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**Diluted Citizenship: Women, Water and Rights in the Midst of
Inequities in India**

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Introduction

Women are largely invisible in every important sphere of Indian public life. Although the Indian Constitution ensures equality for women and men before the law, and prohibits discrimination against any citizen, women's exclusion from domains of decision-making permeates through every section of the Indian society. This near invisibility and exclusion of women is most apparent in water management in India. The view of water, seen as a physical resource and national good, and to be planned and managed by the State, often neglects the fact that women are the primary water managers and educators, and are important as small-scale farmers and irrigators. However, many of the constitutional provisions have not yet translated into real empowerment for women in India; Agarwal's seminal work in 1994 showed that the lack of rights to land and water lie at the core of disenfranchisement of women in a natural resource management sector such as water. At the same time, global development and donor organisations and institutions have called for the inclusion of gender concerns in all sectors related to water management to highlight the agency and voice of women.

Taking lead from Agarwal's argument and the recent global articulations and initiatives, I intend to draw the connections in this paper between gender, water and law in India in view of the unequal status¹ of women as compared to men, draw attention to the various roles women play in water management and the emerging issues, and highlight why it is important to bear in mind the specific gender needs and interests in making water management plans. Putting on a gender lens, noticing women as well as men dealing with water, especially in thrashing out the various social and cultural impediments in enhancing gender equity can only improve future water management practices in India.

The paper is arranged in five parts: first I provide a brief background on citizenship and women in the context of water use and management in India. In the next section, I describe the current status of women in India and then examine how this low status impacts on the various roles women play in water management and note the differences – in both formal and informal rights. This is followed by an overview of contemporary global processes and initiatives in enhancing women's agency in water management. In the final section, the paper summarises the observations, and indicate directions for future policy-making.

Women as Water Using Citizens

The universal citizenship the Constitution of India envisions all individuals with equal rights engaging with governance institutions² or the state in the public arena of political debate. The universalism inherent in this view neglects to recognise that in reality women are often excluded from the public spaces, a near-invisibility from every important sphere of public life³. It is crucial to acknowledge gender differences in all spheres of life, including the management of resources such as water, because citizenship determines rights that are institutionalised in the form of rules, regulations and the legal frameworks. In India all social

¹ 'Status', a commonplace term, refers to a composite picture of situation, expectation, rights and aspirations, of the power women wield in the family and society. Status may include the importance of one's legacy and achievements, including money, property, materials, merits, privileges, access to resources and benefits, comforts, power and decision-making autonomy, making it a multi-dimensional, dynamic and relative concept.

² Institutions comprise rules that individuals have to use to order specific relationship with one another. Ostrom (1990: 11) defined an institution as 'simply the rules actually used (the working rule or rules-in-use) by a set of individuals to organise repetitive activities that produce outcomes affecting those individuals and potentially affecting others.'

³ Biological differences between women and men are transformed into power relations and human agency, creating gender inequalities that are rooted in beliefs, attitudes, feelings, values, behaviour and activities that differentiate women from men.

relations are ‘gendered’ – that is, they are based on the notion of gender⁴. Feminists in India have pointed out that the realities of unequal power and rights between women and men, based on their gender, class, caste and ethnicity are not fully acknowledged in the legal framework that derives from the constitution⁵. Citizenship is known to be bound up with relationships and expressions of power which are always in a flux. According to Meer and Sever (2004: 2) ‘Like power relations, citizenship rights are not fixed, but are objects of struggle to be defended, reinterpreted and extended.’ Gendered exclusions arise from an imagined public-private divide that puts women’s gender roles and responsibilities as lying in the family, caring and child-bearing, and men’s gender roles as being to do with decision-making, formal politics, economics and the workplace.

The territorial gendering of space as female and male domains reduces a woman’s mobility and participation in activities outside the home, particularly market-based interactions, limits her knowledge of the physical environment and disadvantages her in seeking information on new production technologies and practices. Such a divide sees women’s concerns as family and not as public or community/national matters, and frame the rights and ‘common good’ in the interests of men on the powerful groups in the society (Kishwar, 1999). The divide also creates separate institutions to structure the two separate social realms and to define their interactions. Laws are one part⁶ of such institutions, creating expectations of behaviour by imposing form and consistency on human activities, both constraining and enabling them. When laws pertain only to the public domain inhabited only by men as producers and economic actors dealing with resources, they relegate individuals and groups, in this case women, and their actions to the domain of the unimportant, informal or sometimes even illegal.

This near-invisibility and exclusion of women plays, amongst other aspects of life, a crucial role in water management in India. Water, most commonly seen as a physical resource and a national good, continues to be planned and managed by the State⁷ for the envisioned benefit of ‘all members of the society’. This Statist view of water either sees all citizens having the same needs and interests or put women as primarily being water users at home. These representations are embodied formally in laws or informally in the various dealings of the State with its citizens. The imagined equal power and voice of women and men envisions a homogenous ‘community’ subsuming and neglecting gender-based issues and concerns in the water resources are managed by the State. Often, the rights and institutions that confer these rights belong to the formal domain tending to prioritise men’s views and concerns.

State-controlled modes of water governance relegate the traditional and informal institutions of management. This began in India during the colonial times, as David Mosse has shown in his research on the tanks in South India. According to Mosse (2003: 303), ‘The colonial state founded its legitimacy on its capacity to wield the power of science, technology, and rational administration to bring the uncertainties of famine and floods under instrumental control.’

⁴ Gender processes interact with class and caste in ways that we cannot define as an ‘also’ category but is an essential constituent part of these other social differentiations. Gender is a critical ingredient in defining, demarcating and structuring caste and class.

⁵ Here, I am reminded of Sunder Rajan’s (2003) comments on the apparent contradictions amongst feminists caught between the two extremes of market and State; whilst the forces of liberalisation and globalisation erode women’s autonomy, the proposal for women’s reservation in parliament indicates the wish to retain the state as a protection. In noting this dilemma amongst the Indian feminists, Krishnaraj observes (1998: 391) that there is a need to examine the record of this State: ‘We have to pause to ask the question what kind of socialist, secular, democratic republic we had whose loss we bemoan’.

