iied

Gender and Environmental Change in the Developing World

Sarah Bradshaw with Brian Linneker

About the authors

Dr Sarah Bradshaw, Associate Professor in Development Studies, Middlesex University
http://www.mdx.ac.uk/about-us/our-people/staff-directory/bradshaw-sarah
S.Bradshaw@mdx.ac.uk

Dr Brian Linneker, Independent Scholar and Senior Research Fellow, University of London

Produced by IIED's Human Settlements Group

The Human Settlements Group works to reduce poverty and improve health and housing conditions in the urban centres of Africa, Asia and Latin America. It seeks to combine this with promoting good governance and more ecologically sustainable patterns of urban development and rural-urban linkages.

This report reviews the literature and evidence within the fields of gender, climate change and disasters, suggesting that although there are gaps in existing knowledge, policy is often not based on the existing evidence but on stereotypical notions. Drawing lessons from the gender and development literature, it outlines some of the key areas of debate common across the three literatures. In particular how best to ensure the inclusion of women in sustainable development policy so they are served by these policies, rather than being at the service of these policies. It concludes by highlighting gaps in knowledge, noting that studies that look at both climate change and disasters, which consider short and long term climatic risks, are necessary if the issues raised are to be tackled in a way that improves, rather than harms, the position and situation of women.

Contents

Introduction

While 'gender and climate change' and 'gender and disasters' are relatively new but growing fields of academic enquiry, they have a history based on debates around gender and development and the role of gender in environment and development, and they draw on these traditions. Gender and development emerged as a field of academic enquiry and as a policy practice in the 1970s, beginning with the Women in Development (WID) approach. WID sought to better integrate women into what was constructed as a benign development process, and brought gains in education and employment and fulfilment of what have been termed women's 'practical gender needs' – such as providing better access to water (see Molyneux 1985; Moser 1989a). However, the approach was critiqued for its focus on women only. The Gender and Development (GAD) tradition emerged from these critiques and focuses on gender roles and relations that are at the basis of women's exclusion from development, and of problematising the nature of development. GAD projects are more holistic and address women's 'strategic gender interests' such as by seeking to eliminate institutionalised forms of discrimination around land rights, or ensuring the right of women and girls to live free from violence. Following Boserup's (1970) study, a vast literature now exists, including a number of readers on gender and development (see Duggan *et al.* 1997; Visvanathan *et al.* 2011), edited works that bring together key writers with a particular perspective (for example Pearson and Jackson 1998), or on specific themes, such as poverty (for example Chant 2010), as well as texts that focus on the global women's movement (for example Antrobus 2004a), and how gender has been incorporated into development in practice (Kabeer 1994; Moser 1993; Ostergaard 1992).

The 1980s saw the publication of a number of key works on women, development and the environment, perhaps most notably the collection by Dankelman and Davidson (1988) and works by Merchant (1980) and Shiva (1988). Since then, once again a wealth of literature has been produced (see Agarwal 1992; Braidotti R.*et al.*1997; Leach 1994; Rocheleau *et al.* 1996), including reviews reflecting on the evolution in thinking within the field (see Leach 2007, Moore 2008). This evolution began with Women, Environment and Development (WED) that drew on the WID tradition and was critiqued in the same way. In particular 'ecofeminist' constructions of women as closer to nature, based on the sexual division of labour (Ortner 1974), were critiqued as essentialising

as they prioritised biology as an explanatory variable and constructed women 'as' nature through giving birth (Mies 1986). Actors such as the World Bank were able to use this discourse to suggest a 'win-win' approach to environment and gender (see Jackson 1998) that saw women constructed as 'chief victims-and caretakers' (Resurreccion 2012), appropriating women's unpaid labour in activities to protect the environment. This led to a number of subsequent approaches that recognised the material basis of the gender division of labour and differences between women. A number of other approaches emerged out of critiques of WED. This included the Gender, Environment and Development (GED) approach (Braidotti *et al.* 1994, Leach 1994; Joekes *et al.* 1996) which applied gender analysis tools to the environment, 'feminist environmentalism' (Agarwal 1992), and the 'feminist political ecology approach' (Rocheleau *et al.* 1996). These all share a common idea of gender-environment relations as embedded in dynamic social and political relations (see Leach *et al.* 2014 for discussion). More recently, a 'New Feminist Political Ecology' (Resurreccion and Elmhirst 2008) has emerged which encompasses ideas around performativity, recognising that how we act or 'perform' gender consolidates how gender is understood at a societal level. Thus while gender is culturally formed, it encompasses multiple and complex subjectivities; it is also a domain of individual agency or freedom and can be changed.

To a large extent climate change has now become the key focus in global environmental change literature, and even when the term 'environmental' change is still used, it is the outcomes of climate change that are being discussed (see for example Matthew *et al.* 2010). Despite the rich literature on gender and environmental concerns, after promising beginnings (see Alston 2013a), it has been suggested that, in policy terms, gender is a latecomer to the climate change debate (Denton 2004), with MacGregor (2010) noting the 'strange silence' on the gender dimensions of climate change. This could be due to the current emphasis on climate science and technological solutions meaning the agenda has become 'scientized' and 'securitized' (MacGregor 2010). It could also relate to the global and 'transboundary' nature of the problems identified (Resurreccion 2012). However, the existence of a number of collections with a focus on gender and climate change (Alston and Whittenbury 2013a; Cela *et al.*2013; Dankelman 2010; Terry 2009a) evidence

the extent to which a growing literature is emerging on the topic.

In the early 1980s gender research in disasters began to emerge (Rivers 1982), but it was the end of the 1990s that saw the publication of a number of key texts, most notably the first special edition on women and disasters of the International Journal of Mass Emergencies and Disasters, and the edited collection by Enarson and Morrow (1998). Ten years later, the edited collection by Enarson and Chakrabarti (2009) included contributions from a wide range of scholars and practitioners from a diverse range of countries, including from 'third world' countries. However, it was not until 2013 that the first text dedicated to better understanding gender and disasters in the development context was published (Bradshaw 2013). However, as with climate change, despite the efforts of a small, but growing, group of feminist scholars (see Gender and Disasters Network), as late as Hurricane Katrina in 2005 the 'not-noticing' (Seager 2012) of the gendered dimension of disaster by the media and expert responders alike was still clear, and gender was yet to be fully mainstreamed in humanitarian relief, integrated into research and field projects undertaken by the major disaster centres and included in disaster training courses (Enarson and Meyreles 2004).

While it might be assumed there is an overlap between the climate change and disasters literatures given that many 'natural' disasters are related to extreme climatic events, the difference in time frames means this is less than might be expected. While disaster risk reduction (DRR) is focused on immediate climatic risks, climate change adaptation (CCA) is seen through the lens of future risk. This means there is limited 'cross over' literature (see Enarson 2013). In part this explains why, in policy terms, there is limited 'coherence and convergence' in the institutions, organisations and policy frameworks that manage the two issues (Mitchell and van Aalst 2008a: 1). Mitchell and van Aalst note in particular that both struggle to be incorporated into development planning, and this aspiration is further hindered by 'duplicated activities, ineffective use of resources and confusing policies'. They conclude that the DRR (and the CCA) agenda suffer from a 'lack of political influence and human capacity' necessary to get adaptation and risk reduction onto the mainstream development agenda (Mitchell and van Aalst 2008b).

This report begins by considering how gender, climate change and disasters have entered, or not, into international policy frameworks. It then seeks to provide a critical review of current debates on gender and environmental change, with a focus on climate change and disasters. The third section draws out some common themes across the literatures and areas of debate, before concluding by highlighting existing gaps in knowledge.

1

International policy frameworks

1.1 Early gender policy initiatives – the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) and the Beijing Platform for Action (BPfA)

In 1979, during the first UN Decade for Women (1976–1985), the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was adopted by the UN General Assembly. CEDAW is often described as an international bill of rights for women, and is important for two key reasons: first, it affirms the reproductive rights of women; and second, countries that have ratified or acceded to the Convention are legally bound to put its provisions into practice. They are also committed to submit national reports, at least every four years, on measures they have taken to comply with their treaty obligations. While far ranging in the issues covered, including specific discussion of conflict situations, disasters are not mentioned. Similarly, while there is specific reference to rural women, wider environmental concerns are not explicitly covered within CEDAW. However, at its 44th session the CEDAW Committee issued a statement noting that gender equality is essential to the successful implementation, monitoring and evaluation of climate change policies,

and that women's human rights should be included as an overarching guiding principle in climate change treaties. Various articles within CEDAW would lend themselves to engendering climate change policy (see IAW 2011 for discussion) for example Article 7 states 'Parties must ensure women have equal decision-making power at all levels, including in international processes' and this would include climate change negotiations. Countries that ratify CEDAW agree to take all appropriate measures to implement the treaty's provisions, however, while countries must report measures taken to comply with treaty obligations, and there is a process of NGO shadow reporting also, the CEDAW Committee has no enforcement authority; it can only make recommendations highlighting areas where more progress is needed in a particular country. Moreover, a small number of countries have been reluctant to ratify the convention, including the USA, which further limits its ability to hold countries to account.

The decade for women also saw the initiation of a series of United Nations World Conferences on Women starting with a meeting in Mexico in 1975, followed by meetings in Copenhagen (1980) and Nairobi (1985), where women's actions and role in environmental management were raised (Braidotti *et al.* 1997). The fourth, and last full meeting, was in 1995 in Beijing and the resultant Beijing Platform for Action (BPfA) now acts as a framework for annual sessions to review progress across a range of issues, including the environment. In terms of environmental concerns, the BPfA highlights the need to involve women actively in environmental decision-making at all levels and, to integrate gender

concerns and perspectives in policies and programmes for sustainable development. Disasters are a less central concern and the BPfA notes that natural disasters can contribute to environmental degradation (247) and that women may be particularly affected by environmental disasters (46). Under 'actions to be taken' within the need to 'develop gender-sensitive databases, information and monitoring systems', it suggests there is a need to monitor the impact on women of environmental and natural resource degradation, with one of the contributing factors listed being natural disasters. Thus disasters are included as a contributing factor to environmental degradation or an outcome of this, not as an issue in their own right.

1.2 Rio and the United Nations Framework Convention on Climate Change (UNFCCC)

Three years before the Beijing meeting in 1992, the United Nations Conference on Environment and Development (UNCED)- or Earth Summit -was held in Rio, with the United Nations Framework Convention on Climate Change (UNFCCC) as one of the outcomes. Before the Summit, a number of actions by groups such as the Women's Environment and Development Organization (WEDO), Development Alternative with Women for a New Era (DAWN) and Women's Action Agenda 21, sought to influence its outcomes. Many women's networks emerged as part of the 'Global Women's Lobby' in Rio, and Agenda 21 – another outcome of the Summit – recognised women as important actors in environmental protection and poverty alleviation (see Wichterich 2012). Agenda 21 imagined sustainability as being built from the bottom up through initiatives by local governments and community groups (see Agarwal 2001 for example). However, the focus on 'the community', while welcome, often meant either gender and other inequalities were not considered (Cornwall 1998) or that women were equated to the community, through their gender-specific social roles (Dressler *et al.*2010; Leach *et al.* 1999). The transformative agenda promoted by the women's lobby, which sought to change how the economy and livelihoods were constructed, was not reflected in the outcomes of the Summit, which took a more instrumentalist approach to gender. This led DAWN and other groups to suggest 'sustainable development' to be a huge contradiction (Wiltshire 1992), not least since the UNFCCC has been described as a 'remarkably gender-blind' document (Leach *et al.* 2014).

After the Summit, the Women's Major Group was created through recognition of the need for women's participation in decision-making as essential for achieving sustainable development. However, although some efforts have been made to highlight the impact of climate change on women, and there has been a strong call for a gender focus within climate policy, including the UNFCCC process, very few advances have been made to really incorporate this within the negotiations. Although equity is a major issue in climate change debates, gender equality/equity has been neglected within these debates (Lambrou and Paina 2006a) and gender has been included 'almost as an afterthought' (Denton 2002).

The first Conference of Parties (COP) took place in 1995, and during the succession of annual COPs, a group of concerned delegates formed over a period of time into the GenderCC, but it was not until COP13 in 2007 that the group was internationally recognised for its inputs into this global process (Hemmati and Rohr 2009). After lobbying by women activists under the banner 'No climate justice without gender justice', in 2008 the UNFCC Secretariat finally called for gender-sensitive measures (Leach *et al.* 2014). This also saw the launch of major groups, such as the Women for Climate Justice Network and Global Gender and Climate Alliance, by several UN bodies and WEDO (see Terry 2009b). Yet despite these advancements, initially there was not a single woman on the advisory group on climate financing established in 2010 (Wichterich 2012) and climate finance debates have tended to be gender blind (Schalatek 2013).

Climate change processes have largely assumed gender neutrality (Dennison 2003; Denton 2002) and gender is a blind spot of donor policy on climate change (Rodenberg 2009). A review of protocols, treaties, and action finds little evidence that international processes to develop climate change policy have taken gender into account (Skutsch 2002; Villagrassa 2002). This could be linked to the current emphasis on climate science and technological solutions leading to a form of 'global managerialism' that presupposes that all people can adapt with the right resources and knowledge (Alston 2013c), ignoring gender differences. This being said, Alston (2013a) concludes that the efforts of various individuals and groups to promote gender within the climate change negotiations has made some progress, as evidenced by gender inclusion in the fourth IPCC report, for example. However, a review of National Adaptation Programmes of Action (NAPAs) (Holvoet and Inberg 2013) for gender (non) mainstreaming shows that scarcely one third of all of the NAPA papers submitted worldwide contain relevant references to gender as an important planning principle. While the papers often outline the particular ways in

which women are affected by the impacts of climate change, they for the most part depict women only as victims (Rodenberg 2009), and official climate change documents often merely rehearse gender stereotypes (MacGregor, 2010).

1.3 Hyogo Framework for Action

The depiction of women as vulnerable victims is also apparent in the international framework for disaster risk reduction – the Hyogo Framework for Action (HFA). The overall aim of the HFA is to bring about a 'substantial reduction of disaster losses, in lives and in the social, economic and environmental assets of communities and countries.' Established in 2005, the HFA runs to 2015 and so has a similar time frame to the Millennium Development Goals (MDGs), which were established in 2000 as the new global framework for development. While the MDGs are not legally binding at a national level like CEDAW, this set of 10 goals has influenced the key international development actors, including the World Bank, and key donors such as DFID, for the last 15 years. While there is a stand-alone environmental goal, climate change is not a central concern, and disasters are not even mentioned in the goals. This is interesting since the Millennium Declaration (the initial UN document on which the MDGs are based), did recognise the risks of disasters to development, and resolved to intensify collective efforts to reduce the number and effects of natural and man-made disasters. However, in the move from the declaration to the development goals this resolution was lost.

In contrast, the HFA and supporting documentation highlight the interlinkages between development and disasters. One of the three strategic goals of the HFA is 'to effectively integrate, in a coherent manner, disaster risk considerations into sustainable development policies, planning, programming, and financing at all levels of government'. The supporting text suggests disaster risk reduction is an important element for the achievement of internationally agreed development goals, including those contained in the Millennium Declaration. The UNDP Bureau for Crisis Prevention and Recovery notes that 'at first glance, it may appear that the MDGs do not relate specifically to conflict, crisis or natural disasters' but concludes that meeting the MDGs will not be possible while disaster risk management is 'left outside' development.

