INTRODUCTION

In the introduction the issues that are of relevance to this study have been raised. Hence, here I will introduce the problems by capturing only the dominant trends and state the hypothesis and objectives that made me to take up this study and will also explain subsequently the chapterisation and research scheme. My attempt in this thesis is to write a brief account of the emerging politics of water in terms of women's participation in drinking water management systems leading to their empowerment and good governance of water resources at the grassroots level in the context of decentralization and Panchayati Raj revolution in India.

Firstly, to state the need for conducting a study on the theme of women and water, it is worthwhile to mention that studies of women and power generally concentrate either on women's participation in politics or women's oppression under patriarchal structures. Since women's role generally remains invisible before policy makers, continued vulnerabilities are not well documented and the greater power of women to control their own lives in more than minor ways is not well demonstrated (Cleaver and Kessler 1998). There are many domains of power, and access (or lack of it) to natural resources, like water, is also an important dimension of power. Women's dependence on water and forests for the fulfillment of the family subsistence illustrates this. Biomass availability has direct impact on women's work and leads to increased drudgery due to degradation of forests and water resources. This special relationship women have with the environment is due to the social context of gender relations, more women than men are collecting water and firewood and are depending on natural resources for their daily tasks (Agarwal, 2000). They are therefore the ones who suffer most from environmental degradation. Though the relation between women and forest has been studied in India, women and water constitutes a newer field of exploration.

At the conceptual level, this study is located in the area of the politics of development attempting an understanding of how different factors interrelate in processes of development. "Water resources development and management practices which have a negative impact on women, also have a negative impact on development since within the categories of end users, men and women have quite different interests and resources and excluding women as actors and as an interest group means bypassing half the population." (Wijk 1998). This study
focuses on rural communities and women since they are directly involved and basically responsible for reaching out to the drinking water sources, managing them and providing water in the villages. This assumption is based on several arguments and also on experience. Although women are informally involved in the local management of traditional water sources, when an external project comes into the community and water is provided, women are often excluded from management and decision making tasks. This study deals with the traditional involvement of women in public management of water resources, which is more widespread than at present realised. Women in rural areas not only do most of the work in water collection, but also take most of the management decisions. Social studies show that women make careful decisions about water use patterns. They decide which water sources to use for various purposes, how much water to use, and how to transport, store, and draw the water. On the other hand, men decide the location of the settlement, which has a larger impact on water collection efforts (White 1977). However, because gender divisions in local resources management are very subtle, they may be and often are easily overlooked. External projects and programmes, which neglect indigenous management and treat women as beneficiaries and users, and not as water managers and decision makers, thus hamper their results and diminish women's position. In most countries this 'technically highly responsible' work is considered as a typical male thing (Cecilia Tortajada 2000). Thus, overlooking existing management systems often means that in the management of new systems, mainly men get involved.

Within the broad theme of the politics of development in the water sector, the governance perspective provides an organising framework. These concepts and ideas have been discussed in greater detail in the next chapter on theoretical framework of the study. As stated above, we endorse and will be taking into account the management perspective in this study and will also built upon the important consideration of the good governance perspective through decentralization and Panchayati Raj in the Indian context. Governance signifies 'a change in the meaning of government, referring to a new process of governing; or a changed condition of ordered rule; or a new method by which society is governed. Governance comprises the mechanisms, processes and institutions through which collective decisions are made and implemented, citizens, groups, and communities pursue their visions, articulate their interests, exercise their legal rights, meet their obligations and mediate their differences'.
The implementation of Panchayati Raj in India, with thirty three percent reservation of women at all level of local self governance (village, block and district), has given women the authority to exercise their right of controlling and decision making over local natural resources like water. Thus, this new found political right of constitutionally recognised representation and decision making power has added a new dimension for women in terms of having a voice in governance, which was missing until now and women were allowed to play a very limited role in water management. In this context, the purpose of this study is to understand which factors and processes need to be developed to build the good governance model for the drinking/domestic water sector.