⁶ Others are language, money, systems of weights and measures, table manners, and firms and other organisations (see Hodgson 2006).

⁷ I have used the term ‘State’ to mean the Indian state that has the privilege of formulating laws and determining the rights, ‘statist’ for views that reproduce governmentality associated with State, and ‘state’ for individual political units within our country.

This project of colonial modernity established an irrigation bureaucracy that created an intricate network of rules and laws to enhance the State power over resources with a polarized conception of rights and obligations, state and community, but at the same time absolving itself of any liability for the protection of livelihoods against uncertainties. The water resource policy of the post-colonial state in India has only built upon and amplified the contradictions of colonial government, and over the years became entirely unable to maintain decentralized water resources systems or protect the rural livelihoods that depend on them. The formalisation and centralisation of traditional water management has serious gender impacts; first they reinforce gender inequitable systems in the public domain by representing men's needs and interests. Secondly, by emphasising that women's water chores belong to the private domain outside of the formal sphere of law and its reach, they turn women as non-citizens. Above all, by bringing forth new formal water institutions that represent a masculinist approach in assuming superior knowledge of outside experts on water as a resource, and deny women their right to participate, to express their voice and to exercise their agency.

In engendering water managements, experts have been divided amongst themselves as to women and water. Cleaver (1998: 356) has emphasised informal structures and networks, and on management through custom and practice and through 'rules of use'. She sees women's contributions to water resource management in the informal management principles that fit neatly with local women's livelihood priorities for assured access to good quality water. According to her, formalised management principles such as committee structures emphasise restrictions on access and the importance of distributional rules. In an earlier study, Cleaver and Elson (1995) described how women's uses of water occur in the domestic or non-market sphere. This observation is indeed true for India; all over the country, women are the primary water managers and educators at the domestic level in both rural and urban areas. Women perform and teach children the rules of use: reliable and safe sources of collection, storage methods, minimal use, monitoring or policing, and preserve the quality of water.

An offshoot of this view has been an intensive scrutiny on women's reproductive health and privacy issues by the Water and Sanitation (WatSan or WSS) sector, with billions of dollars being spent on this area. This is indeed a crucial area that can improve women's lives, especially millions of rural or urban poor, who are forced to live in increasingly congested conditions without clean and adequate water for drinking and washing-cleaning, and latrines with running water for defecation in privacy and environmental health. However, the excessive emphasis on water and sanitation and health of women in developing countries (as opposed to Integrated Water Resources Management) has been condemned. Critiques of International Water and Sanitation Centre's approach to gender issues in the sector of WSS have drawn attention to the fact that WSS has received by far the greatest attention from development experts (Khosla 2003).

This attention probably reflects the technocentric ideologies that dominated in the past and continues to form the backdrop of developmental interventions in the public health area, and that the reasons and evidences are located in a formal and positivist domain where medical data can prove the absence of health amongst women as compared to men. To those women in India who are without access to clean, safe and adequate drinking water, who are always in contact with polluted waters, who are affected by the lack of sanitation, such a critique might appear as unrealistic. Yet, the popularity of this approach continues to overshadow women's productive roles, by enhancing the representation of women as mothers, wives and daughters belonging only to home, essentially as non-productive citizens.

Consequently, this view has been strongly contested by Zwartveen in her various works (see for example 1995; 1997), who puts the emphasis on women's productive uses rather than reproductive related uses at home. Another important source of contribution in the field has

come from Meinzen-Dick et al (1997) who have consistently focused on property rights issues relating to water and emphasised, besides intra-household disparities in rights, that many of the rights women have over water are non-formal, unwritten, traditional and beyond the legal domain. For our present purpose, especially in outlining the legal and policy implications for India, I contribute to assert this view: that women contribute significantly to the water sector in their roles as farmers and irrigators. Women are also important irrigators in terms of their numbers although they continue to remain concentrated in traditional or small-scale irrigation systems. 33% of workers in the agricultural sector are women, most of them being in rural areas; nearly one-third of agricultural workers in India are women⁸, and most rural women tend to produce some crops for the household as a measure of food security, managing an enormous amount of water in this way⁹.

However, the crops produced by women or waters managed by them tend to remain receive very low or zero priority from irrigation analysts. In fact, the single biggest impediment in making water as a resource to empower women lies in the lack of recognition of women as irrigators and water users. A study by Meinzen-Dick and Zwarteveen (2003: 154) on gender participation in water users' associations found that the biggest barrier to women's participation stem from membership rules that directly or indirectly exclude women. These rules stipulate that only formal right holders to irrigated land can become members or require head-of-household status in order to be eligible for membership, or sometimes a combination of both.

Prevailing stereotypical ideas about the gender division of labour and about appropriate male and female behaviour function as informal recognition as farmers and irrigators. These representations see women as the archetypal 'water carriers' – long queues of women at a well or along the horizon wearing colourful saris and buckets over their heads. Although they provide a symbolic icon of feminine burdens of water – fetching it in heavy containers, transporting it over long distances, and spending great amounts of time in water chores such as washing-cleaning – they obscure the economic agency of women in these jobs as well as in jobs at the farm.

A study undertaken by Upadhyaya in Gujarat (2004) to examine gender roles as both domestic activities and productive water users to show these roles help women to improve their socio-economic status. She found that costs of labour hours for women are not considered as 'real' costs since women are not paid for their contributions. Also, although women are significantly involved in irrigated agriculture, the revenues earned are entirely controlled by men. Women also receive the brunt of the ill-effects of deteriorating water quality, of excesses or scarcities, such as those during draughts and floods as the main bearers of impacts.

The fact of women's involvement in work in particular needs to be seen as a critically important issue in water management; it is well-known that the labour of women is concentrated in the rural areas and in marginal jobs¹⁰. Krishnaraj and Shah (2004: 44) identified four important aspects of women's work in their Millennium Study of Women in

⁸ As per 2001 census, 41.3 million of 128 million total agricultural labourers officially reported.

