

Gender And The Climate Change Agenda.



The impacts of climate change on women and public policy.



Women's
Environmental
Network

GENDER AND THE CLIMATE CHANGE AGENDA

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Christine Haigh & Bernadette Vallely for Women's Environmental Network

Acknowledgements

Thanks to the following for their valuable help with this report, including providing information for the case studies, photographs and comments on earlier versions of the manuscript:

*Rachel Berger (Practical Action)
Sarah Blakemore (Oxfam GB)
Monika Bricke (GenderCC)
Amber Bronnum (Center for Women
and Democracy)*

*Professor Susan Buckingham (Brunel University)
Jo Budd (Women's Environmental Network)*

*Jane Cacouris (Tearfund)
Maureen Fordham (Gender Disaster Network)
Biba Hartigan*

*Lindsey Hayes (Royal College of Nursing)
Minu Hemmati (GenderCC)*

*Beth Henriette (IIED)
Tanjir Hossain (ActionAid)*

*Tim Jones (World Development Movement)
Helen Kinsella (Women's
Environmental Network)*

*Pamela Wilkinson (Help the Aged)
Maira Zahur*

*Petra Kjell (Progressio)
Mervyn Kohler (Help the Aged)
Caroline Lucas MEP (Green Party)
Claire Lyon (BTCV)
Kate Metcalf (Women's Environmental
Network)*

*Zohra Moosa
Sajid Raihan (ActionAid)
Hannah Reid (IIED)
Dee Russell (Wimbledon Park Primary
School)*

*Suzanne Saunter (Oxfam GB)
Tom Sharman (ActionAid)
Harjeet Singh (ActionAid)
Sharon Smee (Fawcett Society)
Lay Sophea (Development and
Partnership in Action, Cambodia)
Katherine Talbot (World Development
Movement)*

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Executive summary

The 1997 Kyoto Protocol committed industrialised countries to reduce their greenhouse gas emissions in recognition of the threat posed by climate change. December 2009 saw the 15th Session of the Conference of the Parties (COP) to the Climate Change Convention. Considerable progress towards an agreement should have been made at December's conference if new greenhouse gas emissions targets are to be in place when the initial Kyoto commitments expire in 2012.

Since Kyoto, the idea of climate change as not simply an environmental issue, but one of social justice, has been given increasing recognition. However, the way in which climate change affects groups that face discrimination and under-representation, such as women, ethnic minorities and indigenous people, has not received sufficient attention.

This report by Women's Environmental Network examines the distinct impacts of climate change on women in both developed and developing countries, women's contribution to climate change, and their involvement in decision making about tackling climate change.

It finds that, because of their increased likelihood of living in poverty, and their gendered social roles, women are more likely than men to:

- die in climate change-related disasters, and suffer from increased workload, loss of income, health problems, and violence and harassment in the aftermath of such events;
- be displaced, or encounter problems when other (usually male) family members migrate for economic reasons;
- experience increased burden of water and fuel collection, and resulting health problems, due to increased incidence of drought or other changes in climate;
- feel the effects of rising food prices most acutely, and be the first to suffer during food shortages;
- suffer exacerbated health inequalities;
- suffer from violence, including sexual violence, in resource conflicts;
- be expected to, and need to, adapt to the effects of climate change, increasing their workload;
- suffer as a result of intended solutions to the problem of climate change, such as forestry projects and biofuel production.

In addition, climate change is making it less likely that the Millennium Development Goals, including improving gender equality, will be met. In summary, climate change is exacerbating existing gender inequality, and will continue to do so unless addressed with gender-sensitive approaches.

The report also finds that, on average, women tend to contribute less to climate change. This is because of their poverty - lower consumption roughly equates with lower greenhouse gas emissions - and their social roles - for example, women are less likely to fly for business reasons, and less likely to hold a driving licence or own a vehicle. It is also observed that women are more inclined towards pro-environmental behaviour, such as recycling and energy efficiency, taking part in citizen actions, and are more likely to favour policies that reduce greenhouse gas emissions, such as limiting airport expansion, or taxing activities with a large climate change impact.

This report highlights the way in which the industries that are contributing most to climate change continue to be dominated by men in the most senior roles. It also finds evidence that the majority of those who continue to deny that climate change is a reality, or a problem that requires attention, are male.

Finally, the report considers women's involvement in decision-making about climate change. It finds that women are poorly represented in both official delegations and in business and civil society groups at the international level, although those women that have been involved have been reported to have made considerable contributions to the outcomes of the negotiations.

Similarly, in most countries, both developed and developing, women are under-represented at national level, both in government and the private sector. However, women are often very active in pro-environmental initiatives at the community level, and domestically their influence can be significant, through their own behaviour, household management, and their role as educators of other family members.

