

Sara Ahmed

Gender, Vulnerability and Disasters: Key concerns for policy and practice

Introduction

Dominant perceptions of disasters typically construct them as natural, largely environmental hazards which may occur relatively suddenly (earthquakes, tsunamis) or with some degree of seasonal regularity (drought, floods). However, disasters unfold in varying socio-economic and cultural contexts and the conceptualization of 'victims' as a homogenous group overlooks the differential ability of men, women, the elderly and children, particularly from marginalized communities, to respond. Vulnerability, a more dynamic concept than poverty, recognizes the role of interlocking systems such as, spatial (e.g. geographic location of the poor in a village), physical (infrastructure), financial (access to credit) and socio-political (institutions) in structuring individual or collective responses to disasters. Drawing on research insights from a collaborative project on adaptation to climate variability and water-induced disasters in South Asia (Moench and Dixit eds. 2004) and ongoing shared learning dialogues on disaster risk reduction this paper looks at key policy concerns in the context of disaster vulnerability. It argues that not only do we need to be better equipped to define and measure vulnerability, but that enabling vulnerable communities, especially women, to cope with or adapt to recurring annual disasters (drought, floods and coastal storms) requires a multi-faceted approach focusing on livelihood diversification, resource mobilization, infrastructure development, technological innovation and strengthening participatory decentralized governance.

Understanding vulnerability

"Development is the process by which vulnerabilities are reduced and capacities increased," (Anderson and Woodrow 1988).

Although there are multiple understandings of the concept of vulnerability, the Hyogo Framework 2005-2015 adopted by the UN at the World Conference on Disasters in 2005 defines vulnerability as a "set of conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of a community to the impact of hazards," (Hyogo 2005). While poor nations and the poor as a social class are more at risk, the extent of vulnerability varies according to the ability of different groups or individuals to secure alternative livelihood options and ensure the flow of resources - financial, social and political - to maintain livelihood security. In that sense vulnerability is different from poverty, though the terms are often used synonymously. Poverty is a core dimension of vulnerability - all poor people are vulnerable - but not all vulnerable people are poor (ActionAid 2005: 7). Poverty measures the current status of deprivation, lack or want: for example, the lack of access to resources (material, political, cultural) and capacities necessary for full participation in economic and social life. Vulnerability on the other hand, is a more dynamic concept than poverty as it captures the changing degree of defenselessness, insecurity or susceptibility to loss caused by exposure to disaster, shocks or unequal risk of individuals, communities and systems.

Vulnerability is multi-dimensional, context specific and scale dependent. Typically, the natural hazards and disasters school focuses on external aspects such as the frequency or probability of risks or hazards and the likely intensity of exposure to an external shock or extreme disasters. While the social vulnerability or social constructionist approach starts by assessing vulnerabilities already embedded in a given social context. According to Cannon (1994): "there are no really generalised opportunities and risks in nature, but instead there are sets of unequal access to opportunities and unequal exposure to risks which are a consequence of the socio-economic (and increasingly, political) system....It is more important to discern how human systems themselves place people in relation to each other and to the environment than it is to interpret natural systems," (cited in Morrow 1999: 2). That is, vulnerability is linked to complex sets of interacting conditions, some related to geography and location (for example, where do the poor reside in flood-prone villages) others with the nature of the dwelling (kuccha or pucca houses) and access to physical infrastructure (potable water supply systems), and some with everyday patterns of social interaction and organization (social networks, community institutions). Thus, the contextualisation of disasters within everyday vulnerabilities recognizes the role of interlocking systems of vulnerability in both physical and social space that is, the construction of overlapping 'geographies of vulnerability' (Fordham 1999: 19).

Why is 'gender' a concern for disasters?