⁹ Ramachandran (2006: 3-4) observes 'Across South Asia ... women on an average account for about 39 per cent of the agricultural workforce (2000). ...However, official statistics often grossly underestimate the female workforce in the region. Women's work, in the household, the farm or the commons is labeled as household chores and not given the status of work. The sectoral distribution pattern of the female workforce reveals that the agricultural sector employs over two-thirds of the women workers in all South Asian countries.... In addition, what makes women's contribution to macro level food security even more significant is the fact that in most countries, women, by choice or restriction, focus largely on subsistence production of food crops, be it on farms or in home gardens, whereas their male counterparts tend to diversify into commercial farming.'

¹⁰ Women account for about 65% of household food production in Asia, playing a critical role in agriculture managing land, water and livestock resources.

Agriculture: predominance of rural workers, the dominance of primary sector in rural areas, a significant set of subsidiary workers within the primary sector, and higher incidence of casual labour. The same study also noted the impacts of mechanisation and the use of technology as in fact having a positive influence as more women become employed in farms.

Land rights and women

However, the water burdens of women do not lead to their active roles in water governance; in most cases, the range of duties performed by them does not translate into decision-making power in water management. More than the gender specificity in the uses of water, gender differences with respect to access to and control over water resources need to be taken into consideration especially in view of the changing water policy context. This fact has been noted all over the world by water professionals, and has been attributed to the generally lower social, economic and legal status of women as compared to men all over the world. India is no exception to this general pattern, and the lack of women's ownership rights over land lies at the core of disenfranchisement of women in a natural resource management sector such as water. The conceptual links between gender and property derived from the gender and land rights debate apply to water, and other wider natural resource, rights. This point of view has been put forth by Agarwal (1994: 2), who notes:

Land defines social status and political power in the village, and it structures relationships both within and outside the household. Yet for most women, effective rights in land remain elusive, even as their marital and kin support erodes and female-headed households multiply. In *legal* terms, women have struggled for and won fairly extensive rights to inherit and control land in much of South Asia; but in practice most stand disinherited. Few own land; even fewer can exercise effective control over it. Yet the voice of the disinherited female peasant has until recently gone largely unheard, not only by policy-makers but also by grassroots groups and academics.

Indeed equality in land rights is the most critical element in women's economic empowerment and in challenging the various social and political inequities that women face on a daily basis in India. Gender equality in inheritance must be promoted as most agricultural land is privately held¹¹. A sample survey (Chen 2000) in seven states of India found that of 470 women with land-owning fathers, only 13% inherited land as daughters. This survey observed that 87 percent of the surveyed women did not receive their legal due as daughters, and half the widows with legal claims did not inherit any land. Of those that did, typically their shares were not recorded formally in the village land records. The popular perception in India is that the widow's share is for her maintenance and not for her direct control or use. Again, widows without sons can rarely inherit. FAO (1996) note: 'Land rights can serve multiple functions in rural women's lives, which are not easy to replicate through other means.' The analyses of gender inequalities and property rights, therefore, form the core of the arguments put forth in this paper.

I draw on the point raised by Agarwal (2002) that property rights are at the heart of increased bargaining power of women either as a group or as individuals. Conceptualising citizenship in a gendered manner, ensuring gender equality is central to development goals. Yet, women continue to be seen as non-participants in production, with no legal claim or right to land and all the status and power it can bring. Land reforms have also targeted men as the household head, excluding women from legal tenure, which affected their claims to water for irrigation and for participation in community institutions.

¹¹ In India, for example, 86% of the arable land is under private ownership.

Although purely patrilineal inheritance laws no longer exist¹², notable gender inequalities remain in both the Hindu and Muslim communities in terms of agricultural, that is productive, land, joint family property, unequal shares, and in the gap between legal rights and actual ownership. Consequently, even for State transfers of land as part of land reform programs, resettlement schemes for the displaced, or poverty eradication programs, women remain invisible. Gupta showed (1993) that in a village in Midnapore district of West Bengal, 98 percent of the land distributed under Operation Barga scheme¹³ went to men, and in nine out of ten female-headed households, the land went to the women's sons. At the same time, one must note that having land right might not automatically translate into the ownership rights of water, as water rights are generally vested in the state in India, with the land owner having only user rights. This is where questions of class enters the debate; as the richer and the more powerful tend to have better access and technology to withdraw water from own land and the commons¹⁴.

Water rights and women

Although the question of water rights is closely intertwined with land rights and obtained through them, Zwarteveen (1997: 1335) emphasises that 'water is quite a different type of resource than land. The analysis of gender and water rights, therefore, requires a basic understanding of the nature of water as a resource.' This difference arises out of the fixed or static nature of land, whereas water is fluid or dynamic, it flows over or under the land and can move away from one's land to that owned by someone else. For example, this fluid nature of water resources means difficulty in drawing a specific border, and can result in upstream-downstream conflicts in riparian rights. For water, the riparian rights are gathered over time; besides this, the other type of rights is gained due to the access to the resource itself. Right determination, according to Singh (1992) becomes necessary if a resource is not freely available; conferring water rights is an important measure or an institutionalised principle to regulate water use and minimize conflicts. Informal rules and regulations have evolved over a long time reflecting the social, economic and political structure, influenced by the local geographical and technological situations. State laws, by not recognising these informal rules and regulations, have stripped the communities from many of the water rights that they have enjoyed in the past, and appropriated these rights. Rajagopal and Janakarajan (nd) note that water rights are institutional time-tested arrangements evolved in order to enable a user community to act, interact and manage a water system. The welfare State, following the example set by the colonial State, created new institutions that excluded the local community from its water rights, and above all, relegated women as the invisible citizens. This is not to say that all traditional or customary modes of water governance are necessarily gender-equitable, this is exemplified by recent research on the traditional water institutions (see Jha's , 2004, comments on sexual division of labour creating gender inequities in Subak¹⁵).