This need to 'disaster-proof' development has been highlighted by actors such as DFID (2004), who note that poorer people tend to be more susceptible to hazards and that disasters can induce poverty, suggesting that as female-headed households are seen to be more asset poor, they may be more impacted by natural hazards. It justifies a focus on disasters by noting how they can 'wipe out any gains that may have been made through poverty reduction programmes or pro-poor economic growth' (DFID 2004: 3). The argument for 'disaster-proofing' then is very much an efficiency rather than a normative or moral discourse (Bradshaw 2009). This efficiency aspect may help explain why the World Bank has become more interested in this field, their interest being formalised through the establishment of the Global Facility for Disaster Reduction and Recovery. The argument for including disasters in development is that disasters may hinder the achievement of development goals and this is no more evident than in the title of the 2010 United Nation's International Strategy for Disaster Reduction (ISDR) document – 'Disaster Risk Reduction: An instrument for achieving the MDGs'.

The HFA also attempts to align with climate change, noting the need to 'promote the integration of risk reduction associated with existing climate variability and future climate change into strategies for the reduction of disaster risk and adaptation to climate change'.

In gender terms, while the HFA is not aligned to any of the key gendered conventions and international agreements, the HFA states in its opening section that a gender perspective should be `integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training' (HFA 2005: 4). However, while it has been suggested that this provides the 'most explicit reference to gender of any other international policy frameworks for DRR' (see UNISDR 2009), it is not without limitations. Most importantly its call to integrate gender into all areas of DRR did not result in gender being integrated even into the HFA itself, and in the remainder of the document gender/women are mentioned only twice: once when discussing early warning systems and once when discussing the need to ensure equal access to appropriate training and educational opportunities. Despite the call to 'mainstream' gender into disaster risk reduction and response in the HFA, later United Nations platforms and meetings have continued to observe that women's role in DRR and climate change adaptation initiatives is still not being recognised in practice (Aguilar 2009; UNISDR 2011). The negotiations around HFA2 which will come into place in 2015 are, at the time of writing, ongoing. They have proceeded largely in parallel to the post-2015 development agenda processes (see below). The way that gender is incorporated into the next framework is still open to question, but it does appear in HFA2 women are now being talked of as 'leaders' rather than just as a vulnerable group.

The HFA2 documentation shows a continued clear recognition of the need to take action to integrate climate change adaptation, development and disaster risk reduction. In contrast, climate change is also largely silent on disasters and the UNFCCC mentions only the need for 'special attention for developing countries prone to natural disasters', and makes no further reference to hazard or disaster risk. Its focus on long-term climatic changes rather than extremes and shocks associated with current climate variability, makes it difficult to integrate DRR into the Convention. However, the UNFCCC is the stronger and more binding convention. Moreover, the lack of commitment to DRR within the UNFCCC may not be an accident as it has been suggested that some key donor governments (and major polluters) are opposed to further integrating DRR and the language of humanitarian assistance into the UNFCCC text because this might create 'complex and potentially expensive overlaps associated with commitments to finance disaster relief' (Mitchell and van Aalst 2008b: 11).

1.4 The MDGs and the post-2015 development agenda

In June 2012, the United Nations Conference for Sustainable Development was held to consider the Rio declaration twenty years on. It noted that 'eradicating poverty is the greatest global challenge facing the world today and an indispensable requirement for sustainable development' and to address this there was a need to recognise the links between the economic, social, and environmental and the need to integrate these aspects. Despite the work of gender scholars and activists a gender vision was missing from the proposed 'future we want' (Wichterich 2012). However, while for some the notion of sustainability had become 'empty rhetoric' (Leach *et al.* 2014), the focus did create a space once again to consider development and environment together, which was reinforced by calls, as the MDGs come to an end, for a new set of goals tentatively named as the Sustainable Development Goals (SDGs) that would address in a balanced way all three dimensions of sustainable development.

The new goals are to build on and be more 'aspirational' than the MDGs. The MDGs have a stand-alone gender and a stand-alone environmental goal. MDG3 aims to 'Promote Gender Equality and Empower Women', yet examination of the related targets highlight that equality and empowerment is measured in terms of education, seats in parliament and women's 'non-agricultural' employment. This focus on education, employment and formal politics suggests more a WID than a GAD approach, and, as noted above, the limitations of WID have been well documented. It also suggests a focus on building women's productive capacity, something in

line with the World Bank's construction of women as an 'untapped resource' and promoting gender equality as 'smart economics' (World Bank 2006; see also Chant and Sweetman 2012). The other goal specifically focused on women is on their reproductive role in Goal 5 on improving maternal health. While a worthy intention, rather than ensuring all women's reproductive health rights, the focus is on women as mothers. Limiting services to maternal health does not provide access to reproductive health services, and does not actively promote women's reproductive health rights – as per the BPfA. Indeed, some of the strongest critiques of the MDGs came from the women's movements (see Antrobus 2014b, WICEJ 2004).

MDG7 focuses on 'Ensuring Environmental Sustainability'. It contains a number of elements and has a range of aims, including to reduce biodiversity loss and includes targets around preserving forests, fish stocks and around CO2 emissions and consumption of ozone-depleting substances. It has a specific focus on sustainable access to safe drinking water and basic sanitation and also on the urban environment in terms of a focus on improving the lives of 'slum' dwellers. As the review of the MDGs proceeds, a review of Goal 7 shows it to be largely on track, but with some mixed results (see DFID 2013). However, more fundamental critiques of Goal 7 suggest even if 'achieved' it will not necessarily have made advances in sustainability given that it tackles symptoms not causes, failing to address access to assets and the institutions that govern these, and in particular as the MDGs fail to tackle structural inequalities which are at the root of environmental degradation – including gender inequality.

The suggestion is that, in order to move forward, the new set of goals needs to better integrate concerns such as environment and gender (SDSN 2013). The illustrative goals produced to date by the High Level Panel process (see HLP 2013) and those produced out of the Open Working Group process (see OWG 2014) have approached 'integrating' gender through calls for the disaggregation of the indicators under a large number of goals and targets by gender, as well as having a stand-alone gender goal. The HLP and OWG process suggests that any gender goal will address explicitly violence against women and girls, and perhaps also other harmful practices such as forced and early marriage. However, the inclusion of reproductive health as a right and the recognition of sexual rights in the goals is, at the time of writing, still open to question. The OWG goals suggest there will be a goal focused on climate change – rather than climate change being included merely as a target or indictor. How the goal is framed within the OWG goals can be critiqued, but if, after the final negotiations, there is a stand-alone climate change goal then this will be seen by many as an advancement on the MDGs.

There has been no stand-alone disaster goal proposed by the HLP or OWG, and the discussions around HFA2 seem to be continuing largely in parallel to the post-2015 development process. However, the OWG goals suggest perhaps disasters will be 'mainstreamed' in the SDGs via indicators – initially having made eight mentions of disasters or disaster related concepts such as resilience, across seven goals. In general (the reduction of) disaster losses are presented as a measure of the extent to which 'development' has occurred or not. The UNDG document that fed into the HLP process (2013: 138) notes that disasters present 'inherent development challenges' and should be addressed in the form of 'development outcomes', as opposed to as purely 'development enablers' noting that disaster risk reduction is `not only an enabler for development, but the primary development objective that protects other development objectives'. The fact there is no DRR goal suggests it is still being seen here as an 'enabler'.

The proposed inclusion of climate change and gender, and to a lesser extent disasters, in the SDGs, suggests an improvement on the MDGs. However, the OWG goals see climate change and the environment continuing to be presented as largely gender neutral suggesting a lack of 'mainstreaming' of gender into these areas. This is despite the growing literature on gender, climate change and disasters that exists. This will now be reviewed.

2

Contemporary debates on gender and climatic change

This section will summarise the existing empirical evidence on the key issues within the gender and climate change, and gender and disaster fields and highlight current debates and areas of concern.

2.1 Gender and climate change

2.1.1 Gendered constructions of climate change

The existence of climate change has been contested, and the evidence base questions that the world is experiencing an above normal increase in global warming. This debate has been constructed as being gender neutral given it is presented as a 'scientific' discussion debating empirical 'fact'. Climate change has been noted as being a highly 'masculinised' concept as it emerged from the scientific establishment, structuring it from the beginning within a techno-scientific framing (Israel and Sachs 2013). Such constructions privilege expert empirical evidence – often then privileging knowledge constructed by educated men – over more qualitative and local knowledges. Attempts have been made to incorporate women into the

construction of knowledge through Participatory Action Research, framing women as 'women farmer scientists' (Koelle 2013) and demonstrating how expert and local knowledges can be combined. Yet even here the notion of women 'scientists' highlights the positivist associations of knowledge within the climate change debate.

More generally, gender studies have not sought to question the existence of climate change, but the way it is 'known'. Local knowledges have been explored (Sogani 2013) to examine the extent to which expert knowledge is in line with that of those impacted by the processes they study. Perceptions of change in climate of men and women farmers, for example, do seem to match well with climate records and the recollections of seasonal variations of both men and women are similar or identical (Lambrou and Nelson 2010). However, the study highlights that while men and women both understand changes to be occurring and relate negative change in agricultural production to wider climate change, their understandings of what this means differ, with men focusing on implications for farming production issues while women describe the wider impacts on the health of the family. Thus not talking to women means that only part of the impact of climate change would be known.

The construction of environmental knowledge as scientific 'fact' not only raises issues around who is generating knowledge but also around how. For example, the subjectivity involved in setting global standards and targets is generally not recognised in 'scientific' accounts of studies largely narrated by male researchers. Moreover, as climate change is presented as a global scale process, it is presented as impacting on an undifferentiated global population and as such there is an assumed gender neutrality (Demeritt 2001). Yet a number of studies highlight that women are more likely to acknowledge ecological problems and risks, express higher levels of concern and engage in activities beneficial to the environment (see Goldsmith *et al.*2013), so even as a global process it may be understood and responded to differently by men and women.

In contrast to the scientific approach, there have been calls to 'relocalize' the negative effects of global warming, to develop an 'environmentalism of everyday life' (Peña 2005). The environmental movement seeks to locate 'nature' and the 'environment' not as abstract notions but as relevant to where people live and work, and there have been calls to adopt a 'post-conventional' approach which sees peoples as all connected and collectivism as fundamental to existence (Bell 2013). The concept of climate justice has emerged as a rights approach to climate change (Agostino and Lizarde 2012) and rights based approaches to gender justice and equity in the context of climate change adaptation are also emerging (Bee *et al.* 2013; Tschakert and Machado 2012). Those who see environmental justice through a gender lens (Tuana 2013) also make clear the links between calls for environmental justice and reproductive justice, linking ecology and social reproduction (Di Chiro 2009).

2.1.2 Assumed vulnerability of women

Despite the supposed gender neutrality of climate change as a global process, much of the policy literature now notes as standard that women will be more adversely affected by climate change (MacGregor 2010). This appears to be based on understandings that women may have fewer resources – including assets, education and income – to respond to changes in weather patterns which alter familiar patterns of wind, rain and temperature. It is true that those with lower incomes or limited resources have a limited ability to cope with the challenges posed by reducing greenhouse emissions and carbon footprints (see Lambrou and Paina 2006b), but this has not translated into policies that build on the specific knowledge and capacities of men and women that could contribute to low-carbon development (for example see Otzelberger 2011).

One aspect that may be important in determining men and women's response and type of response to climate changes are networks, both informal and formal, and information and advice received from others. While institutions may provide advice on climate change and how to act, there are different levels of uptake on the advice provided and Lambrou and Nelson's (2010; 2013) work in rural areas notes that informal institutions, traditional knowledge and neighbours continue to be important sources of information. The unpredictability of the weather may mean that climate change predictions are not heeded, or at least they are interpreted through a lens of existing and local knowledge (Clarke 2013). There is then a need to 'decentre' debate about climate change (Hayward 2008) and this can be achieved via transgovernmental institutions, civil organisations, and individual 'moral agents' – the latter being individuals with experience in 'two or more life worlds', for example someone who is part of the local community but also has meteorology training, acting informally to bridge discourses. The need to 'bridge discourse' is associated with the scientific nature of how climate-related information is presented and also because understandings of climate risk, and acceptable climate risk, may differ between the general public and 'experts' and between men and women (see below).

Within the climate change discourse women tend to be assumed to be the ones responsible for addressing the effects of decreasing supplies of clean water, and decreasing access to crop residues and biomass for energy, due to their traditional gender roles. However, the focus has been on individual characteristics rather than on the kinds of climate-related hardships that will affect specific groups of people, such as ethnic groups (Nightingale 2011). This is interesting since the early gendered writings on the environment within the WED school or related to 'ecofeminist' ideas (see above) were critiqued as not only presenting women as a homogenous group, but also as essentialising women (Leach 2007), resulting in the privileging of poor rural women as the ones who understand the 'problem' and as the ones having the solutions. This discourse of women as 'chief victim-and caretaker' (Resurreccion 2012) seems to be repeated in the current climate change debates (see below) and rather than a strong empirical basis, policy knowledge seems to be based on existing gender roles and related assumptions around women's vulnerability and their assumed desire to nurture and care for the people and environment that surrounds them. This is something also echoed in the disasters literature, where understandings of women's position and situation are based on their supposed characteristics rather than actual evidence (Bradshaw 2009).

2.1.3 Gendered adaptation and the window of opportunity for change

A body of work does now exist to challenge the gender neutrality of climate change (see Goh 2012, and edited collections by Alston and Whittenbury 2013a; Masika 2002; Terry 2009a). Much of the evidence on whether climate crises are gendered has been focused on rural areas and/or agricultural practices. Academic work has highlighted that the gendered impact of climate change is related to the unequal gender relations that produce inequality in access to resources and political voice to gain access (Lambrou and Paina 2006a). The literature notes that unequal power relations are key to understanding vulnerability, risk and coping (Masika 2002; Terry 2009a) and studies have been undertaken in a variety of contexts and cover a variety of issues (see for example Tandon 2007 on water security; Rossie and Lambrou 2008 on biofuels). It has been suggested that in wealthier societies there is likely to be less gender differentiation from the effects of climate change than in poorer countries (Milne 2002), however studies from 'rich' nations such as the US, Canada and Australia would question this assertion (Alston 2013a; Alston and Whittenbury 2013b Clarke 2013; Fletcher 2013).

Studies have also highlighted the adaptive capacities of women across a range of regions, countries and agricultural practices (Ahmed and Fajber 2009; Alston 2013b; Glazebrook 2011; Okali *et al.* 2012; Segnestam 2009). The literature suggests that gender differences exist in adaptation strategies (Codjoe *et al.* 2012) with women being forced to assume non-traditional roles (Babugura 2009), but potentially benefiting from these through the changing gender relations they bring as women gain access to finance through self help groups (Speranza 2006) or earn an income and move into off-farm employment taking them away from the home (Whittenbury 2013) which, while potentially adding to their time burden, also potentially changes their status and position in the home.

A set of studies have addressed this issue more explicitly, starting with the hypothesis that economic empowerment of women can occur through climate mitigation and adaptation (Bäthge 2010; Klasen 2013). However, caution is needed in suggesting that adaptation to climate change may provide a 'window of opportunity' for wider societal change. For example, Onta and Resurreccion's (2011) study of Dalit adaptation strategies highlights that while adaptation strategies are pushing the caste boundaries, they also demonstrate the resilience of gender boundaries even during a crisis. That is, it is dangerous to assume that changing gender roles will bring changing relations and that crisis will bring change. Moreover, climate events may have negative consequences for women, with some limited but growing evidence that there may be an increase in gender-based violence. This is related to tensions over access to and control over resources designed to mitigate disasters, such as irrigation resources, rather than a 'disaster' event itself (Alston 2013b; Whittenbury 2013). Studies also note there may be factors limiting the strategies women are able to adapt (Djoudi and Brockhaus 2011), and that social relations of power bear upon women's abilities to act on their knowledge in the face of climatic uncertainty (Bee 2013). Adaptation may bring emancipation, but it may also bring further and different oppressions (Godden 2013).