In the context of India and indeed most of South Asia, it is well recognised that poor women, children and the elderly carry disproportionate 'vulnerability bundles' which places them in the highest risk category, even amongst marginalised communities (by caste, ethnicity, race or religion) and the poor (Ariyabandu and Wickramasinghe 2003, Fernando and Fernando 1997). Writing almost a decade ago, Wisner et al. (1994) acknowledge that vulnerability is structured by relations of gender and power intersecting at different institutional sites:

"Gender is a pervasive division affecting all societies, and it channels access to social and economic resources away from women and towards men. Women are often denied the right to vote, the right to inherit land, and generally have less control over income-earning opportunities and cash within their own households. Normally their access to resources is inferior to that of men. Since our argument is that less access to resources, in the absence of other compensations to provide safe conditions, leads to increased vulnerability, we contend that in general women are more vulnerable to hazard."

(cited in Enarson and Morrow 1998: 2)

Gender defines the socially constructed identities, roles and responsibilities of women and men, and the relationship between them. It is a neutral term which does not refer to women or men only, but to the way our behaviour and identity is shaped by a process of socialisation involving a range of institutions from the time we are born including, the family, school, culture and religion and the media. Thus, gender relations are built upon universally similar biological differences which constitute us as 'male' or 'female' (mainly reproductive functions). But the gender roles and responsibilities that we acquire from the time we are born are embedded in a specific historical, social, economic, political and cultural context which determines access and control to resources (such as land), endowments (education)

and decision-making. Gender relations are dynamic, characterised by both conflict and co-operation, and mediated by other axis of stratification including caste, class, race, ethnicity, physical or mental ability, age and marital status or position in the family.

Although there has been some progress in recent years to link gender, disasters and development, partly arising from the work of non-governmental organisations (NGOs), donors and others to strengthen the resilience of disaster-prone communities and challenge unequal relations of gender and power, the overriding discourse on disaster management is still largely un-gendered. That is, not only is the field of emergency relief and 'crisis' management predominantly male, engineering solutions such as embankments and check dams are also designed by men, often without consulting water users, particularly marginalised women. On the other hand, we also know "...as little about men's emotional work during disaster recovery as about women's physical work," (Enarson and Morrow 1998: 4).__

However, bringing the voices of women and men into the discourse on disasters as a 'strategic site' embedded in everyday social relations is generally obscured by quantitative analysis of difference between sexes. That is, gender becomes an independent variable, like caste or class that is used to account quantitatively for variation in a dependent variable for example, landholding or expenditure on food or access to wage labour. While no doubt 'visibility' is an important starting point, and gender disaggregated data is important in this respect, all too often there is little analysis of the complexity underlying the 'why' or 'how' of processes of gendered power and negotiation. As Fothergill points out: "gender differentiation, conceptually, does not mean inequality, as 'different' does not mean 'unequal'" (1998: 23), yet given the socio-economic status of the large majority of poor women in India, gender stratification and differentiation tend to coincide. Bourdieu (1977) terms this as 'doxa', that is, gendered relations of power play themselves out in everyday life in such a way that they appear as natural and self-evident, as part of undisputed tradition. But doxa can be subject to challenge and change through processes of mobilisation of the poor/women, structural changes in the economy (globalisation and liberalisation policies) or shifts in cultural meanings and the nature of the 'community'.

Gendered impacts of disasters

Gender inequality is not a homogenous phenomenon and disasters can affect different social groups of women or girls as differently as they may do different social groups of men or boys. While there is limited gender desegregated data on disaster-related mortality emerging evidence, for example, from the December 2004 Asian Tsunami or the earthquakes in South Asia, suggest that women and children are the primary casualties. The important point is that disaster impacts accentuate existing asymmetries of power to impoverish women further, leaving them more insecure in the face of adversity. Despite new policies and laws most rural and urban poor women in India, particularly from marginalised groups, continue to lack:

Access to or ownership/control over productive resources such as land, water, labour and credit (lack of entitlements) given the increasing privatization and or degradation of common property resources

Access to employment and other income-generating opportunities

Access to opportunities that can build their skills and capacities such as education, or ensure a better quality of life (health-care, adequate food and nutrition, access to water, sanitation and hygiene)

Access to participation in decision-making and governance at different institutional levels because of social norms which define women's mobility (seclusion) or question the nature of her participation in societal processes

On the other hand, women are often the primary victims of increasing domestic violence and social conflicts in a society where the politics of gender and identity intersect with communalism, fundamentalism and terrorism to shape women's lived experiences. In a disaster context, women's entitlements and perceptions of interest and well-being (Sen 1980) are further contested as households struggle to survive: "Women themselves underestimate the enormous range of burdens they bear, they may harbour negative images about themselves and be unused to perceiving of themselves as strong and effective survivors, managing a wide spectrum of household and social responsibilities," (Parasuraman and Unnikrishnan 2000: 11).