¹² The Hindu Succession Act of 1956 made sons, daughters and widows equal claimants in a man's separate property and in his share in the joint family property. Similarly, the Muslim Personal Law Shariat (Application) Act of 1937 substantially enhanced Muslim women's property rights in India as compared with those prevailing under custom.

¹³ This major land reform initiative was taken up by the Communist Party of India (Marxist) led Left Front after coming to power in 1977. Operation Barga sought to secure the land rights of tenants by systematically registering them.

¹⁴ For example, lowering of the groundwater table through indiscriminate withdrawal of groundwater is an intervention in the commons; it is not uncommon for a water scarcity to result from such use by the richer either in cities or in the villages.

¹⁵ As noted by Jha (2004), the ability of decision-making is a right that is manifested in both the tasks and roles that women and men play, the freedom to make decisions being central to the idea of participation.

It needs to be emphasised that property rights are far more than just pieces of paper specifying the legal ownership of land or other resources. It also needs to be noted that property rights are most commonly seen on the basis of the household, where the rights rest on the *de facto* or *de jure* male head. In reality, there are differences amongst the individuals within the household with regard to their gender, age or other intra-household characteristics. According to Meinzen-Dick et al. (1997: 1303), property rights ‘encompass a diverse set of tenure rules and other aspects of access to and use of resources. If we understand property rights to an individual’s capacity to call upon the collective to stand behind his or her claim to a benefit stream, then property rights describe relationships between people.’ Women can gain land in three ways – inheritance, state transfers and the market. Of these, inheritance is the most crucial in legal terms although it is impossible to clearly determine what proportion of women in India inherits land in practice as land ownership data is not gender segregated.

Several international institutions have recently called for a greater involvement and participation of women in water management. The thrust of many of these agencies is on the recognition of water as a human right for women. The Gender-Water Alliance (GWA), established in the Netherlands after the World Water Forum in The Hague, recognises that access to safe and adequate water is a right for all women, and that women must have a voice in governing water resources. Consequently, the Global Water Partnership (GWP) has outlined the key principles underlying the philosophy of water governance as: ‘Women should be regarded as central to the provision, management and protection of water resources and services’ (GWA 2006). However, before we deal with the global trends in engendering water management, let me outline the inequalities that women in India encounter in their everyday lives. This is an important task because often we mistake law as being equal to all citizens, implying in water management that governance systems are equitable to both women and men.

The Indian State and women

The Indian State has constitutional guarantees to women’s equality. There have been significant state efforts in promoting women as agents and political actors in India; the constitutional amendments reserving one-third of seats for women has enhanced women’s political participation resulting in the presence of about 800,000 women in local governments (Agnes, 1999). India was one of the countries to give women the right to vote at an early date. Commitment to freedom, equality and social justice lie at the core of India’s nationhood, ensuring equality for women and men before the law, and prohibiting discrimination against any citizen in Articles 14, 15, 15(3), 16, 39 (a, b, & c), and 42. From time to time, the state has sponsored reports, established commissions, participated in international forums and subscribe to international norms of gender equality (see Sarkar, 1998).

Yet, today in most parts of the country, women comprise a disproportionate segment of the chronically poor population, face gender discrimination throughout their lives within the family, society and at places of work, have low levels of control over property and resources, and bear shocking burdens of work. Ramachandran (2006) has pointed out that this is because large numbers of women essentially provide food security and subsistence for the family. These realities of life are clearly evident in the water sector: whereas women are the primary users, all water management plans tend to cater towards the needs of an imagined ‘citizen’ who is almost always a male - a farmer needing irrigation, making decisions with regard to water use, and belonging to that elusive public arena that is devoid of the presence of and deliberations on women’s needs.

The deprivation of women operates in a subtle way, because women are technically equal. This brings to light that the gender inequality has to be viewed in light of capabilities. As Nussbaum (2000: 14-15) put it: 'India's Constitution is a very woman-friendly document. The right of non-discrimination on the basis of sex is guaranteed in the list of justiciable Fundamental Rights, as is the right to the equal protection of the laws – which, as in the U.S., has been interpreted to be incompatible with systematic gender-based hierarchy. Article 21, which states that no citizen shall be deprived of "life or liberty": without any due process of law, has been interpreted as entailing the full range of privacy-right judgments....India has a uniform code of criminal law, in most respects a relic of the Victorian colonial period...But the code's Victorian understanding of women (as either modest or depraved) is ultimately a barrier to full sex equality'. Putting on a gender lens, noticing women as well as men in every aspect of their lives, especially in view of thrashing out the various social and cultural impediments in enhancing the equity that is enshrined in the Constitution, is a necessary task that can only improve future water management practices if taken note of by the policy-makers.

Gender Inequities in India

Let us begin by taking stock of the inequalities first. This is crucial as 'the status of women', measured by international standards and indices, reflects a nation's priorities in the health, welfare, development, enforcement of legal rights, and protection of women and thereby indicate its unequivocal responsibilities in these areas. Sunder Rajan notes (2003: 2): 'The gendering of citizenship draws attention to the way the state constructs "women" – primarily in their difference from men by formulating laws and policies specific to them, but also by differentiating among them..... But equally, though within a different schema of political identity, the rights of "citizenship" propel women into an equal and "same": identity with men and with other women, which is necessarily contradictory in its effects.' The Indian state's performance in making women equal citizens with differences has been dismal. The deprivations suffered by women begins from a woman's right to life itself, and continues on throughout her life, at childhood in her parental home caused by explicit son preference, at her youth and middle age in her in-law's home as a discriminated housewife till her death.