Further, in this thesis, we have seen water both as a problem and as a policy issue for women. A historical analysis of the international and national policy environment has been made in Chapter Two and Three of this study and examples of other countries have also been reviewed in Chapter One to get a holistic picture of the issues in consideration. Indeed, at the policy level, recent international and national policies on water recognise women as the major "beneficiaries" or "recipients" of the benefits of drinking sector projects, particularly the domestic water supply systems as women are principle collectors and managers of water at the household level. Thus, by 'recognizing women's multiple roles as providers of domestic water, as guardians of family health and as managers of water at the community level, water resource planners have increasingly sought to integrate women in water development initiatives.' (Green et al. 1998: 263). On the whole, then, women may be seen as "domestic water managers" having specific water-related interests and contributions to make at household as well as community levels. (Singha et al. 2003). Carolyn Moser (1989) has described the development of water programmes in different stages from welfare approach to the equity or anti-poverty and the efficiency approach and then the empowerment approach. The welfare approach identifies women as the problem and as a disadvantaged group, for whom special women's components had to be developed so in projects such as water supply women were seen mainly as beneficiaries and the solution to family welfare is placed in their hands. This approach was followed in 1960s. In contrast, the anti-poverty and efficiency approaches also recognize the role of women as economic producers and actors in public realm and as managers of water in their own right. This approach was followed in 1970s and 1980s. Finally, by the second half of 1980s and beginning of 1990s it became clear that the
effective involvement of women requires them to unite and develop strength and self-reliance. This is described as the empowerment approach and it seeks to identify power in terms of the right for women, as for men, to determine choices in life and to influence the direction of change. This approach challenges women to seek a new self-consciousness and new positions in their countries' legal and civil codes, economies, institutions and management systems. Without such changes it still occurs that women do the physical work of transport, digging, cleaning and caretaking, but have no say in and do not share control of the resources on which their livelihood depends. (Wijk 1998: 4). Women's empowerment has also been studied in the last chapter of this study and the details of this will be explained a little later in the introduction.

Anyone in agreement with the above necessities of the proposed study can still pose a simple question, why is drinking water taken as a critical issue of major political concern in the thesis? Basically, it should be considered that the availability of safe drinking water is the benchmark for the advancement of the society in which we live. However, this basic need has become a crucial issue since India and many other developing countries today, are facing a huge drinking water crisis. 'Even though the domestic water needs constitute merely three per cent to the total water use in India, it is a high priority need' (IRMA 2000). We are now at a point where drinking water scarcity is constraining not only agriculture and industry, but also severely jeopardizing the health of our people. As the population grows and each person demands more and more goods and services that depend on water, this scarcity can only get worse. In India, the hydrological cycles have been so disturbed and destroyed that in many parts drought and pervasive, unquenched thirst have become a way of life. Water scarcity represents a time bomb of unrest and violence and 'water wars' are not unknown in the daily lives of thousands of citizens. Neighbouring states have drawn daggers over sharing of river waters and taken their flights not only to the courts of law, but also to the streets. Each year, growing number of villages in drought stricken districts squabble endlessly over access to dwindling water sources. And farmers in different parts of the country find their crops dwindling as their groundwater recedes from aquifer to deeper aquifer. While agricultural lands go thirsty, many thousands of villages find it difficult to get clean drinking water. Indeed, we do not have to wait any longer for the war over water to take place, it has already broken out- in the form of desperate skirmishes frantic fights and bitter battles that hundreds of millions of our
compatriots daily go through to get their bucket of water. Sometimes these battles are with each other, sometimes with nature. And the outcome is not re-assuring. The battles are not only being fought every day but they are being lost, on a grand scale.

Therefore, the crisis of drinking water in India is the backdrop in which this study has been conducted. Now, the shortage of water has acquired the proportion of a crisis for our people, and most of all, for the poorest of the poor, especially the women among them. This is because in India, as in all the developing countries, the rural women are forced to bear triple burden of work at home, in the field and in the community. In the areas where water is scarce for many people, there is an increased burden for already overburdened women or girl-child. The prime daily task of the women and girls of the villages is now to walk three four, even five hours upto 8 to 10 kilometers a day carrying pot loads of water on her head to retrieve water for cooking, drinking and household. This leaves her overtired, undernourished with too much work. She is also a prey to stronger forces within the family and the larger society outside her home. She hardly makes any decisions and has little voice in matters that concern her or her children outside the home. Usually, in public affairs that concern her vitally such as water and sanitation, hygiene education and protection of the environment, the decisions are left to the men. The physical well being of her body, her only possession is influenced by these factors and even in these she has no voice. Traditions and culture shackle her. A girl child is unwelcome as she entails a tremendous financial burden to her family. General illiteracy and lack of awareness make her plight worse. In most rural situations women do not know why they are overburdened with work. Moreover, even the economic cost of this insufficient quantity or quality of water for domestic uses is borne disproportionately by women and children due to their predominance in the domestic sphere. These costs include:

- Longer times for water collection: Since women and children are the primary water collectors, longer collection times mean that women have less time for agricultural production, less control over income, and less time for child care.