In the light of this information, the report concludes that remedial action is required on three fronts:

- **Gender-sensitive strategies to mitigate climate change** – the more radical the cuts in emissions in the next few years, the better chance there is of limiting the negative effects of climate change on women.
- **Addressing gender inequality** – until gender inequality is addressed, women will continue to suffer climate injustice.
- **Gender-sensitive strategies for adapting to climate change** – it is vital that adaptation strategies adequately take account of women's considerations.

We argue that one of the most effective ways of ensuring that all three of the above priorities are met is increasing the representation of women in decision-making bodies, particularly at the national and international levels.

Other strategies include a gender audit of stakeholders, and inclusive mainstreaming policies and resources for women-centred solutions.

Foreword

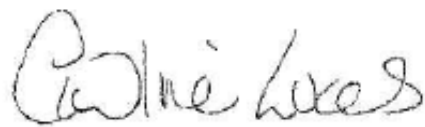
Women's Environmental Network (WEN) brings a fresh, and often missing, perspective to the debates about how public policy makers and all climate interested parties can reach some of their ambitious visions.

Urgent political action is required if we are to stand a chance of creating the social, cultural, and economic circumstances required to deal with the climate crisis, and it is vital that the specific needs of under-represented groups, including women, are recognised and given adequate representation.

In 2007, WEN, with the National Federation of Women's Institutes, published the Women's Manifesto on Climate Change. This highlighted for the first time the way in which gender is relevant to climate change in the UK, and called on the Government to take more action to enable women to take action to deal with the climate crisis.

This report takes WEN's work on the issue a step further by examining in greater detail the specific impacts of climate change on women, both in developed and developing countries. It looks at what must be done to address the disproportionate impacts of climate change on women around the world, and to ensure that their voices are properly represented in the climate change debate.

I strongly recommend this report as vital reading for all those involved in climate negotiations, and those involved in decision making on climate change at the national level.



Caroline Lucas MEP
Leader of the Green Party of England and Wales

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1. INTRODUCTION

“Gender inequalities intersect with climate risks and vulnerabilities. Women’s historic disadvantages — their limited access to resources, restricted rights, and a muted voice in shaping decisions — make them highly vulnerable to climate change.”

Human Development Report 2007/08. **Fighting climate change:
Human solidarity in a divided world**

With communities around the world already feeling the effects of climate change, the UN Climate Change Conference held in Copenhagen in December 2009 was approached with both concern and hope. The first commitment period of the Kyoto Protocol expires in 2012, and a new agreement must be reached as to what greenhouse gas emissions reduction targets should be set, to whom they should apply, who should pay for them and by what mechanisms they may be reached, for the years following 2012. Such an agreement is essential in light of the most recent climate science, and needs to be strong and fair, with clear targets and timelines. Considerable progress is needed during the next few years if an agreement is to be in place when the initial Kyoto commitments expire.

While awareness of climate change and its impacts have risen dramatically since the original agreement, some key areas have been missing from the debate. The gender aspect of climate change is one of them, and this report seeks to raise awareness of climate change as a gendered issue, making recommendations as to how gender disparities may be addressed in the context of climate change. New research has been assessed from the COP15 process in Copenhagen, and we have extrapolated data not previously summarised from recent UN reports to show how dramatic and serious this issue is for women worldwide.

In the first section of this report, the ways in which climate change specifically affects women are considered. Because of prescribed gender roles, and the fact that, the world over, women are more likely to live in poverty than men, women are disproportionately affected by climate change, whether they live in developing or developed countries.

The report also considers women’s contribution to climate change. It is widely accepted that there is a general correlation between consumption and greenhouse gas emissions. As women tend to be poorer than men, they also tend to generate fewer emissions.

The report also looks at who is responsible for those industries that make large contributions to climate change and are doing too little to change, and scrutinizes those who are actively trying to prevent climate change from being addressed. The chapter looks at gendered responsibilities for these contributions to the problem of climate change.

Finally, women’s role in tackling climate change is assessed. Women have enormous potential to help address climate change, especially at the domestic level, but continue to be poorly represented in national and international decision-making about climate change. Without improving the

situation, it is unlikely that a gender equitable approach to addressing climate change will be agreed.

The report considers the experiences of those in both the developing and developed countries. While it in no way seeks to trivialise the experiences of those in the developing world, who have made little or no contribution to climate change and are most vulnerable to its negative effects, it seeks to draw out similarities between the experiences of women across the world. Together women can raise their voices, and call for a just agreement to tackle climate change that empowers women, rather than exacerbating their inequality.

2. THE GENDERED IMPACTS OF CLIMATE CHANGE

“Climate change impacts will be differently distributed among different regions, generations, age classes, income groups, occupations and genders.”

Intergovernmental Panel on Climate Change, Summary for policy makers.
Climate Change 2001: Impacts, Adaptation and Vulnerability.