How adaptation is viewed may also vary between men and women, and there may be divergent views on whether a strategy is adding to coping or adding to vulnerability (Djoudi and Brockhaus 2011). The suggestion is that women may not see men's strategies as 'coping', while men may feel threatened by women's strategies and while recognising that they help the household, yearn for the traditional roles and relations of the past (Godden 2013; Whittenbury 2013). The example of biofuels highlights the fact that green 'solutions' may actually involve a trade-off in terms of land and water use and ecosystems and livelihoods, especially women's livelihoods (Tandon 2009) and liquid biofuel production might exacerbate gendered inequalities, threatening the livelihoods of women, with negative implications in particular for their food security (Rossi and Lambrou 2008). The literature suggests 'adaptation' may not benefit the entire household which echoes findings from times of economic crisis where women have borne the cost of 'coping' (see Elson 1989; Moser 1989b) and suggests a useful set of studies for understanding current crisis responses to climate change. Changing gender roles may not bring an uncontested positive change in gender relations (Tatlonghari and Paris 2013) and the impact of adaptation strategies on gender relations, and the impact on decision making within households, needs to be further explored (Boyd 2009) in both the rural and urban contexts.

2.1.4 Gender and sustainability in cities

While much research is rural and/or agricultural-based, urban areas are also important and cities have been suggested to be a 'driving force of global sustainable development' (HLP 2013). At the very least the urban context is important since over 50 per cent of the world's population now lives in urban areas, and approximately 60 per cent of the area of cities expected by 2030 is yet to be built. Of importance in the urban context is the work of Moser and Satterthwaite (2008) in applying an assets framework approach to the issue of climate change adaptation in urban areas, providing conceptual and practical evidence to support this approach. It highlights that while a large proportion of those most at risk from the effects of climate change are concentrated in urban centres

in low- and middle-income countries, scientists, governments and international agencies provide less support for adaptation in urban than rural areas. Linking back to earlier discussions of the importance of how knowledge is constructed and by whom, one reason for this urban silence may be that issues related to climate change tend to be seen as the responsibility of ministries of the environment not ministries responsible for planning urban infrastructure. The suggested focus on strengthening the asset base of households and communities may also be important for building more competent local planning and more accountable local governments.

In contrast to rural research, urban research is often not framed in the context of CCA, but as environmental management and this may be related to the urban planning aspect. Studies that do not focus on rural areas and agricultural production have highlighted women's greater environmentally friendly forms of consumption (Karlsson and Mensah-Kutin2013), for example the use of green power (Alber 2013; Maceachern 2013), and on urban planning, including transport (Levy 2013). Studies have considered how urban planning can impact on women's mobility, safety and security, and workload (Bjornberg and Hansson 2013) on their use of transport and patterns of consumption (Răty and Carlsson-Kanyama 2010) and also health, migration and livelihood adaptation strategies and noted how grassroots urban movements, in which women's participation is predominant, influence urban policy-makers (Hainard and Verschuur 2003). There has been a call for gender to be integrated into urban planning for sustainability and that urban planning should be informed by 'the infrastructure of everyday life' (Khosla 2013) using neighbourhoods as the focus for people-centred planning that takes into account women's unpaid care work, as well as income-generating activities in supporting the urban economy. However, planners and policymakers struggle to address complex, socio-ecological problems like climate change (Hayward 2008) which may make this holistic gendered approach more difficult to achieve.

2.1.5 Greening growth

While urban literature is focused more on local authority planning, and rural literature on household level adaptation, an area of discussion that bridges both rural and urban spheres is green governance, green growth and the green economy. Environmental governance has been raised as a gender concern given the lack of legal rules on gender issues (Galizzi and Herklotz 2013). The notion of 'green governance', while interesting, is not automatically gendered and the implications of what green means for gender has been explored within the context of forest resources (Agarwal 2010) and biofuels, among others. Green growth and the green economy

are similarly treated with some caution by gender analysts (Becher 2012; Guerrero and Stock 2012; Rogers 2013).

The green economy approach promotes an economy based on bioproducts (bioeconomy) and 'green economics' is said to consider the blind spots of traditional economics (Kennet *et al.* 2012; Kennet and Ka-Ming Mak 2012). However, there are definitional problems with 'green' when applied to the economy. The Women's Major Group for Rio+20 suggests that the emphasis on a 'green economy' and other market-based approaches can have negative outcomes. In terms of forests, for example, since definitions of 'forests' include industrial plantations and 'sustainable forest management' includes industrial logging and land conversion to plantations, the green economy focus can promote the expansion of monoculture tree plantations for carbon sinks or for biomass production, with a resultant loss in biodiversity. Encouraging the private sector and large corporations to 'go green' can also mean an increase in land, water and other resources being channelled to these big corporate players to be managed in the name of 'greening' the economy. The financialisation and commoditisation of ecosystems have been linked with land, water and green grabs (see Borras *et al.* 2011; Fairhead *et al.* 2012; Mehta *et al.* 2012 cited in Leach *et al.* 2014).

As care needs to be taken with what 'green' means, it can be seen as a 'business as usual' approach (Schalatek 2013) that does not seek to promote the development of 'solidarity economies' that are evidenced at the local level around the world (Unmüßig *et al.* 2012), and could instead result in the financialisation of the Earth's natural processes, re-branded as 'ecosystem services' (WMG 2011). It has been suggested that these approaches are socially and environmentally blind to the needs of women and there is a need to focus on the place of gender in the green economy (Kennet *et al.* 2012, Newell 2012) and gender budgeting might be a tool to be used within this (Green Women 2012; Holvoet and Inberg 2013).

Rather than dismiss the idea completely, some suggest that enlightened gender policies could steer the green economy away from narrow male priorities and limited market-based perspectives (Stevens 2012), or away from the 'masculinity of aggressive consumption' (Alaimo 2009) toward a more sustainable pattern. There have been calls to replace efficiency with sufficiency (see Mehta 2010; Salleh 2009), emphasising sharing, redistribution and 'commoning' as guiding principles (Leach *et al.* 2014). The idea of 'green-collar jobs' has also been raised – well-paid career track jobs that also contribute directly to preserving or enhancing environmental quality (Yen and Keleher 2009). The Women's Major Group and others have suggested

that a change of terminology is needed, with a focus on achieving a 'sustainable and equitable economy' rather than a 'green' economy (Dankelman 2013). The latter terminology would allow for more linkages across the environmental / developmental divide and would fit within the current post-2015 policy. However, this would demand some reconceptualisation to include issues such as food security (Smith 2012) and governance of water (Varghese 2012), and a need to focus on issues such as gendered consumption (Maceachern 2013).

It is suggested that sustainable development needs to see a marrying of the 'care economy' which recognises and accounts for primarily women's unpaid social reproduction and care burden (Wichterich 2012), with the instruments of a green economy approach that internalises and values (not commodifies) the use of environmental resources (Schalatek 2013). One suggestion is that a focus on human security and social protection could fill the gap in current gender and climate justice work (Goldsworthy 2010; Tschakert and Machado 2012). Having become a popular tool within development in recent years, including with large agencies such as the World Bank, social protection programmes are being seen as being key for post-event response and presented as a new policy prescription, in particular in disaster management (Heltberg 2007; Vakis 2006).

2.2 Disaster risk reduction

2.2.1 Masculine knowledge and technical fixes

Within the environmental discourse, two divergent images of nature emerge. The construction of nature, or rather earth, as a nurturing mother stands in contrast to the imagining of nature as wild and uncontrollable – bringing storms and droughts, intense heat and cold – something to be dominated and mastered over time via a focus on science and technology. Nowhere more clearly is nature constructed as punishing not nurturing, as 'monster' rather than mother, than in 'disasters' (Hoffman 2002) and disasters are presented as the 'negative of normal nature' (Anderson 2011: 5). On one hand natural hazards, such as hurricanes and earthquakes, are conceptualised as unavoidable extreme physical events (Varley 1994), and have been conceived of as messages from God (or the gods) and mediated through mythological and theological frameworks. On the other hand natural hazards are seen as needing structural responses to control their damaging effects (Smith and Petley 2009), making science and technology the main tools with which to address or master them (see Phillips *et al.* 2010). This focus on technical fixes has meant that the

disastersfield, like climate change, has been a largely masculinised field.

In the early 1980s, gender research in disasters began to emerge (Rivers 1982), and in the 1990s a key text was published by Blaikie *et al* (1994), which sought to shift the focus away from the hazard itself, to vulnerability as the basis of 'disasters'. While a late starter, `gender and disasters' is a growing field and just like environmental and climate change (see Dankelman 2002), one that seems to be drawing lessons from attempts to incorporate gender into development. In 1998 a conference on 'Women and Disaster' was held, followed in 2000 by a meeting with the theme 'Reaching Women and Children in Disasters', and in 2004 around a hundred women and men met to discuss 'Gender Equality and Disaster Risk Reduction'. The change in emphasis from 'Women and Children' at the 2000 conference to 'Gender Equality' in the 2004 conference, suggests a very rapid shift in language and focus (see also Enarson and Fordham 2001; Fordham 1998; Sanz *et al.* 2009) in line with the slower process within development to move from Women in Development in the 1970s to the focus on Gender and Development from the 1980s onwards.

The parallels with gender and development were further highlighted when in the 2004 meeting a breakaway discussion was held largely consisting of men. It identified the practice of focusing discussions on identifying and mitigating women's vulnerabilities as 'limiting in the long run' and called for engaging with 'men and boys in equal measure' (Mishra 2009: 35). This rapid move toward reasserting masculinities also demonstrates parallels with the changing and contested gender and development discourse which had turned to masculinities in the early 2000s (see Chant and Gutmann 2000). In the climate change discourse too, there has been the suggestion that a true gender focus needs to also focus on men, and that men should not be cast only in terms of an all-powerful and destructive group (Demetriades and Esplen 2010). However a focus on men and masculinity represented a highly contested approach to 'doing' gender (see Redman 1996), and was seen by some as aiming to dilute the radical women-focused agenda that had emerged, not to enhance it (Pearson 2000:44).

Since 2004, perhaps the best barometer of what is occurring in academic and practitioner circles – the Gender and Disasters Network – has seen a move toward understanding gender through 'intersectionality' – with sexualities being an emerging theme (see Overton 2014).

2.2.2 Emerging themes in engendering disasters

The notion of a 'window of opportunity' for change is a recurring theme in practitioner and academic writings – the former seeking to use the window to bring change, the latter seeking to demonstrate it exists.

Initially work emerged from the USA and included a focus on violence against women and the impact on family life, house and homes (Hoffman 1998, 1999; Enarson 2001). This was joined by research from the developing world toward the end of the 1990s. Hurricane Mitch in Central America saw advancements in terms of understandings of how gender roles, relations and identities are constructed and reconstructed in the disaster context (see for example Bradshaw 2001a, 2001b; Cupples 2007). High profile events during the early part of the new millennium, including the Indian Ocean tsunami meant an upsurge in case studies and survivor narratives (see for example Oxfam 2009), and accounts from field workers (see for example Clarke and Murray 2010) that focused on women as well as men, including insights into gender within aid giving, and the experiences of women aid workers (Dominelli 2013).

Research post-Hurricane Katrina (see for example David and Enarson 2012) allowed new voices to be heard, such as Jewish middle class women on feelings of being recipients rather than givers of aid, and those of care givers and health professionals caught up in events, and also the disabled and those with specific health needs. It also brought new directions in gendered research (see for example Fothergill and Peek 2008 on young people; Gault et al. 2005 on race; D'Ooge 2008 on sexual orientation), and advancement in the theoretical discussions on the meaning of disasters (see for example Brunsma et al. 2007). Violence against women post-event has been the focus of a number of studies (Brown 2012; Fothergill 1999; Houghton 2009; Jenkins and Phillips 2008). A limited academic literature exists focused specifically on the experience of children (Jabry 2002; Anderson 2005; Peek 2008; Manyena et al. 2006). More recently girls and adolescent girls have received attention (Plan 2013) and issues such as sexuality are now being explored (Pincha 2008; Balgos et al. 2012; Gaillard 2011; Overton 2014; Fordham 2011; Knight and Welton-Mitchell 2013). Pacholok (2013) undertook one of the first studies which focused on masculinity, exploring the highly masculinised world of fire fighters in Canadian wildfires, demonstrating how gender relations are simultaneously sustained and disrupted, suggesting how disasters can serve as catalysts for new patterns of gender, even in highly masculine spaces.

Despite the existence of studies exploring new areas within the post-disaster context, at the macro or policy level some very surprising gaps in knowledge still exist.

2.2.3 Gaps in knowledge – what is the differential impact of disasters?

The disasters literature shows some large and perhaps surprising gaps in knowledge. One is in terms of gendered impact. Impact is measured through material losses in infrastructure, housing and agricultural land, or loss of life, both measures are generally not gendered (Lal et al. 2009; Mazurana et al. 2011). Attempts have been made to quantify household loss (Holland 2008) but as gendered losses within households are seldom recorded, at best comparison is female-headed compared to male-headed households, something that has been noted as a limitation in measures of poverty also. A number of organisations, most notably within the United Nations system, have attempted to quantify the gendered socio-economic impacts of events (see for example ECLAC 1991; ESCAP 2011), with estimates from Nicaragua post-Mitch suggesting, for example, the value of losses in subsistence egg production alone immediately after the event was between US$90,000–120,000 per month (Bradshaw 2004).

Reliable fatalities data disaggregated by gender and generation is also still largely missing (Fordham et al. 2007). A number of studies do suggest a gendered impact with higher deaths among women (Peterson 2007; Ikeda 1995; Hines 2007). While women may be more vulnerable to an event, understandings of risk are also important. The subjective lived experience of risk (see Nathan 2008) is largely ignored in mainstream literature and policy, as are the gender differences of how it is understood (see Kroll-Smith and Gunter 1998). What is an acceptable level of risk is a subjective notion and the perceptions of experts and the public may diverge (Paine 2002). That officials express surprise when risk becomes reality, such as when the levees failed in New Orleans, also highlights that risk denial functions in complex ways (Tuana 2007).

It is suggested there are systematic gender differences in the perception of risk (Gustafson 1998), with white males more likely to rank a variety of risks significantly lower than women or minority groups (Finucane et al. 2000; Fothergill 1996). This helps to explain those cases where more men than woman die such as suggested post-hurricane Mitch (Gomáriz 1999), and differences in deaths, for example during Australian bushfires (Haynes et al. 2010; Whittaker et al. 2012). In the latter, men are most often killed outside while attempting to protect the home and other assets, whilst most female and child fatalities occur while sheltering in the house or when fleeing, usually too late (Eriksen et al. 2010). Lack of information – often transmitted by

men to men (Skutsch 2004; Ikeda 1995) – and lack of education and engagement with preparedness activities means women when faced by a perceived risk often do not know when to act or how to act on warnings (Tyler and Fairbrother 2013). In general, however, research suggests that women are more likely to act upon early warnings (Buvinić 1999; Fothergill 1996; Fordham, 2001), suggesting Disaster Risk Reduction (DRR) needs to be gendered.