Household level analysis can provide a useful starting point for not only looking at gender differentiated disaster impacts but also at how women and communities use a disaster context to negotiate change, to cope or adapt their circumstances by learning from the past and from shared experience. The next section briefly outlines some of the gendered impacts of climate-induced water disasters such as drought, floods and coastal storms drawing on insights from our collaborative action-research in South Asia._

The impact of drought and floods on women and children

Economic impacts

Increased time spent on unpaid work

More time and energy spent on domestic water collection in drought prone areas - women have to walk to water sources further away from the village. It is not uncommon for women to spend up to 4 hours walking almost 6 km a day (back and forth) to fetch water. In upper caste households in Gujarat and Rajasthan (Darbar, Rajput) the practice of purdah or female seclusion dictates that men usually go to collect water if it requires going out of the village. But men have access to transport (bicycles, tractors, bullock carts) and in general do not head-load water.

Women's domestic workload increases after a flood as she has to help with house repairs, cleaning, drying and maintaining belongings in addition to her routine work of cooking, childcare and biomass collection (fodder, fuelwood).

Reduced time available for productive work

In drought prone areas, there is a direct correlation between the time available for productive work and the household's access to water, e.g. where households have private wells or the resources to invest in roof water collection tanks or where community water assets are functioning and well-maintained, there are positive impact on women's water collection time. However, this is not always the case - there are examples from Maharashtra

and Nepal which suggest that easier access to water increased the number of trips women were making and there were no significant changes in gender relations - women still collected water (Ahmed 2005a).

Women may lose sources of paid work for example agricultural wage labour in the aftermath of floods as fields are inaccessible and it is also more difficult for women to move out of the village to work. Where families have lost their own fields either in floods or through river cutting, this also has an impact on household livelihood security unless there are diversified sources of income, e.g. from migration or non-land based occupations.

Male out-migration and remittances

Male out-migration (particularly seasonal or long-distance) puts an added burden on women to manage land often without the security of tenure or financial resources to invest in inputs as well as look after dependents (children, elderly).

On the other hand, remittances provide some immediate security for women/ households to meet consumption needs after floods or make productive investments in land and water resources. For example, evidence from the field in Eastern U.P. and Nepal suggests that remittances are used to build pucca houses with flat roofs where families can shelter during a flood. In drought prone areas, remittances are used to invest in bores or tube-wells, or build household water harvesting and storage structures. But the evidence on migration and remittances is mixed - many women in recent focus group discussions in Campianganj and Maharajanjan blocks of Gorakhpur district and across the border in Nepal complained that remittance flows were erratic and rather small amounts just sufficient to meet immediate consumption needs.

Increased indebtedness

Recurrent floods and drought increases the dependency of the poor on the market and moneylenders for credit at high interest rates to meet immediate consumption and survival needs. Sale of assets such as livestock, or pawning of women's jewelry is not uncommon in drought prone areas.

Social impacts

Conflicts

Increase in conflicts, both verbal and physical, between women at water queues - e.g. when tankers come to drought-affected villages, or at hand-pumps with reduced water flows is not uncommon. Utthan, an NGO working in the drought-affected districts of Saurashtra, Gujarat has documented the bloody fights at wells in the region and how small girls and boys are often lowered into the depths with ropes to collect water (Barot 1997).