FMR and other statistical indicators

This inequality is evident from simple demographical statistics such as the rapidly declining proportion of females in the 0-6 year range and low FMR (Female-Male Ratio also known as the sex ratio – number of women per thousand men) values¹⁶. Martha Nussbaum (2000: 2) noted: 'one might sum all this up by saying that all too often women are not treated as ends in their own right, persons with a dignity that deserves respect from laws and institution. Instead they are treated as mere instruments of the ends of others – reproducers, caregivers, sexual

¹⁶ The FMR values have been steadily declining from a high of 970 women to 1000 men in 1971 to around 933 per 1000 men in 2001. This is indeed a slight increase over the previous census year's (1991) figure of 927. First of all, one must remember that there are wide variations of the sex ratio, depending on state (the state of Haryana being the lowest at 861, and Kerala highest at 1058), and amongst the religious groupings (Sikhs having the lowest at 786, and Hindus at 925, Muslims 942). However, a closer look at the child sex ratio, which gives the sex ratio of the child population between 0-6 years of age, reveals that the sex ratio has actually gone down from the 1991 figure of 945 to 927 in 2001. It has been noted that nearly 150 million more women would be alive in India today if not for the neglect and sex-selective abortion of the girl child. This is the much debated phenomenon of 'missing women', pointed out by Amartya Sen. Agnihotri (2000) has shown that the sex bias does not end at the age of 6 as envisaged; the sex ratio for 5-9 year olds are considerably lower than 0-4 year olds (942 as compared to 976). The FMR is taken as the strongest evidence of gender bias in India; other indicators also reveal that the picture is highly skewed and heavily biased against women. The experts attribute this gender bias to differential nutrition, unequal health care, and even infanticide of girl children as a result of son preference. Similarly, in education the gap is wide; in adult literacy or in under-5 life expectancy.

outlets, agents of a family's general prosperity. Sometimes this instrumental value is strongly positive; sometimes it may actually be negative.'

The low status of women as compared to men is primarily reflected in their lack of rights and ownership of resources, and huge work burdens. In household and family relations, the gender inequality takes the form of violence against women being community-sanctioned, as 'just another form of violence'¹⁷. In production relations the gender inequality takes the form of the appropriation of women's household work. In labour relations it takes the form of discrimination in wages, inadequate access, ownership of and control over productive resources like technology, skills, education, assets like land and credit, information and mobility¹⁸. Although women are expected to work continuously, their participation in the public domain remains restricted by families; if at all they are represented as mothers, sisters and daughters, whose entitlements are subject to community norms and arbitrated by custom, kinship and family. Such inequalities of gender are strongly correlated with poverty, leading to a failure of human capabilities.

In general, women in India are characterised by a high fertility rate (and a high maternal mortality ratio per 100,000 live births of 566), early marriage of girls, excessive childbearing, lack of control over own bodies combined with a high level of illiteracy adversely affecting their health and a causing higher HIV/AIDS prevalence rate (0.5% as compared to 0.3%), intra-household bias in food distribution leading to greater nutritional deficiencies among female children than male children. Improvements in women's literacy have remained low and the disparity between male and female literacy has remained wide. The net primary school enrolment rate is 88% for males and 75% for females but the primary completion rates reveal that only 71% of females are able to complete their education as against 84% males.

Women's low status is a hindrance to development

The World Development Report of 2006 (p. 29) notes the importance of health in dealing with the inequities: 'Alongside the intrinsic importance of health as a dimension of welfare, poor health can directly influence an individual's opportunities – his or her earning capacity, performance at school, ability to care for children, participation in community activities, and so on. This important instrumental function of health implies that inequalities in health often translate into inequalities in other dimensions of welfare. And these inequalities are reproduced over time'. A similar importance can be attributed to education, when assessing inequalities of opportunity, making it an important determinant of individuals' income, health and capacity to interact and communicate with others. Education is known to be the key to building women's capabilities, a key strategy for gender equality and women's empowerment by expanding opportunities for women, by equipping them to make more informed choices and empower them to resist oppression (UNDP, 2005). In India, millions of women are living with the consequences of not having adequate education or of being illiterate. The poor levels of literacy amongst women are caused by multiple factors (UNDP, 2005: 12-13). Patriarchal attitudes define girls' destiny in terms of marriage and family, resulting in the parents' failure to see value in investing scarce capital in educating girls. Indian women in general are caught in a vicious 'inequity trap': gender differentiated access to assets and opportunities are

¹⁷ An Oxfam Briefing Paper published in 2004 notes that in India, 80% of women experience violence within their homes. Every six hours, somewhere in India, a young married woman is burned alive, beaten to death, or driven to commit suicide. It is estimated that more than 15,000 women suffer from dowry-related violence every year. In another nation-wide survey in India, nearly 50% of women reported at least one incident of physical or psychological abuse in their lifetime UNIFEM, 2003).

¹⁸ Krishnaraj, Maithreyi and Amita Shah, 2004. *State of the Indian farmer: A millennium study, Volume 25, Women in agriculture*, Government of India, Ministry of Agriculture and Academic Foundation, New Delhi.

reinforced by unequal norms and social structures, perpetuating gender differences over centuries.

Yet, women are at work throughout India, comprising a significant part of the workforce in India, with an overall labour force participation rate of 33% as per the 2001 census. However, the data on workforce participation take into account mainly the organised forms of work, and fail to fully reveal the extent of women's economic contribution. In rural areas, a large proportion of women are employed in agriculture as labourers and cultivators. In the urban areas, women are employed in the informal jobs such as small factories and household industries, petty trades and services, buildings and construction. Women also account for a greater share in the care economy or home-based work which is difficult to measure. Gender division of labour prevails in all sectors of employment. A large number of rural households are now *de facto* female headed (about 25 %), whether due to widowhood, desertion or male out-migration, especially in the hilly and backward areas. Yet, the national focus of policies and programmes, have been more on employment generation for women rather than ownership and control over resources and give least importance in addressing their priorities or involving them in decision-making roles.

Despite the fact that the Constitution provides legal equality for women and men, social and economic equality between the genders has yet to be achieved in India. This is why many Indian women continue to remain at a lower status with low literacy and poor access to resource and facilities. Throughout India, women comprise a disproportionately large share of the chronic poor population, facing gender discrimination throughout their life within the family, society and at the work place. Gender discrimination starts from the fetus, in terms of the selection of sex, child-bearing, feeding, education, employment, control over property and resources, and eventually in the participation and influences decision making in public and political spheres. Women in Indian society are burdened with heavy workloads; while they have lower status compared to men, they are ascribed the heavier, manual, unskilled jobs whether at home, in the farm or forest, or in the mines. Fertility rates are high, primarily due to factors such as, early marriage, son preference, low access to contraception, low job participation in formal sector and such others. Consequently, it has been difficult for women – especially in rural areas - to organize themselves and sustain movements to claim their resource rights.