Other studies, rather than quantifying, have sought to explain the supposed disparity in death rates noting women's greater vulnerability to be based on socialised gender roles rather than on the biological 'weakness' of women (Chowdhury *et al.*,1993; Oxfam 2005, 2012; WEDO, 2008). Neumayer and Plümper (2007) and Plümper and Neumayer (2006) constructed indicators of disaster magnitude and of women's socio-economic status and explored how these relate to the size of the gender gap in life expectancy. They concluded that in countries where a disaster had occurred, where the socio-economic status of women is low, more women than men die or die at a younger age. In the absence of gender disaggregated data on deaths due to disasters, this study is often cited as evidence to support the notion that women are more vulnerable to hazardous events and that some women are more vulnerable than others. This study did not (and could not) explore existing gender disaggregated data sets on disaster deaths, as these do not exist. The studies highlight that socio-economic status and gender matter, but more importantly they highlight the need for data to be disaggregated by gender and generation in order to understand and address this.

If there is a feminised impact, and more women than men do die, this would suggest the need to focus risk reduction initiatives on women. However, as more men are suggested to survive than women, then relief and reconstruction should focus on men, as survivors. This is not the case, and currently women are targeted in many relief and reconstruction initiatives.

2.2.4 Women's involvement in post-disaster response

Studies suggest women do help in rescue operations but this is often rescuing other women, children and the infirm, and constructed in post-event narratives as helping men in their rescue work (Bradshaw 2001b). In practice, studies suggest women are involved in DRR activities (Fordham and Gupta 2010) and through this, women can come to understand they can take a lead role at all stages, including in rescuing men (Fordham 2006) but often these activities are not named as 'disaster' related but presented as related to such things as community health initiatives (Fordham 2009). This may be due to the fact that disaster response is seen to be a male domain and thus constructing activities as 'health' related, a traditional area for women, reduces any possible threat to the male role.

Research highlights that women have become a target for resources and beneficiaries of relief and reconstruction (ECA 2000) but suggests a 'Women in Development' rather than a 'Gender and Development' approach. This means, as perhaps might be expected, a focus on fulfilling what have been termed women's 'practical gender needs' (see Molyneux 1985; Moser 1989a), such as providing better access to water to allow women to more easily fulfil 'their' reproductive role or providing small animals to women to reinstate patio economies and feed families. Projects focused on 'strategic gender interests', such as seeking the elimination of institutionalised forms of discrimination around land rights, or ensuring the right of women and girls to live free from violence, for example, may in contrast struggle to get funding and also to recruit participants (Bradshaw 2004).

Women have become a target for reconstruction projects in recent years, but not necessarily to promote equality or for strategic gains, but because of efficiency in practical terms (Bradshaw and Linneker 2009). An in-depth study of four communities in Nicaragua impacted by hurricane Mitch (Bradshaw 2002) suggested that while half the women interviewed perceived that they participated most in the projects for reconstruction, only a quarter felt that it waswomen who benefited from this 'participation'. The majority stated that it was the family that benefited from their participation in reconstruction. Such perceptions are supported by interviews with representatives from a number of the organisations involved that targeted resources at women, including 'non-traditional' resources such as giving women collective ownership of cows. For example, when asked how men had reacted to this focus on women, one representative commented that there had not been any major problems since "the women have their cows and the men are drinking the milk…". Thus while portrayed as a project focused on women and promoting gender equality, in fact the outcome might bring more work for women, and greater benefits to men. Resources directed at women might also lead to greater levels of conflict over the use of those resources, something suggested also by social protection programmes such as Conditional Cash Transfers (see below).

Women heads of household have become a particular focus for reconstruction projects, but this has not always improved their situation through inappropriate aid (CIET-CCER 1999a, 1999b), and because it does not respond to newly emerging gendered division of labour post-event related to the rehabilitation of dwellings that imposes constraints on intra-household labour allocation (Takasaki 2012).

2.2.5 Windows of opportunity or double disaster?

The specific gendered impact of disasters or the 'double disaster' women and girls may face has recently been summarised (see Bradshaw and Fordham 2013). The 'secondary' impacts felt by women that the report highlights include loss of education for girls, deterioration in reproductive and sexual health, increase in early and forced marriage, increased poverty, insecure employment and trafficking, and migration.

An increase in violence is now assumed to occur, but there is still a lack of systematic studies to support this. Sexual violence, forced and transactional sex is highlighted as increasing post-event and a change from private to public violence, or from the hands of knowns to unknowns noted. All these issues were seen in the aftermath of the earthquake in Haiti and the findings of various studies are well summarised in a desk report by GSDRC (2013). The potential for relief and reconstruction initiatives to inadvertently be the source of violence in the home and conflict in the home and community has also been noted (Bradshaw 2004), and the loss of status and dignity is a less well recognised consequence of aid (Horton 2012). This is exacerbated by the asymmetrical power relationship within which assistance is bestowed from the first to third world, from male aid workers to female 'beneficiaries', which aims or expects to illicit their gratitude, and not only disempowers men but 'symbolically disempowers' women (Hyndman and de Alwis 2003: 218).

Perhaps the biggest impact on women and girls is the escalation of hours in the working day. While some research highlights an increase in the number of households dependent on one, male worker (Bradshaw 2002), in other cases women move into productive activities, and in general reproductive activities become more burdensome and time consuming, while the time spent in their 'community management' role – here engaged in reconstruction activities – also increases.

The economic impact on community work, especially by women, is difficult to quantify. An estimate for Nicaragua suggested that prior to the hurricane in 1998, women on average devoted three hours per day to 'social and community' activities. In the aftermath of Mitch, in some communities more than half the women involved in reconstruction projects had not participated previously in community activities but after the event up to 75 per cent of women in the community were engaged in reconstruction. This suggests a large increase in their time spent on community activities. It is not clear whether the high number of women involved in reconstruction was due to the increase in time available to them, due to the lack of available productive work, or whether the proportional reduction in productive work also noted in the study was due to lack of time on account of their involvement in reconstruction. If women were replacing income generating activities with community/reconstruction activities, the opportunity cost associated with this nationally was estimated at almost US$350,000 per month (Bradshaw 2004).

Girls, especially adolescent girls, may also be a target for relief and reconstruction agencies anxious to get them (back) into school and this may result in their having four roles to juggle – their productive, reproductive and community management roles and their role – promoted and supported by aid agencies – as 'school girls', blurring further their dual identity as adult/child and with potentially important consequences for the future (see Plan 2013).

However, it is important to note that some research does support to some extent the notion of a window of opportunity for change. For example in Düzce after the 1999 Marmara earthquakes, many men lost their traditional role as sole breadwinner while women and girls found employment in normally taboo locations and occupations outside the home, leading some men to re-evaluate their contributions to feminised household chores (Kümbetoğlu *et al.* 2005). However, as noted above, this 'window of opportunity' does not exist for all women and for other women, their poor levels of education before the earthquake limited the extent to which they could find employment outside traditional female reproductive roles after the event (Ozsoy and Sariipek 2010: 105).

Research highlights that not all women experience the event in the same way, and more importantly for some women the event itself may bring positive changes as well as negative (Cupples 2007). This has been recognised in the concept of Post-Traumatic Growth (PTG) (Tedeschi and Calhoun 2004). The research suggests some people find positive changes arise from struggling with the aftermath of trauma, for example, greater intimacy and compassion for others, feeling personally stronger, and a deeper appreciation of life. One woman survivor of the Marmara earthquakes in Turkey in 1999 reported that the changes in opportunities post-earthquake were so profound that she had 'adopted a new identity' (Ozsoy and Sariipek2010: 103) while Overton (2014) notes the importance of Katrina in the decision of adolescent girls to 'come out' and to be happier living 'out' as lesbians.

2.2.6 Building resilience – a common theme?

Linked to this focus on the positive outcomes of 'disasters' is the call to focus on capacities, rather than vulnerabilities, and the notion of 'resilience'. A recent summary of the available literature around resilience in the humanitarian context (Combaz 2014) suggests that it should be seen not as an alternative to intervention nor a new stand-alone paradigm, but an increasingly important component of a more holistic approach to reducing the impact of disasters. However, while growing in popularity across the disaster and development literatures (see DFID 2011) an agreed understanding of the term is still largely absent (McAlsan 2010). Resilience is emerging as a notion that bridges both the natural and social sciences and is increasingly the focus of policy-making (Turnball *et al.* 2013). Social resilience is a term that has become popular particularly in development literature, conceptualising the ability of human systems to adapt to change (Adger, 2000; Bahadar *et al.* 2010; Pelling, 2003; Davidson, 2010). Many writers recommend a cautious approach to the notion of resilience, to avoid the emergence of yet another 'new tyranny' (Béné *et al.* 2012), highlighting it represents a shift from a state-based to a society-based response (Chandler 2012). It has also been suggested that resilience is 'not a pro-poor concept', in that poverty reduction cannot be substituted by resilience building for example (Béné *et al.* 2012). Authors point to the fact that it is not an inevitable, inherent, universal quality (Norris *et al.* 2008) or that there may be 'resilience outcasts', warning that systems deemed undesirable can also be resilient. In gender terms it is still under researched, and while starting to be a focus (see for example Enarson 2012) it is not clear what it has to offer. One positive benefit a move to make resilience a more central concept might be its ability to bridge the development, climate change and disasters divide.

3

Common issues and areas of debate

The discussion above suggests a number of common themes in the literature.

A review of the gender and climate change and the gender and disasters literature highlights how the academic understanding of key concepts and issues, and the evidence base for a more nuanced understanding of disaster response and climate change adaptation, are much more advanced than the related policy discourse, that still relies largely on unevidenced assumptions around gender roles and relations on which to base its proposals. At times this is due to gaps in knowledge – with one key one being the continued lack of disaggregated data post-disaster on gendered loss, even to the extent that fatalities are not recorded by sex. However, in other instances the assumptions on which policies are based are due to essentialised views of men and women. This includes an assumed vulnerability of women constructing them as needing protection, but at the same time an assumed greater ability for women to cope, respond and adapt to changes and crises, and thus to 'protect' others and the environment.

These gendered discourses of women as both protectors and needing protection are somewhat echoed in the literature that at times seeks to highlight or evidence the opportunities for transformation that extreme climatic events bring, but at the same time also highlights the triple impact of climate change and climate related disasters on women through increasing their productive and reproductive time burdens and the amount of time spent on community-related activities. For adolescents and young women a fourth activity may be added, as governments, development workers and donors seek to promote education as a means for women's 'emancipation', casting adolescents as 'children' needing to be schooled, despite them often carrying very 'adult' time burdens outside the classroom.

The evidence around gendered disaster response and risk reduction, and around climate change impact and adaptation, is somewhat contradictory in terms of how disasters do, and climate change will, impact women and girls. While the gendered outcomes of climate-related processes now and in the future are still not clear and the evidence not conclusive, there is convergence across the areas in terms of possible scenarios and this highlights the need to link the two literatures to ensure greater understanding across both. There is also room to learn from studies within the wider field of gender and development.

The final section will explore further some of these common issues raised by the different kinds of literature, also placing them within the debates that have already unfolded within feminist and the gender and development literature. It begins with a fundamental concern that is common to both the environment and disaster literature around how knowledge is constructed.

3.1 The production of knowledge

In the early 1980s, the first significant collection of articles on feminist epistemology appeared (Harding and Hintikka 1983), suggesting gender to be a variable in conceptions of rationality (Harding 1982) leading to a critique of 'masculinist' constructions of knowledge and the notion of 'objectivity'. Out of this developed the idea of 'embodied objectivity' arising from an understanding that knowledge is always 'situated', always local and limited (Haraway 1988). This body of work sought to dispel the romantic belief in the possibility of objective knowledge produced from an 'outside-of-nature' and 'perspective-free' viewpoint (Fox Keller 1985).

Despite the now large existing body of work on feminist epistemology (see Evans *et al*. 2014), one issue raised in the review of both the disasters and climate change literatures is the continued 'scientific' and 'objective' approach presented by mainstream studies in both. Both show a bias toward 'scientific methods' that presents evidence as 'objective fact' leaving little room for discussion and silencing other, more qualitative findings as 'anecdotal'. The climate change debate in particular may retrench traditional models of scientific objectivity that divide subject from object, knower from known, assuming a view from nowhere, while claiming to be everywhere equally (Haraway 1991:191 cited in Alaimo 2009) ignoring the 'viscous porosity' of nature and culture (Tuana 2007). As Nelson (2008) notes, this is not limited to 'scientists' but economists also continue to present their advice as based on science not nature, as scientifically sound and economically rational, and fail to recognise the subjective understandings of intergenerational equity their models encompass, and the ethical issues this raises.

The notion of risk is common to both climate change and disaster debates, and while risk assessment should represent a blending of science and judgment with important psychological, social, cultural, and political factors once again it is constructed as an objective, measurable fact. As Slovic (1999) notes, whoever controls the definition of risk controls the rational solution to the problem at hand. The 2°C climate target expresses this level currently, and suggests we can both identify levels of acceptable danger, and hold global warming to this. More importantly, it suggests the need to consider the 'framework of values based on power' (Seager 2009) that explains who is creating and driving the agenda for this, and other targets in the current post-2015 policy context.

3.2 Windows of opportunity

While macro level date is presented as 'gender neutral' within policy prescriptions there is an assumed gendered vulnerability. Not only do both the climate change and disasters literature highlight women as a vulnerable group, much of this vulnerability is assumed rather than based on studies that actively explore this. The assumed vulnerability of women is often linked in policy discourse to women's assumed greater poverty, which also helps to explain the focus on female heads of household in post-disaster response. However, the basis of this poverty – unequal power relations – is less often explicitly mentioned or tackled. If women are more vulnerable than men to extreme climate events, then a focus on women post-event is problematic, as more women will have died leaving men alone to act as carers and in need of resources. Yet increasingly it is women who are the 'beneficiaries' of resources in their construction as 'virtuous victims'.

A common theme in the literature is that crisis can bring 'good' change. Both sets of literatures present case studies that show that there is change in gender roles due to crisis, including women moving into 'non-traditional' roles, entering income generating activities and/or moving outside the confines of the home or the farm. However, what is less well evidenced is whether these changing roles bring positive changes in gender relations for women, particularly within households, and if any change in gender relations is long term change. It is not only the crisis that may promote change but policymakers reacting to the crisis, and a focus on women as targets of policy may also have implications for gender roles, and (or and not) gender relations.

3.3 The problems of inclusion

While the key aim of gender activists is to 'include' gender in the policy agenda – be that development, environmental or disaster-focused – the literature suggests a note of caution about how this occurs. In development terms concerns have focused on how the 'feminisation of poverty' thesis became understood as poverty having a 'female face' and thus to suggest poverty reduction policies automatically addressed gender inequality, and led to calls to 'rescue' gender from the 'poverty trap' (Jackson 1996). The high 'participation' of women in poverty reduction programmes suggested that, rather than the feminisation

of poverty, we should talk of the 'feminisation of poverty alleviation' (Chant 2008) whereby women are being constructed not as the most poor, but as the most efficient means by which to reduce the number of poor. While women are expected to take on a new role as the 'beneficiary' of projects that provide economic resources for the household and in particular children, this new role is conceptualised as part of women's existing gendered role as mother and carer. Women then are at the service of the new poverty agenda, rather than being served by it, and this supposed 'gendered' poverty agenda does little to change the situation and position of women (Molyneux 2006; 2007).