Contested household entitlements in terms of access to food, healthcare and education, are another area of, albeit latent, gender conflict. Women may often 'lose' their right to control household income necessary for the basic social reproduction of the household. According to the Gorakhpur Environmental Action Group (GEAG), in the post-flood context partly because of the trauma of displacement and devastation and partly because of the

male bias of relief agencies and the dependence on men/boys to collect dry fuelwood, fodder or potable water, women 'lose' control (decision-making) over some of their domestic responsibilities (GEAG 2003).

Education

Girls may be pulled out of school in drought prone areas to either help with domestic work (water collection) or to look after siblings if mothers have to go out for work or spend more time in water collection.

Extended drought years can also have an impact on school enrolment and retention rates for both boys and girls when families are forced to migrate or poverty pushes children into labour.

In flood affected areas, schools remain closed for a number of days or weeks till the water levels recede; schools are also used as temporary community centres or shelters if they are located at a high point in the village.

Health, hygiene, water supply and sanitation

Less water available for personal hygiene in drought prone areas particularly at times of menstruation, delivery and post-natal care for women is a major health concern. Women report that they bathe and wash clothes less frequently in both drought and flood affected areas - the former because of limited water availability (Ahmed 2005b) and the latter because it is difficult to find privacy when living in community shelters or on embankments.

The number one priority for women in flood affected areas is access to sanitation - in Eastern U.P. and Bihar women use a small wooden platform either just outside the house (machan) and therefore more portable, or fixed on the edge of the rooftop. Many women, particularly the elderly, mentioned that they would eat less food to avoid going through the arduous task of finding a safe, dry and private place for defecation. Often women and young girls go in groups as it provides more security in an uncertain environment (Author, life-cycle narratives with flood-affected women, 2003). Access to sanitation is also an increasing priority for women in drought-prone areas because of the lack of tree cover and privacy.

Lack of clean water in flood affected areas and therefore the higher incidence of waterborne diseases also increases women's unpaid care responsibilities.

Childbirth - many women in Gorakhpur district recounted stories of friends and family members who had to deliver children on rooftops or even tree-tops - the only dry spot in flooded villages. Access to medical facilities is almost impossible, but men often help by ferrying across by boat, the 'chamai' the traditional lower caste woman who cuts the umbilical cord (Author, field interviews 2003).

Access to food and nutrition

Changes in food consumption patterns as a result of changing cropping practices or the failure of crops or low productivity in drought or flood-prone areas has an impact on intra-household food entitlements. In project villages in Satlasana block, Mehsana district, northern Gujarat where the NGO VIKSAT is working, women reported that vegetables are cooked once a day and stretched for two meals (Author, field interviews 2003). Grains of a poorer quality are increasingly being used - rather than buy wheat and then have it ground, many poor families were buying small quantities of poor quality atta and using this for rotis.

Access to information on climate and weather

'Being properly informed' is the key to all climate change mitigation and adaptation efforts. Gender inequities in information flows can have dramatic consequences for both men and women (Huyentruyt and Francis 2003). Though effective climate and weather forecasting can play an important role in reducing uncertainty, there are many problems pertaining to the nature of information collection and dissemination including, frequency and timeliness of information, from where is it collected (e.g. where are rain gauges placed) and most importantly, to whom is such information distributed or who has access to what information. Typically, rural women because of their lower levels of literacy, limited time, gendered patterns of mobility within a village and apprehensions about 'new' technology do not access information and communication systems (radio, TV, mobile phones, etc.) to the extent that men do. At the same time, women's indigenous or traditional knowledge on soil preservation, seed storage, biodiversity and so on is not acknowledged by agricultural experts or in disaster risk reduction strategies.

Gender discrimination/violence against women and girls

Sexual exploitation

Dalit women in northern Gujarat because of their schedule caste (impure) status are often denied access to the (allegedly) 'common' well or tank and have to walk further to collect water. Sexual exploitation by upper caste men is not uncommon, particularly when familial men are not around (migrated) to protect the honour of their wives, daughters or sisters, or even if they are around the sheer human need and desperation for water overrides concerns of female autonomy over her body/sexuality.