Women and Water Rights: Emerging Issues

I have described how Indian society is dominated by caste, class, religion and ethnic interests, gender being a cross cutting factor right across these issues, and if water governance is addressed from this standpoint, a whole new dimension is added to this problem, especially in the rural areas. Crow (2001) noted that the water rights are mostly with the richer classes, whereas the poorer farmers are exploited and deprived. The rich continues to have better access to the productive possibilities of irrigated agriculture. The poor have not only low access to land-based resources but also water, further reducing their livelihood options. A National Academy of Agricultural Sciences report published in 2005 put the question of ownership at the heart of the issues related to water management in India (NAAS, 2005). In its recommendation, the report clearly states that water, as a resource, should not be made a private property, and also that its 'common property resource character' can be changed by transferring the control of water to local communities or user groups. At present, water access mean the private ownership of land and pump for access to groundwater or adjoining water courses. These private sources are mostly available among the upper class and better off farmers and the landlords. The poor use the water from the village 'commons' – the rivers, ponds and public tanks through some form of communal rights of access and use.

Linking women to the main canal

Differences in access to water between women and men are theoretically and legally equal but in practice rooted in the gender inequalities that ensure sexually based roles. In many parts of India women and children are burdened with the responsibility of collecting water for drinking and cooking, and for other household needs, as well as for productive activities occurring near the home, such as livestock-rearing and market gardening. Domestic water seems to receive a lower priority to that needed in fields and industries; this represents a gender bias in that what are perceived as 'men's jobs' are given priority and hence the resources they need made more easily available. Shah's (2006: 172-3) interesting story from his travels in rural Gujarat amply brings out this myopic vision and misplaced priority of water engineers:

We were travelling in the command area of an irrigation project. As we approached, the accompanying engineer told me that they regularly tried to dissuade women from using the canal water for such purposes, but 'somehow they manage to reach the canal and use it for *their* purposes'. However, when I asked them why they were using the canal for washing clothes, the women claimed there was no other convenient arrangement in their village and they preferred to walk the 2 km to wash their clothes in running canal water. Their reply made the engineer uncomfortable.

I asked the women if it was convenient to wash their clothes in the canal. They replied, 'It is better than what we have in the village. Of course it is difficult to wash clothes on the sloping side of the canal. I asked what kind of arrangement they would like if the government was ready to help. The women replied, 'Some kind of platform made of flat stones on which we can sit and wash clothes, using the canal water.'

The little incident narrated in the story sums up the issues: that domestic needs of water in most villages are less of a priority as it is seen as women's business, that canals are meant for men who make decisions related to water, and that state officials responsible for the management of water through large canal systems are entirely blind to the gender-based water needs of women. Zwarteveen (1995) identified two main areas of the differential impacts of irrigation on women and men: the first set related to the allocation of labour, land, water and other resources, maintenance and participation; and the second set related to the use of the outputs of irrigated agricultural production, that is, consumption, storage and exchange or sale.

Failing to address these issues in the decision-making related to irrigation may undermine the value of the project itself. In her words (p. 9): 'the non-involvement of women, or of their needs and interests, in irrigation management has become a self-fulfilling prophecy. Because irrigation is commonly seen as a male activity, and because women are not seen as direct stakeholders in irrigation systems, they have become excluded from efforts to organise water users. Since women's specific concerns thus remain outside the formalised decision-making processes, they are often not recognised as "real" concerns and remain marginal.' Again, it is clear that gender roles play the most crucial factor why both women and men's needs and interests must be taken into consideration; according to Zwarteveen (1995: 7): 'Some of the ways in which irrigation affects women and men will be reflected in their differential needs with respect to the irrigation system's outputs.'

Output measures assess the nature and quality of irrigation services delivered to farm households, services which will in turn be important in determining production, income and other livelihood indicators.' She notes that irrigation project can fail if they do not take into consideration both women and men's needs in ensuring: the adequacy of water delivery, in

the equity in the spatial distribution of water across the system, in the timeliness and convenience, and water quality which again is a major concern for women¹⁹.

Why women in water management?

Why should gender be a central concern in water management? The answer is still not quite clear to many water planners, policy-makers and engineers. This is particularly because of the confusion over ecofeminist claims in recent years that generated considerable interest on the close relationship between women and their environmental elements in India. A series of documents and publications in the 1980s (for example Dankelman and Davidson's 1988 work; Rodda, 1991) put forth the view that women are the household and local level users and managers of the environment because of their reproductive and subsistence-focussed activities. This view came to be known as ecofeminism which claimed that these works performed by women involve them closely with the environment and its resources, making them more dependent and giving them distinct interests in the natural resources especially as sources of food and fuel (Mies and Shiva 1993).

Another, similarly sourced, idea claimed that women were the primary victims of environmental degradation; for example in tracing the ever longer walks to the water, during water related disasters such as floods, and bearers of impacts of displacement and resettlement in dam projects (Mehta and Srinivasan 1999). Consequently some development practitioners and experts began to see all 'women' as the key to understanding the environment and its conservation (Shiva, 1988; 1989) in spite of repeated warnings of the inherent faults in such claims (Leach, 1992; and Jackson, 1992; 1993 for critiques of ecofeminism).

The creation by ecofeminists of a mythical, nurturing woman has served to alienate men who refused to see the urban, educated and middle-class women as carers of the environment or with a special relation to it. In the water sector, it has added to the continued representation of women from developing countries as victims of poor water and sanitation, and has drawn the attention away from the core issues of gender equality and women's empowerment. However, according to Leach's recent work (2007: 68), 'poorly conceptualized and inherently fragile' as this 'Earth Mother myth' was, 'the idea of women's inherent closeness to nature' also served strategic interests. The additional responsibility of being caretakers of local ecology ascribed to women without taking into consideration their access to and control over resources, knowledge, information and decision-making systems is arbitrary and does not empower women.