- Less water for drinking, bathing, and sanitation: Research by the international Food Policy Research institute has shown that in some circumstances these nonfood inputs into nutrition are more important than food in avoiding malnutrition.
- Loss of income from water-intensive activities undertaken by women: Domestic water supplies are used in many small-scale food processing or craft activities and gardens, which are important sources of income, especially for poor households.

- Increased incidents of diseases like malaria: On account effects of bad water diarrhoeal diseases due to contamination, or other effects of bad water management affect women disproportionately, because women have to shoulder health expenses and time burdens for caring for the ill.

So, for economic, health and reasons related to family well being, women are actively taking lead in water management issues.

Having stated the direct impact of drinking water crisis situation on women, it remains to be stated that other than drinking water, water issues related to irrigation also affect women. Surprisingly, water politics has been mostly understood only in terms of water disputes over irrigation system controlled by men and it is generally assumed that women use and manage freshwater mainly domestically, and that productive use is reserved for men (irrigated agriculture, production of goods and services, livestock keeping and breeding). But recent studies have shown that irrigation system are also used for many other things like domestic water, livestock, home gardens, fishing, and small enterprises, which are closely related to women. Therefore, women's economic use of water and the involvement of women in other sectors of water use, such as irrigation has generally been underestimated and therefore underrated. In fact, many gender sensitive studies have revealed a much more active role of women in irrigated agriculture and livestock care than has been assumed. Studies show that women are producers of 80% of the food consumed in the poorest parts of the world. For this, they first produce water by spending several hours a day finding water sources, collecting water, storing it and purifying it. Women in rural areas lug up 40 kilos a day to maintain their family's health, hygiene and nutrition standards-for cooking, drinking, washing, caring for the sick and for the infants. In this sense water politics is also about gender and women's need and demand for water rights. It concerns decision-making by women on the development of physical infrastructure and distribution of water resources to people's homes, fields, and enterprises. Collection of water would be considered to be economic activities of high labour cost if they were replaced by paid labour (McPherson and Jackson 1985). Cash income is
earned from vegetable gardens, and also the produce provides a source of cheap and essential food supplements for their families. Because unsalaried work by women is not included in the Gross National Product (GNP), the value of their labour to the national economy is vastly underestimated (Goutier 1995; INSTRAW 1984). Although this situation is gradually changing, reports on women's share in production and their involvement in development projects still come predominantly from female and all statistics are not yet routinely segregated for women and men researchers (SIDA 1994). This indicates that gender has not yet been clearly identified in the overall set of variables for development and development research. Through this study, I will try to explain that these other uses may not consume as much water but they are high value, and many of these are mostly women's uses and are crucial to women's need and existence at the grassroots level. However, 'these linkages starting from people's own reality are often missed by water professionals.' (Meinzen and Dick 2000). Chapter five in this study takes into account this aspect describing the economic need for women as the leading factor for initiating a state wide Water Campaign in Gujarat. So, along with women's ability to participate in water management and governance, the study shows the basic fact of women's economic need as an important factor compelling women to undertake these responsibilities in the first place as discussed in the anti poverty and efficiency approach described by Carolyn. This study recognizes and re-enforces the importance of water for economic purposes and the linkages between gender and economic costs of water for the poor women in rural areas. So, water is a political issue in a state in which a large population is deprived of access to water of sufficient quantity and quality to meet minimum levels of health, income and freedom from drudgery caused to women.

However, women's strategic choices are, like men's, shaped by a complex set of constraints and resources, needs and opportunities. These, again, reflect not only their class position in the labor market (e.g., their levels of skill, the demand for their labor) but also how they are positioned within the communities on which they depend for their survival and how their communities are positioned in relation to others. Thus, besides the participation of men and women in general, there is also the issue of the balance between male and female participation and between women of different class, which this study seeks to explore. This study in chapter five on SEWA looks into this issue of who, in terms of gender and class participates in what decisions, work, functions and benefits and whether participation and
management are gender and poverty specific. So, politics also arises due to asymmetries arising due to class, gender, caste, historical legacies, power occupations and political rivalries. (Lyla Mehta 1997). In this context, water policies and interventions to eradicate the drudgery caused to women for carrying water are relevant. (Barbara Van Koppen 2000).