Such concerns have been more recently highlighted within the disasters literature focused on the way governments and non-governmental organisations have increasingly incorporated gender frameworks into their planning for disaster relief responses (Horton 2012). The focus on women as delivering disaster relief and reconstruction while 'giving' resources to women similarly plays on existing gender roles and reinforces rather than challenges gender relations (Bradshaw 2013). Implementation of gender guidelines often conceptualise women in limited, essentialised terms as mothers charged with protecting others, or as 'weak' women needing protection (Pittaway *et al.* 2007). This double identity of women as both virtuous and vulnerable (Arora-Jonsson 2011) is at the root of the focus on women by policymakers. In the post-disaster context these women 'beneficiaries' of aid may not only be targeted as 'vulnerable' but 'virtuous' mothers and service deliverers, but also as those more likely to demonstrate the gratitude demanded from being the receivers of relief aid (Hyndman and de Alwis 2003).

Discussion of the 'feminisation' (Chant 2008; Bradshaw 2010) or 'motherisation' (Molyneux 2006) of policy response, or an 'ecomaternalism' (Arora-Jonsson 2011) is also not new within gender and environmental literature. Such discussions had been part of the critiques that emerged over ecofeminist approaches in the 1990s, where critics suggested that the proclaimed 'success' of WED projects had often been gained at the expense of women – adding unremunerated environmental protection roles to women's existing burdens to bring positive collective benefits but few personal gains (Jackson 1993; Leach 1994). Such roles not only increase women's workloads but demand an examination of how women's new roles and responsibilities affect and change power relationships (Djoudi and Brockhaus 2011). Constructing women's response to environmental issues as different from men's – highlighting for example male response as an institutionalised mitigation and adaptation compared to a more individual/collective female response – may add to this, and MacGregor (2010) suggests it is 'somewhat dangerous' for feminists to celebrate women's responses to environmental problems when they are

connected to their gender specific responsibilities for social reproduction. This raises the question of how best to ensure the inclusion of women within ongoing development, environmental and disaster programmes in a way that ensures they are served by these programmes, rather than being at the service of them.

3.4 Social reproduction

The dual construction of women as both victims and as virtuous runs parallel to a second dualism – women as producers and reproducers. Although less of an explicit issue within the gender and disasters field, women's 'reproductive' work has been central to constructions of women in both WID and WED schools of thought. The gendered division of labour is central to explaining women's subordinate role, but also privileges them as better protectors of the environment and better service providers. This would not be an issue if women were 'rewarded' for this efficiency in economic terms or via society valuing these characteristics more highly. However, as the nurturing characteristics of women are assumed to be 'natural' they are little valued. A focus on the unpaid care economy that acknowledges its value and leads to a reconceptualisation of its worth within society would be welcome. However, care is needed that it does not become another means to focus on population growth within the environmental debate (Hartman 2010; Hartman and Braajas-Roman 2011) and used to further justify targeting resources to women as 'virtuous-victims' within the disasters field.

One important policy area that plays on this is social protection. Social protection has become a potential policy 'solution' not only within development, but also in the disaster discourse (Heltberg 2007; Vakis 2006). It has been suggested that disaster risk reduction and social protection, both on the 'adaptation continuum', coupled with a livelihoods approach, could play an important role in contributing to improving adaptive capacity in the face of climate change (Jones *et al.* 2010). One of the most popular forms of social protection among policymakers has been Conditional Cash Transfer (CCT) programmes. These programmes have varying conditions but in general monetary resources, given directly to women, are conditional on children meeting targets in school attendance, in growth and nutrition and on women attending workshops on health etc. While they are presented as a new policy solution, including in the post-2015 context, there is a well established, and still growing, evidence base of the potential negative gendered effects (see Molyneux 2006, 2007; Bradshaw and Quiros 2008). Not least that far from being 'empowering', the programmes seek to define the identity of women as being focused on mothering as well as what it means to be a 'good' mother (Bradshaw 2008).

While the policy focus is on women as mothers and as service deliverers, feminists suggest the focus should be on sexual and reproductive rights and ensuring all women, married, mothers, or not, are able to make decisions about their fertility and sexuality. Linked to this is the emerging focus on adolescent girls in the disaster (Plan 2013) and climate change (Goodman 2013) literatures. While adolescence is a concept and as a concept the relevance of adolescence to many girls across the globe questioned, it is through the category of adolescence that girls are entering the policy discourse including the post-2015 discussions.

3.5 From gendering to greening: the dangers of mainstreaming

An overall trend, as highlighted by a review of DRR and CCA, is that women (and girls) are noticeable by their inclusion – not exclusion – from the policy discourse. The fact women's inclusion in policy can be as problematic as their exclusion has been highlighted above. While there have been calls to mainstream gender into environmental processes and laws (Galizzi and Herklotz 2013; Ginige *et al.* 2009; Shalatek 2013), the experience of mainstreaming gender in the development context suggests care is needed in how this is done (Porter and Sweetman 2005; Walby 2005), as the common approach to mainstreaming adopted has been the basis of criticisms (see Mukhopadhyay 2004; True and Mintrom 2001; Woodford-Berger 2004). It has been suggested mainstreaming in practice meant that a 'streaming away' of gender issues had occurred though reducing gender to a technical/tick box exercise that does not acknowledge the issues of power at the basis of gender inequalities. Mainstreaming has constructed gender as a crosscutting or transversal issue, diluting its meaning, and the responsibility of all and the responsibility of no one, which has de-politicised calls to engender development. However, here the issue is not so much to debate the gendering of processes, but to highlight lessons that might be learned from them for other processes, most notably ideas of 'greening' the economy.

It has been suggested that the 'greening' of the economy should be better read as 'greenwashing' since, as with mainstreaming gender, it may serve only to suggest that a new approach has been adopted, and that 'the environment' is included in policies and proposals, when in reality it merely justifies business as usual. Thus just as gender was a key issue to enter the mainstream development discourse, now calls to 'disaster-proof' development seek to 'embed' disasters within the development discourse, while the environment has emerged as a key concern within the sustainable development debate. The rise to the fore of 'sustainable development' allows the development discourse to subsume environment, disasters and gender – to mainstream them – as seen within the post-2015 agenda. This may not make them more central nor more visible, but instead depoliticise and dilute the calls to make them central and more visible. If women are to be the means to deliver this 'greening' through sustainable consumption, social protection and social reproduction, then greening may also become a key issue for gender activists.

4

Concluding comments

The report has highlighted several areas of overlap between the development, environment and disasters literature in terms of the concepts used – with risk and vulnerability being shared concepts, but without necessarily a shared understanding, while resilience perhaps offers a bridge across the continued conceptual divide. It also highlights a number of shared concerns – particularly related to the masculinisation of knowledge and the dominance of technical or scientific policy solutions, the targeting of resources at women as 'virtuous –victims' to deliver policy goals, and the role of social 'protection' policies for poverty alleviation, vulnerability reduction and climate change adaptation.

The report notes also that the way women are being presented in the policy discourse is as an 'opportunity', with the development literature talking of women as an 'untapped resource' while the other literature focuses on the notion of the 'window of opportunity' that crisis may bring. Yet there is little evidence to support the fact that long term positive change in gender relations has been the product of crisis provoked by economic shocks or natural hazards, while the lack of evidence around climate change adaptation means that it is still too early to say what the outcome will be.

The report then builds on those who have, since the mid-1990s, suggested caution is needed when celebrating women's 'success' at managing resources and coping in crisis, since their related inclusion in policy initiatives may be as problematic as their exclusion.

The report highlights that while the body of knowledge is growing, there remain many continued gaps. In reality what is not known is much greater than what is known. There are some quite fundamental gaps – such as a lack of routine collection of sex disaggregated data post-disaster on deaths, injuries and losses. This is perhaps surprising since in general the two fields are characterised by a leaning toward quantification, perhaps due to their 'scientific' roots.

A reliance on empirical fact to inform policy has determined what is included and how in the policy discourse. On the one hand, policymakers do not have the required gendered information and so instead stereotypical assumptions are at the basis of policy decisions. On the other hand, where evidence does exist, its micro level, qualitative nature means it is not seen to be 'robust' and thus can be ignored. One area that needs to be addressed, as was the case in the field of gender and development and the emergence of feminist economists, is the need to engage with science and scientists using scientific methods to challenge gender blind evidence.

However, what is also apparent from the literature is the need for further studies at the micro level, particularly household studies, to show how men and women experience environmental change differently, and how these differences, and those that arise from other characteristics such as age, income and ethnicity, make environmental crisis a gendered issue.

Finally, it is clear the literatures have much in common and studies that consider both climate change and disasters, that look at short and long term risks, are a necessity if the issues raised are to be tackled in a way that improves, rather than harms, the position and situation of women.

References

Adger, W.N. 2000. Social and ecological resilience: are they related? *Progress in Human Geography*, 24, 3, 347–364

Agarwal, B. 2010. *Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry*, Oxford University Press, ISBN 0199569681. http://www.forestrynepal.org/publications/book/4958

Agarwal, B. 2001. Participatory exclusions, community forestry, and gender: An analysis for South Asia and a conceptual framework. *World Development*, *29*(10), 1623–1648.

Agarwal, B. 1992. The Gender and Environment Debate: Lessons from India, *Feminist Studies*, 18, 1, 119–158.

Agostino, A., Lizarde, R. 2012. Gender and Climate Justice, *Development*, 55, 90.

Aguilar, L. 2009. *Training Manual on Gender and Climate Change*, IUCN. www.iucn.org/news_homepage/events/unfccc2/events/2011_durban/publications/?uPubsID=3592

Ahmed S., Fajber E. 2009. Engendering adaptation to climate variability in Gujarat, India. *Gender and Development*, 17, 1, 33–50.

Alber, G. 2013. Gendered Access to Green Power: Motivations and Barriers for Changing the Energy Provider, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands

Alaimo, S. 2009. *Insurgent Vulnerability and the Carbon Footprint of Gender*, Kvinder, Køn & Forskning, 3, 22–35. https://tidsskrift.dk/index.php/KKF/article/view/44306/84085

Alston, M. 2013a. Introducing Gender and Climate Change: Research, Policy and Action, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Alston, M. 2013b. Gender and Climate Change in Australia and the Pacific, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Alston, M. 2013c. Women and Adaptation, *Wiley Interdisciplinary Reviews: Climate Change,* (1757–7780), 4, 5, 351–358.

Alston, M. and Whittenbury, K. (eds) 2013a. *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, ISBN: 978-94-007-5517-8 (Print) 978-94-007-5518-5 (Online), Springer, Netherlands.

Alston, M. and Whittenbury, K. 2013b. Does Climate Crisis in Australia's Food Bowl Create a Basis for Change in Agricultural Gender Relations? *Agriculture and Human Values*, 30, 1, 115–128.

Anderson, M. 2011. *Disaster Writing: The Cultural Politics of Catastrophe in Latin America*, Charlottesville, VA: University of Virginia Press.

Anderson, W.A. 2005. 'Bringing Children into Focus on the Social Science Disaster Research Agenda' *International Journal of Mass Emergencies and Disasters* 23, 3, 159–175

Antrobus, P. 2004a. *The Global Women's Movement: Origins, Issues And Strategie*s, London: Zed Books.

Antrobus, P. 2004b. MDGs – The most distracting gimmick, in WICEJ (ed.) *Seeking Accountability on Women's Human Rights: Women Debate the Millennium Development Goals,* Women's International Coalition for Economic Justice, 14–16, www.banulacht.ie/onlinedocs/WICEJ_Seeking_Accountability_on_Womens_Human_Rights_UN_MDGs_(2004).pdf

Arora-Jonsson, S. 2011. Virtue and vulnerability: Discourses on women, gender and climate change, *Global Environmental Change*, 21, 2, 744–751.

Babugura, A. 2009. *Gender and Climate Change: South Africa Case Study*. Heinrich Böll Foundation Southern Africa. www.upb.edu.ph/ktrc2/attachments/article/131/Gender%20and%20Climate%20Change%20South%20Africa%20Case%20Study.pdf

Balgos, B., Gaillard, J.C., Sanz, K. 2012. The warias of Indonesia in disaster risk reduction: the case of the 2010 Mt Merapi eruption in Indonesia', *Gender and Development*, 20, 2, 337–48.

Bäthge, S. 2010. *Climate Change and Gender: Economic Empowerment of Women through Climate Mitigation and Adaptation?* GTZ Working Papers, GTZ, Eschborn. /www.oecd.org/social/gender-development/46975138.pdf

Becher, C. 2012. The concept of a 'green economy', gender equality andintergenerational solidarity, *European Women's Voice*, Spring 2011.

Bee, B. 2013. Who Reaps What is Sown? A Feminist Inquiry into Climate Change Adaptation in Two Mexican Ejidos, ACME, *An International E-Journal for Critical Geographies*, 12, 1, 131–154. www.acme-journal. org/vol12/Bee2013.pdf

Bee, B., Biermann, M., Tschakert, P. 2013. Gender, Development, and Rights-Based Approaches: Lessons for Climate Change Adaptation and Adaptive Social Protection, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Bell, K. 2013. Post-conventional Approaches to Gender, Climate Change and Social Justice, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Béné, C., Godfrey Wood, R., Newsham, A. and Davies, M. 2012. Resilience: New Utopia or New Tyranny? Reflection about the Potentials and Limits of the Concept of Resilience in Relation to Vulnerability Reduction Programmes, *IDS Working Paper 405,* IDS. www.ids.ac.uk/publication/resilience-new-utopia-or-new-tyranny-reflection-about-the-potentials-and-limits-of-the-concept-of-resilience-in-relation-to-vulnerability-reduction-programmes

Bjornberg, K.E. and Hansson, O. 2013. Gendering local climate change adaptation, *Local Environment: The International Journal of Justice and Sustainability*, 18, 2, p217.

Blaikie, P., Cannon, T., Davis, I., Wisner, B. 1994. *At Risk: Natural Hazards, People's Vulnerability and Disasters*, Routledge, London. Second edition published as: Wisner B., Blaikie P., Cannon T., Davis I. (2004).

Borras Jr, S. M., Hall, R., Scoones, I., White, B., & Wolford, W. 2011. Towards a better understanding of global land grabbing: an editorial introduction. *The Journal of Peasant Studies*, 38(2), 209–216.

Boserup, E. 1970. *Woman's Role in Economic Development*, St Martin's, New York.

Boyd, E. 2009. The Noel Kempff Project in Bolivia: gender, power and decision-making in climate mitigation, in Terry, G. (ed) Climate Change and Gender Justice. *Working in Gender and Development Series.* Oxfam and Practical Action Publishing, 240.

Bradshaw, S, 2013. *Gender, Development and Disasters*, Edward Elgar, Northampton, UK.

Bradshaw, S. 2010. Feminisation or de-feminisation?: Gendered experiences of poverty post-disaster, in Chant S (ed) *International Handbook on Gender and Poverty*, Edward Elgar, Cheltenham, UK, pp. 627–632.

Bradshaw, S. 2009. Engendering disasters: Feminisation of response or a feminisation of responsibility? *Regional Development Dialogue*, 30, 1, 123–131.

Bradshaw, S. 2008. From Structural Adjustment to Social Adjustment: A Gendered Analysis of Conditional Cash Transfer Programmes in Mexico and Nicaragua in *Global Social Policy,* 8:1, 188–207

Bradshaw, S. 2004. *Socio-economic Impacts of Natural Disasters: A gender analysis*, United Nations Economic Commission for Latin America and the Caribbean – ECLAC, Serie Manuales 32./www.eclac. org/publicaciones/xml/3/15433/lcl2128i.pdf

Bradshaw, S. 2002. Exploring the gender dimensions of reconstruction processes post-Hurricane Mitch*, Journal of International Development,* 14, 871–879.

Bradshaw, S. 2001a. *Dangerous Liaisons: Women, Men and Hurricane Mitch / Relaciones Peligrosas: Mujeres, Hombres y el Mitch*, Puntos de Encuentro, Managua, Nicaragua.