The emphasis on women's participation in co-management has accompanied a renewed focus on poverty, which in turn has tended to be gender-blind, promoting images of undifferentiated, consensual communities or 'the poor'. Commenting on this current absence of gender, Leach notes (p. 81) that whilst some of these studies have been influenced by discussions on resource rights or the sustainable livelihoods approach, and that 'there is little evidence of a well conceptualized gender relations perspective' in policy literature.

¹⁹ The example is interesting and enlightening. Zwarteveen (1995: 6) notes: 'Very often the main irrigated crop is controlled by the male member of the farming household. Women will often contribute labour to this crop, but very often they also grow crops of their own. These crops may be used for consumption, or they may be sold to provide women with a personal source of income. When there is an opportunity to do so, women will make use of irrigation water to grow these crops. They may take water directly from the channels or sometimes they use drainage water. However, these crops grown by women are often not considered the 'main' crop, or sometimes it is not even realized that they are grown. As a consequence, their water requirements are seldom taken into account when devising water delivery schedules. In some cases, the use of irrigation water for growing crops other than the planned one, or for using water on plots outside the designed command area, will even be considered illegal.'

In water management, this is particularly true as the crucial issues of rights and resource access must be acknowledged in relation to gender. This has been indicated by feminist scholars in India time and again; a recent example can be cited from Kerala where the state's record of literacy, health and demographic performance are almost equal between women and men. Kodoth (2004: 1911) has shown that social development built upon and strengthened a patriarchal conjugal framework of property relations, within which women's property was anchored to marriage and to the marital family, which did not give women independent rights to property.

Bringing Women into the Mainstream of Water

When marginalised groups, including women, but especially those women from the marginalised groups, tend to remain excluded from the development processes, it creates a situation of economic dependence. This makes possible the exclusion of women from rising to positions of power by themselves, creating a vicious cycle of exclusion, dependence and powerlessness. The deeply ingrained social attitudes to women play an important role in making this exclusion possible. Researchers have found that 'effective, efficient and equitable management of water resources is only achieved when both men and women are involved in consultation processes, in the management and implementation of water-related services' (Derbyshire et al., 2003: 1). Yet it is still not common for policy-makers to consider who will require water, for what purposes, at the household or community levels, and what effects regulations and legal instruments will have on these uses and user-groups (Wijk et al 1996).

A similar stream of thought goes back (2001) to the statement made by a conference in Bonn: 'Water resources management should be based on a participatory approach. Both men and women should be involved and have an equal voice in managing the sustainable use of water resources and sharing of benefits. The role of women in water related areas needs to be strengthened and their participation broadened' (Inter-ministerial Conference on Freshwater, Bonn, Germany 2001). The question that arises has been put forth by Maharaj (2003: 4), 'How do we strengthen the role of women and ensure they have an equal voice and choice?' In the next section, I will show how the development institutions have globally worked together towards an answer to this question. The recent efforts by them might serve as an example for policy-making in India.

Hydrofeminisms

Development institutions have played a major role in bringing gender issues to the foreground of water-resource management. These agencies began to locate gender in water with initiatives in the water and sanitation sector, emphasizing the need for accessible, clean and safe, drinking water and sanitation needs for women in poorer communities. The focus, for example, of the United Nations during its International Drinking Water and Sanitation Decade (1981-1990) was on 'clean drinking water and sanitation for all by 1990'. The 1992 Dublin Principles were an attempt to concisely state the main issues and thrusts of water management (Solanes and Gonzalez-Villareal 1999: 6).

While this principle recognized that 'women play a central part in the provision, management and safeguarding of water', Principle 4 states clearly that water 'has an economic value in all its competing uses and should be recognised as an economic good'. Consequently, during the 1990s, water policies changed drastically with the neo-liberal economic agenda, and as the market moved in, there was an initial disarray between privatization of water supply, decentralization, demand management, and integrated water resource management. The global commitment to 'water for all', community participation (and the inclusion of women) and the empowerment of women was somewhat lost in the shuffle.

The United Nations Conference on Environment and Development (UNCED) endorsed Agenda 21, which incorporated the Dublin Principles as part of its Chapter 18, 'Protection of the quality and supply of water resources', and has now come to form the baseline for sustainable development particularly of water resources. The Gender and Water Alliance (GWA) was created at the Second World Water Forum in The Hague in 2000 'in recognition of the fact that that the water sector had been a technically-driven engineering project that did not recognise and incorporate the different social relationships and roles of women and men, poor and rich communities, and minority and majority cultures in the provision of water and sanitation services' (Khosla 2003: 3).

Finally, the international agencies have now arrived at a consensus that participation by both women and men, not as objects but as equal partners, is essential for sustained interventions in water management (UNDP 2003). In the United Nations Millennium Declaration, Heads of States identified a number of targets for countries to meet by 2015 (popularly called the Millennium Development Goals, or MDGs). Goal three puts a great thrust on gender equality and women's empowerment; and target 10 pledges to reduce by half the proportion of people without sustainable access to safe drinking water and sanitation by 2015. Others, such as those relating to girls' education and maternal health, also touch upon gender and water.

It is also increasingly being realized that, instead of being a global public good, water must be seen as a human right for everyone (Mehta 2005). Water as a human right was originally not explicitly recognized in the Universal Declaration of Human rights, but was implicitly included as an essential factor in ensuring the universal human right to 'a standard of living adequate for [...] health and well-being' (Article 25, Universal Declaration of Human Rights). In 2002 the United Nations Committee on Economic, Social and Cultural Rights affirmed that access to adequate amounts of clean water for personal and domestic uses is a fundamental right for all people (General Comment No. 15).