Significantly when we look back historically, this was not always the case, especially in the villages. In their edited books, "Making Water Everybody’s Business" and "Dying Wisdom: Rise, Fall and Potential of India’s Traditional Water Harvesting System", Anil Agarwal and Sunita Narayan among other writers have made a historiographical account of the water situation in India. According to their analysis, in the last 50 years, significant changes have taken place with regards to water situation. In India, 70 percent of the people who reside in rural areas traditionally had developed a range of techniques to conserve every possible form of water for drinking and farming purposes from rainwater to groundwater, stream to river water and floodwater (Agarwal 2001 (i): 2). Slowly, over the years, the state has replaced the traditional role of communities and households in meeting their water needs, therefore there has been a significant shift in use of water sources, management, provision and distribution methods. Further, ‘adoption of unsustainable models of agriculture and drinking water provision services and its improper management is today threatening ‘both traditional water and land management practices’ (Agarwal 2001 (i): 2). Modern methods have provided the much needed freshwater but they have also led to the decline of traditional systems and increased conflicts between water users. "Traditionally, village ponds were ubiquitous. Each village had more than one pond. While one was used exclusively to meet domestic drinking and cooking needs, and was therefore, well protected, the others were used for non-potable uses. These ponds were managed by panchayats. Then came the hand pumps and pipeline with a pipe dream: water supply at the doorstep. Most panchayats consented without knowing he implications at that time. This was the beginning of their dependence on external sources for the most basic requirement of life-water. This was also the beginning of disempowerment. Most panchayats stopped managing the village’s common property resources. They collected money from the village communities so that the water board could manage the water supply through pipelines. Slowly the problems of centralised systems started creeping in. Powerful communities in the villages near the water source started breaking the pipeline to take away more water. In addition, economically powerful groups in villages with significant decision-
making power took all decisions about where, for example, to locate a community water source that it serves their interests primarily. Moreover, due to poor quality of the pipeline installed, those who could not get easy access to water started breaking the pipes frequently. Moreover, its dependence on scarce electricity supply prevented water from flowing over long distances. The water could not be lifted to overhead tanks. Through breakage and pilferage, polluted water would seep into the pipeline. Complaints by the people went unheard and lay unattended. These people had no rights over the quality and quantity of water that they received. Since these villages were listed as 'attended' in official documents, the villages were not eligible for any assistance. They were simply the passive receivers of a system, which had been installed without their understanding or involvement. So, these programs of the government have led to the decline in social capital or the community spirit. A cause and effect relationship developed on both sides i.e. when government became active people became indifferent. When people became indifferent, and resources became open access resources, the government became dominant and made more laws" (Barot and Salil 2001). There are two major problems with the current strategy—one is the shift from surface water or sub-soil water—tanks, ponds and wells— to groundwater like borewells and pipeline water supply (Ballabh 2000). "In India more than, 90% of rural population depends on groundwater for meeting the drinking and domestic needs. The other is that the responsibility for providing water has shifted from communities to governments. There is universal agreement regarding the failure of government agencies in executing water programmes. On paper, the government may have succeeded but in reality there are many villages with a chronic problem. Lack of effective coordination between different departments trying to tackle an activity involving a multiplicity of disciplines, and a unified approach, is seen as the crucial bottleneck. There are numerous rivers that are so heavily exploited that they have no river flow left during the summer season. The groundwater table is falling rapidly in many parts of the country" (Rao 2000). "There are financial and human problems with state-sponsored water supply. The state subsidises water. People squander it. The state soon runs out of money for new projects to meet the bloated and burgeoning demand and for maintaining the projects already built. The state becomes responsible for water supply and the people just sit and watch and demand. An acute crisis can already be seen in smaller river basins like those of Yamuna, Sabarmati, Noyyal and Bhavani" (Vani et al. 1995). In this study, in Chapter 4, 5 and 6, we have looked into some of
the drinking water sources and schemes and how women can participate in its management and governance to improve the systems at the village/local level.