Bradshaw, S. 2001b. Reconstructing roles and relations: Women's participation in reconstruction in post-Mitch Nicaragua, *Gender and Development*, 9, 3, 79–87.

Bradshaw, S. and Fordham, M. 2013. *Women, girls and disasters: A review for DFID*, Department for International Development – DFID, UK. www.gov.uk/government/uploads/system/uploads/attachment_data/file/236656/women-girls-disasters.pdf

Bradshaw, S. and Linneker, B. 2009. Gender perspectives on disaster reconstruction in Nicaragua: Reconstructing roles and relations, in Elaine Enarson and Dhar Chakrabarti (eds) *Women, Gender and Disaster: Global issues and initiatives*, Sage: India, 75–88

Braidotti, R., Charkiewicz, E., Hausler, S., Wieringa, S. 1997. 'Women, the Environment and Sustainable Development'. In Duggan L, Visvanathan N, Nisonoff L, Wiegersma N (eds) *The Women, Gender and Development Reader*, New Jersey, Zed Books Ltd, 54–61.

Braidotti, R., Charkiewicz, E., Häusler, S., and Wieringa, S. 1994. *Women, the environment and sustainable development: towards a theoretical synthesis*, Zed Books

Brown, B.L. 2012. Battered women's shelters in New Orleans: Recovery and transformation, in E. David and E. Enarson (eds.), *The Women of Katrina: How Gender, Race and Class Matter in an American Disaster*, Nashville: Vanderbilt University Press, pp. 17–189.

Brunsma, D., Overfelt, D., and Picou, J.S. (eds.) 2007. *The Sociology of Katrina: Perspectives on a Modern Catastrophe*, Maryland USA: Rowman and Littlefield

Buvinić, M. 1999. *Hurricane Mitch: Women's needs and contributions*, Inter-American Development Bank, Sustainable Development Department TechnicalPapers Series. http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=816307

Cela, B., Dankelman, I., Stern, J. 2013. (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP. www.undp.org/content/undp/en/home/librarypage/womens-empowerment/powerful-synergies/

Chandler, D. 2012. Resilience and Human Security: The Post-interventionist Paradigm, *Security Dialogue*, 43, 3, 213–229. http://sdi.sagepub.com/content/43/3/213.abstract

Chant, S. (ed.) 2010. *International Handbook on Gender and Poverty*, Edward Elgar, Cheltenham, UK.

Chant, S. 2008. The 'feminisation' of poverty and the 'feminisation' of anti-poverty programmes: Room for revision? *Journal of Development Studies*, 44, 2, 165–197.

Chant, S. and Gutmann, M. 2000. *Mainstreaming Men into Gender and Development: Debates, Reflections and Experiences*, Oxford: Oxfam Publishing.

Chant, S. and Sweetman, C. 2012. Fixing women or fixing the world? 'smart economics', efficiency approaches, and gender equality in development, *Gender and Development*, 20, 3, 517–529.

Chowdhury, A.M.R.,Bhuyia, A.U., Choudhury, A.Y. and Sen, R. 1993. The Bangladesh Cyclone of 1991: Why So Many People Died. *Disasters* 17 (4): 291–304.

CIET-CCER. 1999a. *Social Audit for the Emergency and Reconstruction: Phase 1* – April 1999, Managua, Nicaragua: Civil Coordinator for Emergency and Reconstruction / CIETinternational /Carqui Press.

CIET-CCER. 1999b. *Auditoría Social para la Emergencia y la Reconstrucción – Fase 2* – Noviembre, Managua, Nicaragua: Civil Coordinator for Emergency and Reconstruction / CIETinternational, Carqui Press.

Clarke, J. 2013. Renegotiating Gender as Farming Families Manage Agricultural and Rural Restructuring in the Mallee, in Alston, M., Whittenbury, K. (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Clarke, M. and Murray, S. 2010. The voices of international NGO staff, in M. Clarke, I. Fanany, and S. Kenny (eds.) *Post-Disaster Reconstruction: Lessons from Aceh*, London: Earthscan, pp. 155–185.

Codjoe, S.N., Atidoh, A., Kafui, L., Burkett, V. 2012. Gender and occupational perspectives on adaptation to climate extremes in the Afram Plains of Ghana, *Climatic Change,* 110, 1–2, 431–454.

Combaz, E. 2014. *Disaster resilience: Topic guide*. Birmingham, UK: GSDRC, University of Birmingham.

Cornwall, A. 1998. Gender, participation and the politics of difference, in Guijt, I., Shah, M.K. (eds.) *The Myth of Community: Gender Issues in Participatory Development*, London: Intermediate technology Publications, pp. 46–57.

Cupples, J. 2007. Gender and Hurricane Mitch: Reconstructing subjectivities after disaster, *The Journal of Disaster Studies, Policy and Management*, 31, 2, 155–175.

Dankelman, I. 2013. On the Road to Sustainable Development: Promoting Gender Equality and Addressing Climate Change*, in* Cela B, Dankelman I, Stern J (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP. 15–25

Dankelman, I. 2010. (ed) *Gender and Climate Change: An Introduction*, Earthscan Publications Ltd, London.

Dankelman, I. 2002. Climate Change: Learning from Gender Analysis and Women's Experience of Organizing for Sustainable Development, *Gender and Development*, 10, 2, 21–29.

Dankelman, I. E., and Davidson, J. (eds.) 1988. *Women and environment in the third world: alliance for the future.* Earthscan.

Davidson D.J. 2010. The Applicability of the Concept of Resilience to Social Systems: Some Sources of Optimism and Nagging Doubts, *Society and Natural Resources: An International Journal,* 23, 12,1135–1149

David E., Enarson E. 2012. *The Women of Katrina: How Gender, Race and Class Matter in an American Disaster*, Nashville, Vanderbilt University Press.

Demetriades J. and Esplen E. 2010. The Gender Dimensions of Poverty and Climate Change Adaptation, in Mearns R., Mearns A.N. (eds*) Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World*, Washington D.C, The World Bank.

Demeritt, D. 2001. The construction of global warming and the politics of science, *Annals of the Association of American Geographers* 91, 307–337.

Dennison C.E. 2003. From Beijing to Kyoto: Gendering the International Climate Change Negotiation Process, in *Advancing Human Security: The Role of Technology and Politics,* Halifax and Pugwash, Nova Scotia, Canada: 53rd Pugwash Conference on Science and World Affairs. www.pugwash.org/reports/pic/53/dennison.htm

Denton F. 2004. Gender and Climate Change: Giving the "Latecomer" a Head Start, *IDS Bulletin,* 35, 3, 42–49.

Denton F. 2002. Climate Change Vulnerability, Impacts, and Adaptation: Why Does Gender Matter? in Masika R(ed.) *Gender, Development and Climate Change*, Oxfam, London, pp. 10–20.

DFID 2013. DFID Annual Report and Accounts 2013 to 2014. Department for International Development, UK. www.gov.uk/government/publications/dfid-annual-report-and-accounts-2013-to-2014

DFID 2011. *Defining Disaster Resilience: A DFID approach paper,* Department for International Development, UK. http://www.dfid.gov.uk/Documents/publications1/Defining-Disaster-Resilience-DFID-Approach-Paper.pdf

DFID 2004. Adaptation to climate change: Making development disaster-proof, *DFID Key Sheet* 06. Department for International Development, UK. www.unpei.org/sites/default/files/PDF/resourceefficiency/KM-resource-DFID-impact-climatechange-vulnerability.pdf

Di Chiro, G 2009. Sustaining everyday life: bringing together environmental, climate and reproductive justice. *DifferenTake*s, 58. http://popdev.hampshire.edu/sites/default/files/uploads/u4763/DT%2058%20-%20Di%20Chiro.pdf

Djoudi H. and Brockhaus M. 2011. Is adaptation to climate change gender neutral? *International Forestry Review*, 13, 2, 123–135. www.cifor.org/publications/pdf_files/articles/ADjoudi1101.pdf

Dominelli L. 2013. Gendering Climate Change: Implications for debates policies and practices in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, ISBN: 978-94-007-5517-8 (Print) 978-94-007-5518-5 (Online), Springer, Netherlands, 77–94.

D'Ooge C. 2008. *Queer Katrina: Gender and sexual orientation matters in the aftermath of the disaster, in Willinger B (ed.)* Katrina and the Women of New Orleans: Executive Report and Findings*,* New Orleans: Newcomb College, Tulane University.

Dressler, W., Büscher, B., Schoon, M., Brockington, D., Hayes, T., Kull, C., McCarthy, J. and Streshta, K. 2010. From Hope to Crisis and Back? A Critical History of the Global CBNRM Narrative. *Environmental Conservation*. 37,1,1–11.

Duggan N., Visvanathan N., Nisonoff L., Wiegersma N. (eds) 1997. *The Women, Gender and Development Reader*, New Jersey, Zed Books Ltd.

ECA 2000. Independent evaluation of expenditure of DEC Central American Hurricane appeal funds', San Jose, Costa Rica, available at www.alnap.org/pool/files/erd-2873-full.pdf

ECLAC 1991. *Manual for Estimating the Socio-Economic Effects of Natural Disasters* United Nations Economic Commission for Latin America and the Caribbean: Mexico.

Elson, D. 1989. 'The impact of structural adjustment on women: Concepts and issues', in O. Bade (ed.) *The IMF, The World Bank and The African Debt*. Vol. 2, London: Zed Book Ltd.

Enarson E. 2013. Two Solitudes, Many Bridges, Big Tent: Women's Leadership in Climate and Disaster Risk Reduction, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Enarson E. 2012. *Women Confronting Natural Disaster: From Vulnerability to Resilience*, Lynne Rienner Publishers, Boulder Colorado, USA.

Enarson E. 2001. What women do: gendered labor in the Red River Valley flood, *Global Environmental Change*, Part B: Environmental Hazards 3, 1, p1–18.

Enarson E. and Chakrabarti D. 2009. *Women, Gender and Disaster: Global Issues and Initiatives*, Sage, India.

Enarson E. and Fordham M. 2001. From women's needs to women's rights in disasters, *Global Environmental Change B*, Environmental Hazards, 3, 133–136.

Enarson E. and Meyreles L. 2004. International perspectives on gender and disaster: differences and possibilities, *International Journal of Sociology and Social Policy*, 24, 10, 49–93.

Enarson E. and Morrow B. 1998. (eds) *The Gendered Terrain of Disasters: Through Women's Eyes*, International Hurricane Centre, Florida International University, Miami.

Eriksen C., Gill N., Head L. 2010. The gendered dimensions of bushfire in changing rural landscapes in Australia, *Journal of Rural Studies*, 26, 4, 332–342.

ESCAP 2011. Social and Economic Impact of Disasters: Estimating the Threshold between Low and High Levels of Risk, *MPDD Working Papers* WP/11/15, United Nations Economic and Social Commission for Asia and the Pacific.

Evans M., Hemmings C., Henry M., Johnstone H., Madhok S., Plomien A., Wearing S. (eds) 2014. *The SAGE Handbook of Feminist Theory*. Sage Publications Ltd, London

Fairhead J., Leach M., Scoones I. 2012. Green grabbing: A new appropriation of nature? *Journal of Peasant Studies*. 39, 2, 285–307.

Finucane M.L., Slovic P., Mertz C.K., Flynn J., Satterfield T.A. 2000. Gender, race, and perceived risk: The 'white male' effect*, Health, Risk and Society*, 2, 2, 159–172.

Fletcher A.J. 2013. From `Free' Trade to Farm Women: Gender and the Neoliberal Environment, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Fothergill A. 1999. An exploratory study of woman battering in the Grand Forks flood disaster: Implications for community responses and policies, *International Journal of Mass Emergencies and Disasters*, 17, 1, 79–98.

Fothergill A. 1996. Gender, risk and disaster, *International Journal of Mass Emergencies and Disasters*, 14,1, 33–56.

Fothergill A. and Peek L. 2008. Children's displacement in Louisiana after Katrina, in L. Peek L, Weber L (eds.) *Displaced: Voices from the Katrina Diaspora*, New York: Columbia University Press.

Fordham M. 2011. Gender sexuality and disaster, in Wisner B., Gaillard J.C., Kelman I. (eds) *The Routledge Handbook of Hazards and Disaster Risk Reduction*, Routledge, London, pp. 395–406.

Fordham M. 2009. We can make things better for each other: Women and girls organise to reduce disasters in Central America, in Enarson E, Chakrabarti D (eds) *Women, Gender and Disaster: Global Issues and Initiatives*, Sage, India, 175–188.

Fordham M. 2001. *Challenging boundaries: A gender perspective on early warning in disaster and environmental management, United Nations Division for the Advancement of Women (DAW).* International Strategy for Disaster Reduction (ISDR) Expert Group Meeting on Environmental Management and the Mitigation of Natural Disasters: a Gender Perspective, Ankara.

Fordham M. 1998. Making women visible in disasters: Problematising the private domain, *Journal of Disaster Studies, Policy and Management*, 22, 2, 126–43.

Fordham M. and Gupta S. 2010. (eds) *Leading resilient development: grassroots women's priorities, practices and innovations.* http://huairou.org/sites/default/files/Leading%20Resilient%20Development%20GROOTS.pdf

Fordham M. with Ariyabandu, M.M, Gopalan P. and Peterson K. 2007. Please don't raise gender now – we're in an emergency! *2006 World Disasters Report* International Federation of Red Cross and Red Crescent Societies

Fox Keller E. 1985. *Reflections on Gender and Science*. Yale University Press, New Haven

Gaillard J.C. 2011. People's Response to Disasters: Vulnerability, Capacities and Resilience in *Philippine Context, Angeles City*: Center for Kapampangan Studies.

Galizzi P and Herkolz A. 2013. Missing in Action: Gender in International Environmental Law, in Cela B, Dankelman I, Stern J (2013) (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP, 29–41. www.undp.org/content/undp/en/home/librarypage/womens-empowerment/powerful-synergies/

Gault, B., Hartmann, H., Jones-DeWeever, A., Werschkul, M., Williams, E. 2005.*The Women of New Orleans and the Gulf Coast: Multiple Disadvantages and Key Assets for Recovery*, Part I, Poverty, Race, Gender and Class, Washington DC: IWPR.

Ginige, K., Amaratunga D., Haigh R. 2009. Mainstreaming gender in disaster reduction: why and how? *Disaster Prevention and Management*, 18, 23–34.

Glazebrook, T. 2011. Women and Climate Change: A Case Study from Northeast Ghana, *Hypatia*, 26, 4, 762–782.

Godden, N.J. 2013. Gender and Declining Fisheries in Lobitos, Perú: Beyond Pescador and Ama De Casa, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Goh, A.H.X. 2012. A literature review of the gender-differentiated impacts of climate change on women's and men's assets and well-being in developing countries, *CAPRi Working Paper* No.106, Washington DC, International Food Policy Research Institute. http://dx.doi.org/10.2499/CAPRiWP106

Goldsmith, R., Feygina, I., Jost, J.T. 2013. The Gender Gap in Environmental Attitudes: A System Justification Perspective, in Alston M., Whittenbury K. (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Goldsworthy, H. 2010. Women, Global Environmental Change and Human Security, in Matthew R.A., Barnett J., McDonald B., O'Brien K. (eds) *Global Environmental Change and Human Security*, MIT Press, Cambridge and London, pp. 215–236.

Gomáriz Moraga E. 1999. *Género y desastres: Introducción conceptual y análisis de situación*, Paper prepared for the IDB technical meeting on the effects of Hurricane Mitch on women and their participation in the reconstruction of Central America.