Preliminary insights suggest that adivasi and other poor, landless and vulnerable women (and sometimes, children) are being pushed into trafficking and sex work in much of the drought prone tribal belt of central and western India as well as the flood prone region of eastern India, bordering Nepal and Bangladesh (Moench and Dixit eds. 2004). Apart from the degrading sexual exploitation of women, the trend towards sex work as an alternative livelihood option, whether 'voluntary' or forced_ has implications for the spread of HIV-AIDS. However, till recently there has been little dialogue between feminist and women's groups working on issues of sex work and trafficking and those involved in natural resource management and livelihood issues.

Sex ratio

The declining sex ratio in drought prone areas of Gujarat over the last decade, particularly child sex ratio is a cause of concern (GHDR 2005). According to VIKSAT's primary survey in 2003, the sex ratio of children up to 5 years in Bhiloda taluka (Sabarkantha district) was as

low as 717/1000 and in Satlasana block it was 756/1000 (in Moench and Dixit eds. 2004). Gujarat has a history of female foeticide and infanticide and as one of the more prosperous, industrial states in the country access to sex selection technology is now widely available even in small towns and peri-urban areas, despite the official ban on amniocentesis. While the links between drought as a long-term disaster context and the declining sex ratio need to be explored further it is not premature to conclude that environmental and livelihood stress coupled with already strong social norms about male child preference have an adverse impact on the girl child.

Building adaptive capacity and resilience

"Today's poverty is yesterday's unaddressed vulnerability", (Yamin et al. 2005: 5)

Focusing solely on vulnerability, while an important starting point, sees the poor, particularly women, as victims of disasters rather than social actors finding ways to cope with or adapt to disasters through building on their inherent capacities or capabilities. These could include, participating in community-based natural resources management initiatives such as watershed management or adopting new technologies to manage water scarcity or abundance; pooling together the diversity of skills that may exist in a given local context and strengthening social networks; or building self-help groups to access credit and facilitate women's participation in mixed decentralised institutions of governance.

The core challenge for development policy is how do we build the adaptive capacity and resilience of disaster-prone communities? Adaptive capacity, for our purposes, is the ability to restructure livelihood systems in ways that maintain standards of living and meet other core social objectives (such as environmental protection) in the presence of change, surprise and the risk patterns those create. Resilience on the other hand, is the ability of existing livelihood systems to maintain standards of living and meet other core social objectives despite disruption (Moench 2005). Some adaptation is self-driven: migration, social networks, risk-taking capacity of individuals. But often households and communities require access to skills, assets and other resources necessary to adapt to ongoing change processes and restructure their livelihoods.

The role of diverse development organizations in facilitating adaptation through participatory and gender-aware processes which enable vulnerable communities is critical. These include:

Supporting livelihood diversification: including non-farm enterprises particularly for the landless, developing new skills and providing access to markets and information systems. GEAG has introduced sustainable agricultural practices through women's SHGs in two blocks of Gorakhpur district which has reduced dependency on expensive external inputs, gradually increased farm productivity and mitigated soil quality degradation. In flood prone villages together with other smaller NGOs, GEAG is experimenting with quick growing paddy (time and space management given the small landholdings) and duck rearing as an income generating project.

Facilitating access to financial resources: micro-credit and micro-finance through Self Help Groups in disaster-prone areas can not only support livelihood diversification, but also

reduces the dependency on moneylenders and resulting indebtedness while helping households strengthen their resilience by investing in appropriate infrastructure whether to cope with water scarcity (water harvesting, drip irrigation) or excessive flooding (making houses pucca and building flat roofs). In addition, the need to develop alternative, low-cost and flexible micro-insurance mechanisms for the poor is critical. Organizations such as the Disaster Management Institute and SEWA, (Gujarat) and Friends for Women World Banking are promoting with such interventions at a small scale.

Developing appropriate physical infrastructure: participatory risk mapping and community disaster planning are not only useful in identifying where the poor and vulnerable live, but also in ascertaining where for example, a community can build a flood shelter, or a storage bank for seeds, grains, fodder and fuelwood. Investing in community infrastructure can also provide local employment opportunities for women and men who may otherwise be forced to migrate or engage in work which is forcing them to exploiting their bodies and selves. From a gender and vulnerability perspective, and as highlighted in the just launched UNDP Human Development Report 2006 on water, poverty and power, access to sanitation for women and children is important not only in terms of reducing the incidence of water-borne disease, but as a fundamental human right in according women privacy and dignity.