Besides, population growth, over exploitation, lack of conservation measures at appropriate locations and people's participation in planning and implementation has also added to the water scarcity. As a result, a large number of habitations in India have remained the problem villages that do not have safe drinking water even today (Government of India 2000). No doubt, the state has acted, as provider so far because drinking water has been a major development constraint in the rural areas and the state believes it has had no option but to provide the required facilities. Needless to say, this problem of operation and maintenance with such centralised systems is common to most developing countries and therefore it still remains very crucial to delineate the roles and responsibilities of the state for finding solutions that impact such large populations. Nevertheless, it is clear that the present state of affairs is unsustainable - economically, environmentally and institutionally. Clearly, the present strategy is a drain on the state exchequer on the one hand and inefficient in terms of assuring water supply to people on the other. There is therefore a need to shift to a sustainable strategy of providing water supply to the population. 'Hopes that large centralised systems, including large bureaucracies, provide economies of scale and efficiency have been belied. If anything, large systems have not been able to promote even equity, whether class, caste, gender or regional. This is because the large systems are inherently less responsive to the ground, and either delay or even deny justice. The voice of the discriminated or marginalised cannot cross the geographical, procedural or informational boundaries and the status quo sustains itself. Moreover, with limited finances, long gestation period and the adverse effect on environment and displacement of people, which has been highlighted in the recent cases of Narmada Sagar and Tehri dam, the bulk of existing and future water needs would be met by tapping rainwater and groundwater and utilizing it more efficiently. Therefore, large centralized systems promote neither efficiency nor equity nor are they effective.' (Srivatava 2000). This is one of the positions that we have taken in this thesis and tried to search for a better and more participatory governance model.

In the context of the water crisis and failure on the part of the government to respond adequately due to its focus on centralized large water management systems, the general
consensus that has emerged worldwide in recent years is that participatory approaches through decentralised operations and maintenance in the hands of local user groups such as pani samities, task groups within the Panchayat, water committees, stand post committees, is the system that holds promise as being most effective. The new thinking is captured in new drinking water programs by trying to include in their projects: demand-driven approach, cost recovery for operation and maintenance, sharing for investment/capital cost, community participation and village-based operation and maintenance. We will look into some of these issues in Chapters 5 and 6 of the thesis, through the field based study of drinking water schemes, such as laying pipelines, handpumps, roofrain water harvesting, watershed management, construction and revival of ponds in Gujarat.

Nevertheless, despite these apparently radical measures, "one can remain a long way from achieving decentralisation in the true sense. The measures listed above are applied to projects planned centrally with no feedback from the community regarding its needs, priorities and choices, especially of women. There has been an amazing lack of awareness among water engineers, sarpanches and water committee members about the constitution and role of the water committees. Therefore, in actual practice many of the committees are defunct. Several members especially do not even know that they were on the committees" (Kapoor et al. 2002). The fault lies in the manner in which the committees are constituted by the water boards that run the government water supply schemes, which simply ask sarpanches to give a list of names for the committees without first discussing this with the villagers. Moreover, villagers hardly know anything about the water supply schemes and how the river/ground waters reached them, or at what cost etc. So they do not understand how they would undertake this task. Therefore, there are gaps in governance and lack of effective water policies and its implementation with regards to institution building and the field study discussed in chapter five and six also aims at finding out what they are and what could be done to make better water governance at the grassroots level a reality.

Paradoxically, fears have been expressed that the decentralised local systems would be powerless to counter unfair power balances and will only promote the highly inequitable status quo. But experience has shown that these measures have made some headway in increasing the control of users in the water supply systems, as discussed in chapter three on India's
water management policies and practices. Although there remains a huge gap in water policies and practice at ground level yet to demonstrate some of the good practices at grassroots levels, there have been examples in different states of India that are worth considering for drawing conclusions on better governance. In this context, in this study we have looked into the respective roles that different change agents have been playing, especially the crucial dimension of the role of the non-governmental organisations (NGOs) and community organisations, which act as intermediaries and catalysts for strengthening the role of Panchayats and enabling the women to take up leadership roles in issues such as water, which closely affect them. It has been advocated that for the full potential of Panchayati Raj institutions to be realised, at least two vital inputs are required, which include: (i) a powerful grassroots initiative towards a pro-poor alliance, deeply sensitive to the women's questions and, (ii) a strong thrust towards technical capability enhancement through NGO intervention to effectively empower Panchayati Raj institutions to carry out the responsibilities being devolved upon them (Agarwal et al. 2001 (i)). It has been observed in several cases in rural areas that the grass root NGOs who have won the confidence of the communities have made a tremendous impact on communities to build the confidence and capacity to take up important leadership and managerial roles. It therefore remains to be seen what role these NGOs are capable of taking and what supporting environment needs to be build based upon such far and few examples that we have discussed in the study. However, apart from that it is still worth considering as to what could be the alternatives and lessons from the examples that have come up.

