from health problems, their daily routine has disturbed, their time of education has suffered, their extra burden of household work has increased, their time of livelihood has reduced, their pleasure is gone, their status has decreased, and their livelihood is now heavily dependent on men.

Krishna Ahooja (Krishna Ahooja, 1995) rightly pointed out, "Despite these economic and social consequences, few policy statement made during the debate by the preparatory committee for UNCED (August) connected women to other international economic or global environment at the macro level. The committee focused on "urbanisation of poverty", "environmental expenditure", "responsibility for waste", and "over consumption of natural resources". From all these topic women were omitted, being regarded as neither beneficiaries nor contributors. Now India is going towards fully acceptance of globalisation policy. Upto this time, results of our development projects, clearly indicate that, our development process has created wider gap between development and women. Result of Kanpar village have already proved these facts. In these circumstances the process of globalisation will also be affected. Within international institutions, national structures and local communities,

the process of globalisation has already begun. In 1991, India accepted the globalisation policy with so much hope that foreign market and investors will invest their capital and opportunities of employment will reach all. Now it is well accepted that the assumption of that time does not come true in reality. From that time none of our politicians have paid enough attention at the local level. To earn the foreign capital, India already has opened its doors for foreign investors, but at what cost? The first need of the development process is, to minimise the gap between development and women. There can be no development without taking the human beings into account. If a development harms a large number of people and environment to a great extent, it can hardly be called development. Results of the eight villages clearly show a wide gap between women and development. The women who comprise approximately half of the population, are becoming more and more dependent on men, are turning away from education, have lost their livelihood as well as their social status too.

If we want more sustainable development, we have to think again for conservation of natural resources. Instead of economic globalisation, we have to think about how our natural resources could be preserved, how could planning save our natural resources, how could we ensure sustainable development. In a true sense, if we want to go towards the path of globalisation, we have to bring women in the mainstream. Overuse of natural resources makes women backward. It is necessary that “governments should develop comprehensive long-term national plans for water management and conservation. Integrated management of water resources should be a central feature of development policy” (Krishna Ahooja Patel, 1995), and women should be a main part of our development process.

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