Facilitating decentralized and participatory local governance and resource management is the key to sustainable adaptation strategies. However, while the watershed approach is widely promoted in drought prone areas through community watershed management institutions, catchment management in flood prone basins is still caught up in the transboundary politics of water sharing and technical fixes such as embankments for 'controlling' floods. There is a need moreover, to consolidate the myriad types of rural community institutions facilitated by NGOs and to ensure effective governance in collaboration with gram panchayats and panchayati raj institutions at different levels of governance. Women's participation, particularly from socially excluded groups, is not only a question of numbers (typically, one-third reservation, though many NGOs are promoting 50 percent women's participation), but equally, of ensuring that she has the right and space to articulate her voice as a citizen in a plural democracy.

In conclusion, scientific research notwithstanding, it is clear that the frequency and intensity of climate-induced water related disasters is going to increase and in many places these are going to impact vulnerable populations, existing social conflicts and in some cases, co-occur with sudden disasters such as earthquakes (drought in Kutch) and tsunamis (recurring floods in Tamil Nadu). However, disasters can provide an opportunity for transforming unequal power relations and structures if those who are engaged in relief, reconstruction and rehabilitation efforts are aware of the underlying socio-economic and cultural factors that determine access to resources, opportunities and voice (decision-making). This means disaggregating the 'community' and the 'household' as units of analysis to better understand gender, caste, class and inter-generational inequity. Mainstreaming social vulnerability discourse and gender analysis in national disaster management policy and practice is as important as mapping physical dimensions of hazard risks which tend to be the predominant current approach to disaster vulnerability (Lambrou and Piana 2006). Shared learning dialogues and strategic collaborative partnerships between grassroots vulnerable

communities, development professionals, practitioners and policy makers is critical in ensuring that disaster risk reduction approaches address the larger questions of human security and human rights.

References

ActionAid (2005) *Participatory Vulnerability Analysis: A Step by Step Guide for Field Staff*, London: ActionAid International.

Ahmed, S. (2005a) "Why is gender equity a concern for water management?" in S. Ahmed (ed.) *Flowing Upstream: Empowering Women through Water Management Initiatives in India*, Ahmedabad: Centre for Environment Education and New Delhi: Foundation Books.

Ahmed, S. (2005b) "Negotiating gender equity through decentralised water management in coastal Gujarat: The case of Utthan," in S. Ahmed (ed.) *Flowing Upstream: Empowering Women through Water Management Initiatives in India*.

Ariyabandu, M. M. and M. Wickramasinghe (2003) *Gender Dimensions in Disaster Management: A Guide for South Asia*, Colombo: Intermediate Technology Development Group.

Barot, N. (1997) "A people's movement towards creating sustainable drinking water systems in rural Gujarat," in N. Rao and L. Rurup (eds.) *A Just Right: Women's Ownership of Natural Resources and Livelihood Security*, New Delhi: Friedrich Ebert Stiftung.

Bolin, R., Jackson, M. and A. Crist (1998) "Gender inequality, vulnerability and disaster: issues in theory and research," in E. Enarson and B.H. Morrow (eds.) *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Greenwood Publications.

Bourdieu, P. (1977) *Outline of a Theory of Practice*. Cambridge: Cambridge University Press.

-----, (2000) *Gender and Natural Disasters*. Geneva: International Labour Organisation of the United Nations (ILO Infocus Programme on Crisis Response and Reconstruction, Working Paper No. 1).

Enarson, E. and B.H. Morrow (eds.) (1998) *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Greenwood Publications.

Enarson, E. and M. Fordham (2001) "From women's needs to women's rights in disasters," *Environmental Hazards*, no. 3, pp. 133-136.