Therefore, it is worth mentioning about some of these communities, which have in the face of extreme adversity, revived and created new water management systems. Often the catalyst has been a non-governmental organization (NGO), which has actively participated in creating new relationship between people and water. NGOs have played a substantial role in the rural water supply sector in India for the last four decades. Intact, several NGO in India have played an important role in facilitating the different roles, motivations and experiences of cooperation between men and women in all such movements in the process of collective action. These are the examples that bear testimony to the effectiveness of decentralised systems, where user groups are empowered to take decisions, make plans and influence policies that affect them. In Gujarat, there is Amul, a homegrown model of people's power and decentralisation. Another
significant example is of the inspiration provided by the village Ralegaon Siddhi under the leadership of Krishna Bhaurao Hazare in Ahmednagar district. Similarly, the example of 650 villages in Alwar district for the revival of five rivers under the leadership of Rajendra Singh of Tarun Bharat Sangh especially the formation and revival of water committees or the pani panchayats is particularly significant. These examples have shown the potential of government sponsored but community-managed watershed managed programmes for achieving excellent results (Agarwal 2001(ii)). In this study in Chapter Three, we have looked into the performance of some of these case studies although most of them through secondary sources, which sometime fail to mention the role of women in the success of these programmes. This study shows that until recently, the three most important criteria for judging the performance of community institutions for water management have been: the extent of community participation in decision-making, equity in the distribution of costs and benefits, and efficiency in protecting and regenerating the resource. On all these counts, institutions, which look successful, have been mostly found lacking from a gender perspective and it becomes difficult to state the role and impacts on women, which remains an open and relevant question in order to understand the true success stories.

Therefore, to fill this gap, an attempt has been made through this study to understand the role of women within these community level initiatives and action by choosing one of the organisation in Gujarat, which has successfully demonstrated the importance of women’s leadership and made visible women’s role and contribution in such water management programmes. The case study of the organisation called 'Self Employed Women's Association' (SEWA) has been undertaken through the study of its drinking water campaign. SEWA's intervention in this case has led to success of women's leadership in small-scale community managed water sources. In this study we have focused on some such programmes, which include building roof rain water harvesting structures, handpump repair and maintenance, pipeline operation and management, construction of agri-film lined ponds and the watershed development programme, which also directly impacts the drinking water sources as well. The study shows that these programmes have led to recharging of groundwater, therefore directly impacting the availability of drinking water and also empowerment of women in these areas (Kapoor et al. 2002). It is in this framework of collective action that women's participation in community institutions for management of drinking water resources and issues related to pani
samitis/pani panchayats or water committees, panchayats, water boards etc have been highlighted in this study to understand the issues related to good governance. Basically, such effort needs to be situated within global policy discourses which call for equipping and empowering rural women through training so that they can manage community water assets more effectively (World Bank 1993).

SEWA's case study in this thesis brings to the focus the problem and the issue related to the need for “women’s empowerment” in the water sector that is seen both as a means and an end as described in the empowerment approach described by Carolyn Moser, which has increasingly been adopted since early 1990s, as stated above. Empowering women is therefore considered very essential to enable them to control their own lives as individuals, in the family, the community and the larger society. However, different people look upon empowerment in different ways in different situations. Employment for women is a major factor in empowerment of women in many countries of the Asian region. When women get full employment, their economic empowerment increases their decision-making capacity. They become able to take part in various committees, boards and social organizations, which will help them influence the changes that help to reduce their drudgery and burden. However, in cases where women are over burdened with work, installment of time saving facilities, such as water supplies is then conditional. In the areas of water supply and water resource protection these emerging trends are a great expression of hope for women, especially poor, disadvantaged rural women. In Philippines, economic advancement and equal access to and control of resources would be an approximation to empowerment of women. It would mean a greater consciousness of time and energy resources in Sri Lanka. In Bhutan, equal opportunities, is important in creating an environment for women to play a more decisive role. Self-reliance employment and economic equality and justice are some factors that empower women in Bangladesh. In India, for instance, the 73rd amendment in the constitution has placed the task of managing and maintaining all basic services in the hands of Panchayats, in which one third are women who had never managed a local service before. For them, empowerment would mean more political autonomy, less dependence on men for decision making and being able to make their own voices heard.
The study assumes that women’s empowerment through Panchayati Raj institutions will automatically enhance women’s participation in crucial issues affecting them such as water management. Simultaneously, it is also possible that enhanced participation of women in village development programmes such as those related to water management will bring about their empowerment and lead to the better governance of resources through Panchayati Raj Institutions. Whatever the case may be it is worth considering whether this, in turn, will usher in more effective policies and programmes in the water sector, as women will then be able to decide upon issues affecting their lives and derive equal share in the benefits in the sector. To look into these questions based on these arguments stated above the study conducted at the village level has sought to assess the empowerment of women as described in the last chapter of the thesis. In this context some of the indicators for empowerment that have been considered are:

1. Women and Water Governance: It is considered that effective participation of women in community water issues is one of the ways of assessing women’s empowerment, therefore, the study looks into the following aspects related to water governance:
   i. Women’s participation in Water Management Programmes and Water Committees
   ii. Women’s interaction with Panchayat and Water Board officials
   iii. Women’s participation In Training programmes
   iv. Changes in gender roles in water management have been assessed in following terms:
      a) Regarding decision making for investment in traditional water sources
      b) Regarding use of water
      c) Follow-up after breakdown
      d) Decisions about Construction operation and maintenance
      e) Upgrading-Operation and Maintenance

2. Women’s control over their time and income: As discussed earlier regarding the difficulties that women face at the household levels during the times of water crisis, so it is important to know that after getting empowered to participate in panchayats and to take over water programmes, if women are also feel empowered at the household level in gaining control over their time and income. To see whether women now have sufficient control over the way they want to use their time and money is by considering:
   a) If women are making the decisions alone or
b) With someone in the household or

c) If someone else is still deciding for her

3. Women’s Position in the society and household has also been studied to assess the role women take. Regarding what type of changes in leadership role of women in society the following stages or levels of participation have been taken into consideration:

1. Leader of other villages
2. Leader of women in other villages
3. Leader of women in the village
4. Speaking in the village meetings
5. Going to meetings in the other villages
6. Going to village meetings
7. Never going in meetings

The issues taken into consideration to see the changes in gender relation at the household level over the past few years were:

1. Going out alone
2. Children going to school
3. Women have savings
4. Women participate in agricultural decisions
5. Woman participate in decisions on purchase of cattle
6. Women have own assets in their name

Interview with men to get men’s opinion on changes in gender relations that men have observed over the last 10 years, as well as about their opinion and the reasons for these changes.

Gender role and responsibility at the Household level was also assessed by looking into who is providing the help to women for completing their tasks-the husband, girls or boys especially during normal water situation and during the time of water shortage.
Hypothesis

The study is based on the hypothesis that the overall use and system of water management will improve if the users, especially the women, are empowered to have a greater role in:
- Decision making regarding water, its use and distribution in the village.
- Provisions of water, methods of water collection, its place etc.
- Management of water, its preservation, rules and through women headed committees.

Objectives

The basic objectives of the study are:

1. To understand the changing politics of water management from a gender perspective and its impact at the international, national and local policy levels.

2. To understand the political relevance of women as managers and participants in development of community water sources.

3. To understand the role and participation of women in decision making at Panchayat levels in the context of Panchayati Raj amendment and increased participation of women at all the three tiers of Panchayats.

4. To understand the relationship of the State and non governmental organisations for women's empowerment and the role of NGOs as facilitators between rural women and policy makers.

5. To understand the women's water management initiatives through a comparative study of the methods and strategy involved in the villages of SEWA and the non-SEWA villages, to analyse how the women are empowered to gain access to rural development programmes and political space.
Outline of the Thesis

This hypothesis has been field tested and the findings of the study are based upon first-hand data procured through intensive ethnographic fieldwork in rural areas of the state of Gujarat in India, conducted between July 1998 and June 2001. In order to gain access to the field, I lived in Gujarat and learnt the language of the local community, i.e., 'Gujarati' to gather information to the best of my satisfaction and ability. Chapter 1, 2, 3 and 4 are based on secondary sources. Chapter 5, 6 and 7 are based entirely on the field data and reference material collected during field work, which forms an integral part of the study.

The Introduction outlines the nature and scope of the study, and broadly describes some of the crucial issues and questions that have been examined in the course of the thesis. It also brings to the fore the necessity of addressing the question of women and their involvement in the larger issue of water politics of the state through the process of decentralization.