While the General comment is not legally binding, it does carry the weight of a 'soft law', and governments have increasingly faced pressures from civil society organizations for adequate and regular amounts of safe water, to tackle the challenge of social and political conflicts arising from inequitable distributions of it, and to include the citizens in its planning and management (Lahiri-Dutt 2006). It is now more or less accepted that the right to water is clearly established under international human rights law: all people have the right of access to the amount of water required to sustain life and fulfill basic needs (WEDO 2003). The right to water has been identified as a component of the right to housing, the right to the highest attainable standard of health, and the right to food under the International Covenant on Economic, Social and Cultural Rights which states: 'With respect to the right to water, States parties have a special obligation to provide those who do not have sufficient means with the necessary water and water facilities and to prevent any discrimination on internationally prohibited grounds in the provision of water and water services. ... States parties should take steps to ensure that women are not excluded from decision-making processes concerning water resources and entitlement.

The disproportionate burden women bear in the collection of water should be alleviated' (ICESCR 2002). Human rights advocates now recognise water as a critical component of gender equality and a tool for the empowerment of women. In March 2005 the International Decade for Action, Water for Life (2005-2015) was launched to coincide with meeting the MDGs in water and sanitation. The goals of the Decade are to have a greater focus on the implementation of water-related programmes and projects, 'while striving to ensure the participation and involvement of women in water-related development efforts...'.

Besides the 'engendering' of development agenda, the other major source of gendering water came from the Water Supply and Sanitation (WSS) sector, dealing with women's health issues. Indeed, many women, especially in poor communities, are in constant contact with polluted water and affected by the lack of sanitation, thus becoming vulnerable to water-related diseases. This again reflects the prioritization of what is seen as 'masculine' jobs, keeping women's access to water and sanitation at a lower level of concern that I have discussed earlier in the paper. Global meetings (eg UNICEF's World Summit for Children in 1990 and 2002, the 1996 Habitat II Conference in Istanbul, and the 1995 Beijing Fourth World Conference on Women) have given top priority to water and sanitation. As noted before, this excessive emphasis on water and sanitation and health of women in developing countries (as opposed to integrated water resources management) has been condemned.

There is still a long way to go to give effect on the grassroots level in India to the principles and policies agreed at the global level. The difficulty of moving ahead often lies in designing and implementing workable and politically acceptable schemes at the local level. Much has yet to be done in this sector, and there is no doubt about it. At the same time, attention needs to be focused on smaller scale and community-based water management programs such as Integrated Water Resource Management.

Policy Implications for Water Management in India

In conclusion, I come back to the questions touched upon earlier: the question of citizenship, of property rights and of empowerment. In India, where water rights are usually obtained through access to land or through labour contribution, it is clear that women have very little opportunity of acquiring either irrigated land or water rights. As we noted before, women's access to water is in most cases mediated through their husbands and male relatives, and women as a rule do not have official or legal entitlements to water in the form of water rights. Women also lack formal access to water users' organisations or formal or market-based means to enforce their water rights. In the absence of formalised legal rights and powers, women are often forced to rely on informal and at times illegal means to fulfil their water needs. How far they are able to do so depends on whether or how far these needs are recognised by the state; for example, in case of water and sanitation, the strong connection to reproductive health and generational impacts makes it easier for the needs to be recognised as valid.

Women's lack of formal access to water is unacceptable, particularly in view of the rise in the numbers of de facto women headed farms in rural areas as a consequence of male migration to cities. Under such a circumstance, a large part of the actual water distribution would occur in the informal domain, outside of the legal framework. Zwarteveen (1997: 1346) noted that attribution of individual water rights to women would have similar effects as the access of any productive resource to women: increased well-being, improved bargaining position and increased efficiency and productivity.

It is feared that privatisation of water would impinge negatively upon women's livelihoods and reduce bargaining power instead of enhancing them. This has been most eloquently expressed by Shiva (2002). Market-based water transactions and governance modes will rely on traditional gender roles that have made women and girl children the water carriers in the first place. Inadequate access to water would increase women's burdens as caregivers and household providers, depleting their roles as economic agents. Evidences are pointing towards women being seriously affected by water privatisation as they comprise the majority of the poor. This is due to the gender inequalities and asymmetries in power relations mentioned before. As power at the household and society is concentrated in the patriarchal structure of society, and women are deprived of rights over productive resources, they are assigned the most menial, difficult and unrewarding tasks. Liu showed how private property regimes perpetuate and can intensify gender inequalities by marginalising women in the

monetised economy. When a price is put on water, and when domestic or reproductive uses of water do not generate incomes directly, the benefits are not captured in conventional economic indicators (cited in WEDO 2003).

The objective of any water policy must be responsive to women's water needs, especially in the current context of increasing scarcity, privatization, and search for measures to increase the productivity of water use. As long as women's water needs are not visible and considered to be legitimate at all levels of policy-making, sustainable, efficient and equitable use of water would be impossible to reach in India. If independent entitlements to any natural resource can enhance an individual's bargaining position, securing water rights would pave the way for empowerment of women.

The rhetoric on gender mainstreaming and gender equality extending to gendered livelihoods, poverty and environmental protection might remain a distant dream unless gender is seen in the context of different status and relational elements in which people are enmeshed. I have described how the multiple and changeable facets of gender include aspects of women and men determined by unequal status and power in the eyes of law. Sexual division of labour, seemingly 'natural' and often traditionally acceptable in societies, encourages men to appropriate women's work as men's property. In an agrarian society this leads to enormous inequalities in power in every aspect of water management – segregating women's jobs from men's jobs. Even in case of domestic water supply projects, there is a need to make water an instrument of empowerment for everyone in the society, and for this women need to be seen as more than just passive recipients but rather as active agents.

However, water resource management policy involves a problem of designing a management system to meet a set of ongoing challenges. The best system would meet the most critical challenges of the situation at hand, the situations varying with the specific type of water resource, characteristics of the resource user, and the environmental, social, economic and political context in which the resource use is taking place. In recommending this path, Ostrom et al (2003) describe this approach to resource management to a medical practice: 'Diagnosis and treatment are based on hard science as well as many individual case histories and meta-analyses of accumulated evidence from cases. However, because every case has unique aspects, as effective practitioner draws both on established principles and on knowledge of the specific case in facing the challenges of diagnosing problems and prescribe a course of action.'

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