Fernando, P. and V. Fernando (eds.) (1997) *South Asian Women: Facing Disasters, Securing Life*. Colombo: Intermediate Technology Publications for Duryog Nivaran.

Fordham, M. (1999) "The intersection of gender and social class in disaster: balancing resilience and vulnerability," *International Journal of Mass Emergencies and Disasters*, 17(1), pp. 15-36.

Fothergill, A. (1998) "The neglect of gender in disaster work: an overview of the literature," in E. Enarson and B.H. Morrow (eds.) *The Gendered Terrain of Disaster: Through Women's Eyes*. Westport, CT: Greenwood Publications.

Hyogo (2005) *Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters*, A/CONF.206/6, World Conference on Disasters Reduction, January 18-20, Kobe, Hyogo, Japan.

Huyentruyt, M.E. and J. Francis (2003) *Position Paper on Climate Change, Water and Gender* (no source?).

Lambrou, Y. and G. Piana (2006) *Gender: The Missing Component of the Response to Climate Change*, Rome: Food and Agriculture Organisation of the United Nations (FAO).

Moench, M. and A. Dixit eds. (2004) *Adaptive Capacity and Livelihood Resilience: Adaptive Strategies for Responding to Floods and Drought in South Asia*, Kathmandu: Institute for Social and Environmental Transition, Nepal and Boulder: ISET-International.

Morrow, B.H. (1999) "Identifying and mapping community vulnerability," *Disasters*, 23(1), pp. 1-18.

Parasuraman, S. and P.V. Unnikrishnan (2000) *India Disasters Report: Towards a Policy Initiative*. New Delhi: Oxford University Press.

Sen, A. (1990) "Gender and cooperative conflicts" in I. Tinker (ed.) *Persistent Inequalities: Women and World Development*, Oxford: Oxford University Press.

Wisner, B., Blaikie, P., Cannon, T. and I. Davis (1994, 2nd ed. 2004) *At Risk: Natural Hazards, People's Vulnerability and Disaster*, London and New York: Routledge.

Yamin, F., Rahman, A. and S. Huq (2005) "Vulnerability, adaptation and climate disasters: A conceptual overview," *IDS Bulletin*, vol. 36, no. 4, pp. 1-14.

Steering Committee Member, Gender and Water Alliance <http://www.genderandwater.org>
and Senior Research Associate with the Institute for Social and Environmental Transition
<http://www.i-s-e-t.org>. Contact: sara@sustainablewater.org, sara.ahmed@gmail.com

Parts of this paper draw on earlier work on disaster vulnerability and women's coping strategies. This is perhaps more true in the context of developed nations which have an older history of disaster research funded by federal agencies concerned with how to 'manage'; see Bolin et al. 1998 for a good discussion of how disaster research in the USA has been gender-blind. While developing countries have to some extent, at least in the post-colonial period, begun to address disasters as social phenomena too, the early Famine (drought) or Irrigation (floods) Commissions were largely technical in their approach. This collaborative action-research project involves NGOs, development professionals, practitioners and researchers in India, Nepal and Pakistan to look at the effectiveness of different disaster risk reduction strategies, community adaptation and differential access to information and communication which can mitigate disaster vulnerability (early warning systems). The results of the first phase of research (2003-2004) funded by USAID are available, see Moench and Dixit eds. 2004; while IDRC, DFID and GEF are currently funding further work towards implementation pilots building on shared learning dialogues. The extended caring roles of women in the face of the post-disaster 'flight of men' has been well documented, see Enarson 2000.

Insights from a recent field trip (November 1-7th, 2006) by the author under our ongoing collaborative action research (see fn. 3) where preliminary interviews with poor women and men in Gorakhpur district suggested that remittances which potentially useful, may be variable. Declining urban living conditions (little access to water or sanitation) and increasing insecurity (communal riots, terrorist attacks) make it harder for migrants, who are always the first affected, to find sustainable work.

This is not the place to discuss the polemics of the debate on sex work, but simply to point out that in the context of poverty the push of women towards sex work is perhaps never a voluntary choice as she has little recourse to any other options.