Chapter 1 broadly explains the theoretical concepts involved in development and governance perspective and assesses some existing studies that deal with issues of women and water management, on the one hand, and, community initiatives and decentralization, on the other.

It can be said that this study on the change in water management systems through women's empowerment was pursued simultaneously at three levels, in a mutually reinforcing way. Firstly, the policy environment in the water sector, which included the study of national and international policies adopted at different times, has been discussed in chapters (2 and 3) on international and national policy environment. Chapter 2 describes the emerging focus on women in the changing scenario of international water policies, and Chapter 3 speaks of the national water policy and programmes, and points to the limited recognition of women in these programmes despite India being a signatory to most of the international policies and agreements discussed in chapter 2.

Secondly, the institutional factors that shape implementation strategies and approaches have been analysed through the study on SEWA and study of water governing bodies of Gujarat. These are dealt within the chapters on Gujarat and SEWA (chapter 4, 5 and 6). Chapter 4
delineates the state water policy environment, and programmes and issues in Gujarat. Significantly, the research in Chapter 5 and 6 on SEWA has been described in words rather than numbers and for the collection of this data qualitative research methodology was chosen in order to be able to study the people in the 'field' in their natural settings. Chapter 5 deals with SEWA as an organization and its initiative of the water campaign in Gujarat. Chapter 6 deals with the case studies of three districts from among the water campaign districts as discussed in Chapter 5.

Thirdly, an evaluation of how water systems are managed by men and women in communities leading to empowerment of women at the grassroots level has been dealt in the Chapters 7. Here the field study of the villages in terms of quantitative data that was collected at the village level to assess the degree of women's empowerment through participation in water governance as a result of SEWA's intervention for community water management initiatives.

Finally, the Conclusion provides a summary of the main findings of the research shaping the issues raised at the onset and consolidating the possible linkages. It suggests three things in particular. Firstly, at the theoretical and conceptual level for developing a model on good governance through the process of democratic decentralization, the role of the state, civil society, gender and class are inter-related and it is important to take into account what men and women do and the kind of technology, capital, human labour, planning and co-operative capacity option they chose to adopt. However, although it can be stated that the gender dimension has received an increasing amount of attention in the international policy arena, the implementation of the ideas and theories, especially in the rural environment, require the further involvement of women. Secondly, the uniqueness of the study in terms of good water governance in the context of Panchayati Raj Institutions in India for empowering women including those of poor classes shows that this in fact is a viable strategy. Thirdly, the community model through women's empowerment remains the underpinning of the above analysis showing that it clearly impacts women economically, politically, socially, and at the level of their personal life. Finally, the conclusion also draws attention to the intricacies involved in the entire process that are described in the three major arguments of the thesis, as stated above.
Research Tools and Methodology

The research tools used included Participant Observation (i.e. directly gathering information by seeing and hearing) and unstructured interviews, 'in-depth', 'free style' interviews, and focus group discussions, usually tape recorded and then transcribed before analysis. Historical and contemporary records, documents and cultural products (e.g. media literature etc.) were also referred (details provided in bibliography and documents referred section). Observed events, behaviours and attitudes have been verified by independent sources (e.g. records and interviews, illustrative events and narratives). The methodology adopted ensured a comparison between and across communities to identify why some communities do better than others at sustaining infrastructures and its benefits, which have resulted through the analysis of the gender perspective, especially by understanding the role of women in drinking water management and in governance of water resources.

Research Limitations

"Rural areas are difficult, expensive and time consuming places in which to conduct investigations. Generally, a compromise has to be made in selecting the sample size, the scope of survey and the accuracy of measurement in order to provide reasonable data with the resources and time available" (IRC 1998). The remote areas of Gujarat characterised by poor infrastructure and long distances, this finding is especially true. Given the limited time and resources, a complete survey with appropriate sample sizes and with in-depth discussions in each village was not possible. Time and the constraint of long and difficult distances between villages and districts for carrying out in depth quantitative study also caused tremendous strain on the resources available at my disposal. Due to drought conditions and problems related to water, even the villagers covered under the study said that they be intimated well in advance so that they could fetch and store enough water for drinking and cooking before they could participate in research discussions! It should also be pointed out at the onset that the villages that did not have any presence of a strong external agency like NGO, the level of co-operation from the communities for data collection was quite difficult due to unfamiliarity and disinterest in research.