Goodman D. 2013. Adolescent Girls at the Tipping Point of Sustainable Development in Cela B., Dankelman I., Stern J. (2013) (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP, 167–179. http://www.undp.org/content/undp/en/home/librarypage/womens-empowerment/powerful-synergies/

Green Women 2012. *Green feminist economy is gender-equal and sustainable*, a report from Green Women. www.gronakvinnor.se

GSDRC 2013. *Helpdesk Research Report: Violence against women and girls in Haiti*, Governance and Social Development Resource Centre.

Gustafson E. 1998. Gender Differences in Risk Perception: Theoretical and Methodological Perspectives, *Risk Analysis*, 18, 6.

Guerrero M.N. and Stock A. 2012. *Green Economy from a Gender Perspective*, Friedrich Ebert Stiftung, Policy Paper 19.

Hainard F. and Verschuur C. 2003. Gender relations and grass-roots urban movements, *International Social Science Journal*, 55, 473.

Harding, S. 1982. Is Gender a Variable in Conceptions of Rationality: A Survey of Issues, *Dialectica,* 36(2–3): 225–242.

Harding, S. and Hintikka M. (eds.) 1983. *Discovering Reality: Feminist Perspectives on Epistemology, Metaphysics, Methodology, and the Philosophy of Science*, Dordrecht: D. Reidel.

Haraway, D. 1988. Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective, *Feminist Studies*, 14: 575–599.

Haraway, D. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*, New York: Routledge.

Hartman B. 2010. Rethinking the role of population in human security, in Mattew R et al (eds) *Global environmental change and human security*, MIT press, Cambridge, Massachusetts and London, England, 193–214.

Hartman B, Braajas-Roman, E. 2011. The population bomb is back – with a global warming twist, in Visvanathan N et al (eds) *The women, gender and development reader (second edition)*, Zed Books, London and New York, 327–333.

Haynes, K., Handmer. J., McAneney, J., Tibbits, A., Coates, L. 2010. Australian bushfire fatalities 1900–2008: exploring trends in relation to the 'Prepare, stay and defend or leave early' policy, *Environmental Science and Policy*, 13, 3, 185–194.

Hayward, B. 2008. Let's Talk about the Weather: Decentering Democratic Debate about Climate Change, *Hypatia: A Journal of Feminist Philosophy,* 23, 3, 79–98.

Heltberg, R. 2007. Helping South Asia cope better with natural disasters: The role of social protection, *Development Policy Review*, 25, 6, 681–698.

Hemmati M. and Rohr U. 2009. Engendering the climate-change negotiations: experiences, challenges, and steps forward, *Gender and Development*, 17, 1, 19–32

HFA (Hyogo Framework for Action) 2005. *Building the resilience of nations and communities to disasters* www.unisdr.org/we/coordinate/hfa

Hines, R. 2007. Natural Disasters and Gender Inequalities: the 2004 Tsunami and the case of India, *Race, Gender and Class*, 14, 60.

HLP. 2013. A New Global Partnership: Eradicate Poverty and Transform Economies through Sustainable Development, *The report of the High level Panel of Eminent Persons on the Post-2015 Development Agenda*. www.post2015hlp.org/the-report/

Hoffman, S. 2002. The monster and the mother: The symbolism of disaster, in Hoffman S, Oliver-Smith A (eds.) *Catastrophe & Culture: The Anthropology of Disaster*, New Mexico: School of American Research Press, pp. 113–142.

Hoffman, S. 1999. The regenesis of traditional gender patterns in the wake of a disaster, in Oliver-Smith, A., Hoffman, S. (eds) *The Angry Earth: Disaster in Anthropological Perspective*, Routledge, New York, 173–91.

Hoffman, S. 1998. Eve and Adam among the embers: Gender patterns after the Oakland Berkeley Firestorm, in Enarson, E., Morrow, B. (eds) *The Gendered Terrain of Disasters*, Praeger, Westport, Connecticut and London, 55–62.

Holland, P. 2008. *An economic analysis of flood warning in Navua, Fiji.* Pacific Islands Applied Geoscience Commission (SOPAC), Suva.

Holvoet N. and Inberg L. 2013. How gender-sensitive are the National Adaptation Programmes of Action (NAPAs) of Sub-Saharan African countries? A gender-scan of 31 NAPAs, Working Paper / 2013.02. *Institute of development Policy and Management*, University of Antwerp. https://docs.google.com/viewer?url=http://www.ua.ac.be/download.aspx?c%3D.IOB%26n%3D104550%26ct%3D104550%26e%3D318418

Horton L. 2012. After the earthquake: gender inequality and transformation in post-disaster Haiti, *Gender and Development*, 20, 2, 295–308.

Houghton, R. 2009. Everything became a struggle, absolute struggle: Post-flood increases in domestic violence in New Zealand', in E. Enarson and D. Chakrabarti (eds.), *Women, Gender and Disaster: Global Issues and Initiatives*, India: Sage, 9–111

Hyndman, J. and de Alwis, M. 2003. Beyond gender: Towards a feminist analysis of humanitarianism and development in Sri Lanka, *Women's Studies Quarterly*, 31, 3–4, 212–226.

IAW. 2011. *CEDAW, Rural Women and Climate Change*. Observer paper submitted by: The International Alliance of Women, Global Gender Climate Alliance. Paper prepared for UN Women in cooperation with FAO, IFAD and WFP – Expert Group Meeting Enabling rural women's economic empowerment: institutions, opportunities and participation Accra, Ghana, September 2011. www.un.org/womenwatch/daw/csw/csw56/egm/IAW-RP-1-EGM-RW-Sep-2011.pdf

Ikeda K. 1995. Gender Differences in Human Loss and Vulnerability in Natural Disasters: A Case Study from Bangladesh, *Indian Journal of Gender Studies*, 2, 171–93.

Israel A.L. and Sachs C. 2013. A Climate for Feminist Intervention: Feminist Science Studies and Climate Change, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Jackson, C. 1998. Gender, irrigation, and environment: arguing for agency. *Agriculture and Human Values*, 15, 4, 313–324.

Jackson, C. 1996. Rescuing gender from the poverty trap. *World Development*, 24 (3). pp. 489–504

Jackson, C. 1993. Doing what comes naturally? Women and environment in development. *World Development*, 21 (12). pp. 1947–1963.

Jabry, A. 2002. *Children in Disasters: After the Cameras Have Gone*, London: Plan UK.

Jenkins, P. and Phillips, B. 2008. Battered women, catastrophe, and the context of safety after Hurricane Katrina, *Feminist Formations*, 20 (3), 49–68.

Joekes, S., Green, C. and Leach, M. 1996. 'Integrating gender into environmental research and policy', *IDS Working Paper 27*, Institute of Development Studies, University of Sussex, UK

Kabeer, N. 1994. *Reversed Realities: Gender Hierarchies in Development Thought*, Verso, London.

Karlsson, G. and Mensah-Kutin, R. 2013. Links between Gender Equality, Access to Sustainable Energy and Climate Change Mitigation Measures in Cela, B., Dankelman, I., Stern, J. 2013. (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP, 103–118. www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/Powerful-Synergies.pdf

Kennet, M. and Ka-Ming Mak W. 2012. *Green Economics and Climate Change*, Green Economics Institute, ISBN 978-1-907543-10-4.

Kennet, M., Felton, J., Winchester, A., Gale D' Oliveira, M. 2012. *Green Economics: A Gendered Green economy! Women's Unequal Pay and Poverty*, Green Economics Institute

Klasen, S. 2013. Gender, Growth and Adaptation to Climate Change in Cela, B., Dankelman, I., Stern, J. (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP. www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/Powerful-Synergies.pdf

Khosla, P. 2013. Our urban future: gender and inclusive, pro-poor and environmentally sustainable, in Cela, B, Dankelman, I, Stern, J (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP. www.undp.org/content/undp/en/home/librarypage/womens-empowerment/powerful-synergies/

Knight, K. and Welton-Mitchell, C. 2013. Gender identity and disaster response in Nepal, *Forced Migration Review*, 57–58.

Koelle, B. 2013. Women Farmer Scientists in Participatory Action Research Processes for Adaptation, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Kroll-Smith, S., Gunter, V. 1998. Legislators, interpreters and disasters: The importance of how as well as what is a disaster, in Quarantelli EL (ed.) *What is a Disaster? Perspectives on the Question*, London and New York: Routledge, pp. 161–178.

Kümbetoğlu, B, User, I, Yarar, B. 2005. *Housing conditions of the earthquake victims: a case study on 'kalici konutlar' (permanent houses) in Düzce*. The 7th European Sociological Association Conference: Rethinking Inequalities, Poland.

Lal, P., Singh, R., Holland, P. 2009. *Relationship between Natural Disasters and Poverty: A Fiji Case Study*, SOPAC Miscellaneous Report 678 April 2009.

Lambrou, Y. and Nelson, S. 2013. Gender Issues in Climate Change Adaptation: Farmers' Food Security in Andhra Pradesh, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Lambrou, Y. and Nelson, S. 2010. *Farmers in a Changing Climate: Does Gender Matter? Food Security in Andhra Pradesh, India*. Food and Agriculture Organization of the United Nations.www.fao.org/docrep/013/i1721e/i1721e.pdf

Lambrou, Y. and Paina, G. 2006a. *Gender: The Missing Component in the Response to Climate Change*, Food and Agriculture Organization of the United Nations. www.fao.org/sd/dim_pe1/docs/pe1_051001d1_en.pdf

Lambrou, Y. and Paina, G. 2006b. *Energy and Gender in Rural Sustainable Development*, Food and Agriculture Organization of the United Nations. www.fao.org/sd/dim_pe1/docs/pe1_060501d1_en.pdf

Leach, M. 2007. Earth Mother Myths and Other Ecofeminist Fables: How a Strategic Notion Rose and Fell, *Development and Change*, 38: 1, 67–85.

Leach, M. 1994. *Rainforest Relations: Gender and resource use among the Mende of Gola, Sierra Leone*. Edinburgh: Edinburgh University Press.

Leach, M. Mehta, L., P. Prabhakaran P. 2014. *Equality and sustainable development: A pathways approach.* Conceptual framework chapter for UN Women World Survey on the Role of Women in Development 2014 STEPS Centre, Institute of Development Studies, University of Sussex, Revised draft, February 20 2014.

Leach M., Mearns, R., Scoones, I. 1999. Environmental entitlements: dynamics and institutions in community-based natural resource management, *World Development* 27(2): 225–247.

Levy, C. 2013. Travel choice reframed: 'deep distribution' and gender in urban transport, *Environment and Urbanization*, 25, 47–63.

Maceachern D. 2013. Women, Consumption and Sustainable Development, in Cela, B., Dankelman, I., Stern, J. (eds) *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, UNDP. www.undp.org/content/dam/undp/library/gender/Gender%20and%20Environment/Powerful-Synergies.pdf

MacGregor S. 2010. A Stranger Silence Still: The Need for Feminist Social Research on Climate Change, *Sociological Review*, 57, Issue Supplement S2, Special Issue: Sociological Review Monograph Series: Nature, Society and Environmental Crisis, Carter B, Charles N (eds) p124–140.

Manyena S.B. 2006. The Concept of Resilience Revisited, *Disasters*, 30, 4, 434–450. http://onlinelibrary.wiley.com/doi/10.1111/j.0361-3666.2006.00331.x/abstract

Matthew R.A., Barnett J., McDonald B., O'Brien K. (eds) 2010. *Global Environmental Change and Human Security*, MIT Press, Cambridge and London.

Masika R. (ed.) 2002. *Gender, Development and Climate Change*, Oxfam, London.

Mazurana D., Benelli P., Gupta H., Walker P. 2011. *Sex and Age Matter: Improving Humanitarian Response in Emergencies*. Feinstein International Center, Tufts University, August 2011.

Mehta, L. 2010. *The Limits to Scarcity. Contesting the Politics of Allocation.* Earthscan: London

Mehta, L., Veldwisch, G. J., & Franco, J. 2012. Introduction to the Special Issue: Water grabbing? Focus on the (re)appropriation of finite water resources. *Water Alternatives*, *5*(2), 193–207.

Merchant, C. 1980. The Death of Nature: Women. *Ecology, and the Scientific Revolution* (San Francisco, 1980), 132.

Mies, M. 1986. *Patriarchy and accumulation on a world scale: Women in the international division of labour*. Zed Books: London

Mitchell T. and van Aalst M. 2008a. Disaster risk reduction and climate change adaptation: Closing the gap, *id21 highlights*, 71, 1

Mitchell T. and van Aalst M. 2008b. *Convergence of Disaster Risk Reduction and Climate Change Adaptation: A Review for DFID.* http://www.preventionweb.net/files/7853_ConvergenceofDRRandCCA1.pdf

Mishra P. 2009. Let's share the stage: Involving men in gender equality and disaster risk reduction, in Enarson E, Chakrabarti D (eds.) *Women, Gender and Disaster: Global Issues and Initiatives*, India: Sage, pp. 29–39.

Molyneux, M. 2007. Two cheers for conditional cash transfers, *IDS Bulletin*, 38, 3, 69–75.

Molyneux M. 2006. Mothers at the service of the new poverty agenda: PROGRESA/ Oportunidades, Mexico's Conditional Transfer Programme', *Journal of Social Policy and Administration*, Special Issue on Latin America, 40, 4, 425–49.

Molyneux M. 1985. Mobilization without emancipation? Women's interests, the state, and revolution in Nicaragua, *Feminist Studies*, 11, 2, 227–254.

Moser, C. 1993. *Gender and Development Planning*, Routledge, London.

Moser, C. 1989a. Gender planning in the Third World: Meeting practical and strategic gender needs, *World Development*, 17, 11, 1799–1825.

Moser, C. 1989b. 'The impact of recession and adjustment at the micro level: Low-income women and their households in Guayaquil, Ecuador', in UNICEF (ed.) *Invisible Adjustment*, Vol. 2, New York: UNICEF, Americas and Caribbean Regional Office.

Moser, C. and Satterthwaite, D. 2008. Towards Pro-poor Climate Change Adaptation in the Urban Centres of Low- and Middle-Income Countries, *Climate Change and Cities Discussion Paper 3*, International Institute for Environment and Development (IIED). http://pubs.iied.org/pdfs/10564IIED.pdf

Mukhopadhyay, M. 2004. Mainstreaming gender or 'streaming, gender away: Feminists marooned in the development business, *IDS Bulletin,* 35, 4, 95–103.

Nathan, F. 2008. Risk perception, risk management and vulnerability to landslides in the hill slopes in the city of La Paz, Bolivia, A preliminary statement, *Disasters,* 32, 3, 337–357.

Newell, A. 2012. *Does Gender Equality Have a Place in the Green Economy?* February 10th, 2012. www.triplepundit.com/2012/02/green-economy-include-women/

Neumayer, E. and Plümper, T. 2007. The gendered nature of natural disasters: The impact of catastrophic events on the gender gap in life expectancy 1981–2002, *Annals of the Association of American Geographers*, 97, 3, 551–566.

Nightingale, A. J. 2011. 'Bounding difference: Intersectionality and the material production of gender, caste, class and environment in Nepal', *Geoforum*, 42.2: 153–162

Norris, F.H., Stevens, S.P., Pfefferbaum, B., Wyche, K.F., Pfefferbaum, R.L. 2008. Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness, *American Journal of Community Psychology*, 41, 1–2, 127–150. http://link.springer.com/article/10.1007/s10464-007-9156-6

Onta, N. and Resurreccion, B.P. 2011. The Role of Gender and Caste in Climate Adaptation Strategies in Nepal, *Mountain Research and Development*, 31, 4, 351-356. www.gsdrc.org/go/display&type=Document&id=4271&utm_medium=rss&utm_campaign=gsdrc&utm_source=newsfeed

Ortner, S.B. 1974. Is female to male as nature is to culture? In M. Z. Rosaldo and L. Lamphere (eds), *Woman, culture, and society*. Stanford, CA: Stanford University Press, pp. 68–87

Otzelberger, A. 2011. Gender-responsive strategies on climate change: recent progress and ways forward for donors *Institute of Development Studies*. www.gdnonline.org/resources/BRIDGE_Gender_responsive_strategies_on_CC.pdf

Ostergaard, L. (ed.) 1992. *Gender and Development*, Routledge, London.

Overton, L. 2014. *Girls interrupted: Girls growing up post-Katrina,* PhD thesis, Middlesex University.

OWG. 2014. Outcome Document – Open Working Group on Sustainable Development Goals.

http://sustainabledevelopment.un.org/content/documents/4518SDGs_FINAL_Proposal%20of%20OWG_19%20July%20at%201320hrs.pdf

Oxfam. 2009. *Collaboration in crises: Lessons in community participation from the Oxfam International Tsunami research program*, 26 December 2009, available at www.oxfam.org/en/policy/collaboration-crises

Oxfam. 2005. The Tsunami's Impact on Women*, Oxfam Briefing Note, Oxfam International.*/www.preventionweb.net/files/1502_bn050326tsunamiwomen.pdf

Ozsoy, A. and Sariipek D.B. 2010. Women and Their Socio-Economic Situations, in Dasgupta S., Şiriner I., De P.S. (eds) *Women's Encounter with Disaster*, Kolkata, Frontpage.

Pacholok, S. 2013. *Into the Fire: Disaster and the Remaking of Gender,* University of Toronto Press, Toronto.

Paine, R. 2002. Danger and the no-risk thesis, in Hoffman S, Oliver-Smith A (eds.) *Catastrophe & Culture: The Anthropology of Disaster*, New Mexico: School of American Research Press, pp. 67–90.

Pearson, R. 2000. Which men, why now? Reflections on men and development, *IDS Bulletin* **31** (2), 42–48.

Pearson, R. and Jackson C. (eds) 1998. *Feminist Visions of Development: Gender Analysis and Policy*, Routledge, London

Peek, L. 2008. Children and Disasters: Understanding Vulnerability, Developing Capacities, and Promoting Resilience – An Introduction, *Youth and Environments*, 18, 1, 1–29.

Peña, D. 2005. *Mexican Americans and the Environment: Tierra y Vida*. Tucson: University of Arizona Press

Peterson, K 2007. *Reaching Out to Women When Disaster Strikes*, Soroptimist, White Paper. www.soroptimist.org/whitepapers/WhitePaperDocs/WPReachingWomenDisaster.pdf

Phillips, B.D., Fothergill A., Blinn-Pike L. (eds.) 2010. *Social Vulnerability to Disasters*, Boca Raton, Fl: CRC Press.

Pincha, C. 2008. *Indian Ocean tsunami through the gender lens: Insights from Tamil Nadu India*, Oxfam America & NANBAN Trust, India. www.gdnonline.org/resources/Pincha_IndianOceanTsunamiThroughtheGender%20Lens.pdf

Pittaway, E, Batolomei, L, Rees S. 2007. Gendered dimensions of the 2004 tsunami and a potential social work response in post-disaster situations, *International Social Work,* 50, 3, 307–19.

Plan. 2013. *The State of the World's Girls 2013: In Double Jeopardy: Adolescent Girls and Disasters*, Because I am a Girl Annual Report, Plan International, UK. http://plan-international.org/files/global/publications/campaigns/biag-2013-report-english.pdf

Plümper, T. and Neumayer, E. 2006. The unequal burden of war: the effect of armed conflict on the gender gap in life expectancy, *International Organization*, 60, 3, 723–754.

Porter F. and Sweetman C. 2005. *Mainstreaming Gender in Development: A Critical Review. Has Gender Mainstreaming Made a Difference after 10 Years*? Oxford: Oxfam.

Răty R.and Carlsson-Kanyama A. 2010. Energy consumption by gender in some European countries, *Energy Policy*, 33, 1, 646–649.

Redman, P. 1996. 'Empowering men to disempower themselves': Heterosexual masculinities, HIV and the contradictions of antioppressive education', in M. Mac An Ghaill (ed.), *Understanding Masculinities: Social Relations and Cultural Arenas*, Buckingham: Open University Press, pp. 168–182.

Rivers, J.P.W. 1982. Women and children last: An essay on sex discrimination in disasters, *Disasters* 4, 56–267

Resurreccion, B.P. 2012. 'The Gender and Climate Debate: More of the Same or New Ways of Doing and Thinking?' In L. Elliot and M. Caballero-Anthony (eds) *Human Security and Climate Change in Southeast Asia.* London & New York: Routledge, Taylor & Francis.

Resurreccion, B.P. and Elmhirst, R. 2008*. Gender and Natural Resource Management*, Earthscan, London.

Rodenberg B. 2009. *Climate change adaptation from a gender perspective*, Discussion Paper / Deutsches Institut für Entwicklungspolitik – DIE, Bonn.

Rossi A, and Lambrou Y. 2008. *Gender and Equity Issues in Liquid Biofuels Production Minimizing the Risks to Maximize the Opportunities*, Food and Agriculture Organization of the United Nations.

Rocheleau D., Thomas-Slayter B., Wangari E. 1996. Gender and Environment: a Feminist Political Ecology Perspective, in Rocheleau D, Thomas-Slayter B, Wangari E (eds) *Feminist Political Ecology: Global Issues and Local Experiences*, Routledge, New York, p. 3–23.

Rogers K. 2013. *Fixing the Green Economy Gender Gap*. www.earthday.org/blog/2013/06/07/fixing-green-economy-gender-gap

Salleh, A. (ed.) 2009. *Ecosufficiency and global justice: women write political ecology.* London: Pluto Press.

Sanz K., Kelman I., Adebola A., Chacon J., Sanchez R. and Gender and Disaster Network Members 2009. From the inside out: Reflections on gendering Disaster Risk Reduction, *Regional Development Dialogue,* 30, 1, 14–21.

SDSN 2013. An Action Agenda for Sustainable Development. Sustainable Development Solutions Network, New York. http://unsdsn.org/resources/publications/an-action-agenda-for-sustainable-development/

Seager J. 2012. Noticing Gender (or not) in Disasters, in David E, Enarson E (eds.) *The Women of Katrina: How Gender, Race and Class Matter in an American Disaster*, Nashville: Vanderbilt University Press, 7–9.

Seager J. 2009. Death by degrees: Taking a feminist hard look at the 2°C climate policy, *Kvinder, Køn & Forskning,* 3, 11–21. https://tidsskrift.dk/index.php/KKF/article/viewFile/44305/84084

Seager J. 2006. Noticing Gender (or not) in Disasters, *Geoforum*, 37, 1, 2–3.

Schalatek L. 2013. *The Post-2015 Framework: Merging Care and Green Economy Approaches to Finance Gender-Equitable Sustainable Development*, Heinrich Böll Stiftung, Washington DC.

Segnestam, L. 2009. Division of Capitals—What Role Does It Play for Gender-Differentiated Vulnerability to Drought in Nicaragua? *Community Development*, 40:2: 154–176

Shiva, V. 1988. *Staying alive: women, ecology, and development.* London: Zed Books.

Skutsch M. 2004. *Mainstreaming Gender into the Climate Change Regime* (COP 10), Buenos Aires: Genanet.

Skutsch M. 2002. Protocols, Treaties, and Action: The 'Climate Change Process' Viewed through Gender Spectacles, *Gender and Development*, 10, 2, 30–39.

Slovic P. 1999. Trust, Emotion, Sex, Politics, and Science: Surveying the Risk-Assessment Battlefield, *Risk Analysis*, 19, 4, 689–701.

Smith K. 2012. Gender and Food Security in a Fair, Green Economy? *Development*, 55, 1, 81–89.

Smith K. and Petley D.N. 1991. *Environmental Hazards: Assessing Risk and Reducing Disaster,* fifth edition 2009, Routledge, London and New York 5th edition.

Sogani R. 2013. Climate Change: A Himalayan Perspective 'Local Knowledge – The Way Forward, in Alston M, Whittenbury K (eds.) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Speranza I.C. 2006. Gender-based analysis of vulnerability to drought among agro-pastoral households in semi-arid Makueni district, Kenya, in Premchander S. and Müller, C (eds.) *Gender and Sustainable Development*. NCCR-North-South, 119–146.

Takasaki Y. 2012. Natural Disasters, Gender and Handicrafts, *The Journal of Development Studies*, 48, 1, 115–132.

Tandon, N. 2009. The Bio-Fuel Frenzy: What Options for Rural Women? A Case of Rural Development Schizophrenia. Terry G (ed.) *Climate Change and Gender Justice*, Practical Action Publishing and Oxfam GB, Oxford, 127–142

Tandon, N. 2007. Biopolitics, climate change and water security: impact, vulnerability and adaptation issues for women, *Agenda: Empowering women for gender equity*, 21, 73, 4–17

Tatlonghari G.T. and Paris T.R. 2013. Gendered Adaptations to Climate Change: A Case Study from the Philippines, in Alston M, Whittenbury K (eds.) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Tedeschi R. and Calhoun L. 2004. Posttraumatic Growth: Conceptual Foundations and Empirical Evidence, *Psychological Inquiry*, 5, 1, 1–18.

Terry G (ed) 2009a. *Climate Change and Gender Justice*, Practical Action Publishing and Oxfam GB, Oxford.

Terry G. 2009b. No Climate Justice Without Gender Justice: An Overview of the Issue, *Gender and Development*, 17, 1, 5–18.

True, J. and Mintrom, M. 2001. Transnational networks and policy diffusion: The case of gender mainstreaming, *International Studies Quarterly* 45, 27–57.

Tschakert P. and Machado M. 2012. Gender Justice and Rights in Climate Change Adaptation: Opportunities and Pitfalls, *Ethics and Social Welfare*, Special Issue, Gender Justice, 6, 3.

Tuana N. 2013. Gendering Climate Knowledge for Justice: Catalyzing a New Research Agenda, in Alston M, Whittenbury K (eds.) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Tuana N. 2007. Viscous Porosities: Witnessing Katrina, in Alaimo S, Hekman SJ (eds) *Material Feminisms*, Bloomington, Indiana University Press.

Tyler M. and Fairbrother P. 2013. Bushfires are "men's business": The Importance of gender and rural hegemonic masculinity, *Journal of Rural Studies*, 30, 110–119.

UNDG 2013. *A million voices: The world we want.* United Nations Development Group.

UNISDR 2011. *Themes and issues in disaster risk reduction*, UNISDR. http://www.unisdr.org/files/23647_themesandissuesindisasterriskreduct.pdf

UNISDR 2009. *Making disaster risk reduction gender-sensitive: Policy and practical guidelines,* UNISDR, UNDP and IUCN, Geneva, Switzerland, June 2009. www.preventionweb.net/files/9922_MakingDisasterRiskReductionGenderSe.pdf

Unmüßig, B., Sachs, W. and Fatheuer, T. 2012. Critique of the Green Ecology. – Toward Social and Environmental Equity. *Ecology Series No. 22.*Heinrich Böll Stiftung. Berlin

Vakis R. 2006. Complementing natural disasters management: The role of social protection, *Social Protection Discussion Paper* 0543, Washington DC: The World Bank.

Varghese S. 2012. *Looking Through a Gender Lens: Water in the Green Economy*, Heinrich Boll Stiftung, North America.

Varley A. 1994. The exceptional and the everyday: Vulnerability analysis in the International Decade for Natural Disaster Reduction', in Varley A (ed.) *Disasters, Development and Environment*, John Wiley, Chichester, New York, pp. 1–11.

Villagrassa D. 2002. Kyoto Protocol Negotiations: Reflections on the Role of Women, *Gender and Development*, 10, 2, 40–44.

Visvanathan N., Duggan, L., Nisonoff, L., Wiegersma, N. (eds) 2011. *The Women, Gender and Development Reader (second edition)*, Zed Books, London and New York.

Walby, S. 2005. Gender mainstreaming: productive tensions in theory and practice, *Social Politics: International Studies in Gender, State and Society*, 12 (3), 32–343

WEDO 2008. *Gender, Climate Change and Human Security: Lessons from Bangladesh, Ghana and Senegal,* Prepared for ELIAMEP, May 2008. www.wedo.org/wp-content/uploads/hsn-study-final-may-20-2008.pdf

Whittaker J, Handmer J, Mercer D. 2012. Vulnerability to bushfires in rural Australia: A case study from East Gippsland, Victoria 2012, *Journal of Rural Studies*, 28, 2, 161–173.

Wichterich, C. 2012. The future we want. A feminist perspective. *Ecology Series Vol 21.* Heinrich Böll Stiftung. Berlin.

Wiltshire, R. 1992. *Environment and Development. Grassroots' Women's Perspectives*. Development Aternatives with Women for a New era (DAWN), Barbados.

Woodford-Berger P. 2004. Gender mainstreaming: What is it (about) and should we continue doing it? *IDS Bulletin*, 35, 4, 65–72

World Bank 2006. *Gender Equality as Smart Economics: A World Bank Group Gender Action Plan* (Fiscal years 2007–10). World Bank Group, September, 2006.

Whittenbury K. 2013. Climate Change, Women's Health, Wellbeing and Experiences of Gender Based Violence in Australia, in Alston M, Whittenbury K (eds) *Research, Action and Policy: Addressing the Gendered Impacts of Climate Change*, Springer, Netherlands.

Related reading

Building resilience to environmental change by transforming gender relations by Cecilia Tacoli, Emily Polack, Isilda Nhantumbo, Janna Tenzing – IIED briefing http://pubs.iied.org/17237IIED.html?k=gender

http://pubs.iied.org/17215IIED.html?k=gender

The global land rush: securing a better deal for women by Emily Polack – IIED briefing http://pubs.iied.org/17150IIED.html

His REDD+, her REDD+: how integrating gender can improve readiness by Isilda Nhantumbo and Linley Chiwona-Karltun http://pubs.iied.org/17136IIED.html

The benefits and constraints of urbanization for gender equality – E&U Brief by Cecilia Tacoli http://pubs.iied.org/10629IIED.html?k=gender

Gender and urban change – Environment & Urbanization journal 25:1

http://pubs.iied.org/10628IIED.html?k=gender

Urbanization, gender and urban poverty: paid work and unpaid carework in the cities by Cecilia Tacoli http://pubs.iied.org/10614IIED.html

Mainstreaming gender and climate change in Nepal by Jony Mainaly and Su Fei Tan – working paper

http://pubs.iied.org/10033IIED.html?k=gender

This report reviews the existing policy and academic literature and summarises the empirical evidence within the fields of gender, climate change and disasters, suggesting that although there are gaps in existing knowledge, policy is often not based on the existing evidence but on stereotypical notions of women and men and their relative vulnerabilities and capacities. Drawing lessons from the gender and development literature, it outlines some of the key areas of debate common across the three literatures. In particular how best to ensure the inclusion of women in sustainable development policy so they are served by these policies, rather than being at the service of these policies. It concludes by highlighting gaps in knowledge, noting that studies that look at both climate change and disasters, which consider short and long term climatic risks, are necessary if the issues raised are to be tackled in a way that improves, rather than harms, the position and situation of women.

Knowledge
Products