It is now widely recognised that the impacts of climate change will affect the poor, both within and between countries, first and worst because they are the most vulnerable and have least resources to adapt to a changing climate. As women constitute 70 per cent of the 1.3 billion people in the world living below the poverty line¹, it follows that they will be disproportionately affected by climate change. Similarly, in the UK, poverty rates are 19% higher for women than men, and being particularly stark in some sections of society. For example, six times more single female pensioners live in poverty than their male counterparts². However, the gendered impacts of climate change are wide-ranging, based on women's and men's social roles as well as relative poverty or wealth, and will affect individuals in both developing and developed countries. This chapter examines the main ways that climate change is affecting and in future will affect women and men differently.

2.1 Disasters and extreme weather events

“Gender bias in the impact of disasters is also under-reported. When disasters strike, they hurt whole communities – but women often bear the brunt. Floods frequently claim far more female victims because their mobility is restricted and they have not been taught to swim...In the aftermath of a disaster, restrictions on the legal rights and entitlements of women to land and property can limit access to credit needed for recovery.”

Human Development Report 2007/08. Fighting climate change:
Human solidarity in a divided world

The most recent Intergovernmental Panel on Climate Change (IPCC) reports predict that climate change will exacerbate extreme weather events such as tropical storms, heat waves, and heavy precipitation leading to flooding³. Whether in developing or developed countries, there is evidence to suggest that women are more likely to die as a result of such disasters, and, if they survive, suffer more in the after-effects.

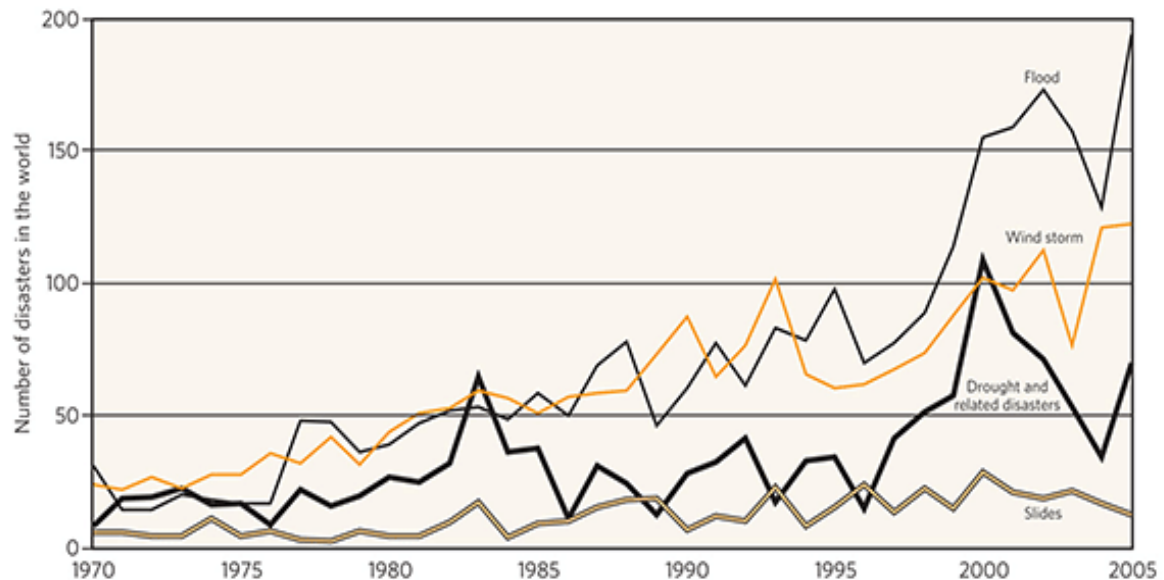
¹ Denton, F. (2002) *Climate change, vulnerability, impacts and adaptation: why does gender matter?* In Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

² Calculated by WEN from Department of Work and Pensions (2009) *Households Below Average Income. An analysis of the income distribution 1994/95 – 2007/08*. London: DWP

³ IPCC (2007) *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Summary for policy makers*. Cambridge: Cambridge University Press

One study has found that women and children are 14 times more likely than men to die in natural disasters⁴. Global Humanitarian Forum's recent Human Impact Report estimates that 300,000 people are already dying each year as a result of climate change, of which 14,500 deaths are directly caused by weather-related disasters attributable to climate change⁵, and it is highly likely that the majority of these victims are female.

Figure 1.1: Extreme weather events, 1970-2005



Source: United Nations International Strategy for Disaster Reduction. 2009.

Experience from recent disasters supports this: in the 1991 cyclone in Bangladesh, the mortality rate for women aged 20-44 was 71 per thousand, compared to 15 per thousand men of the same age⁶ - almost five times higher for women. Reasons for the disparity include women not having been taught to swim, clothing restricting mobility and cultural norms regarding the preservation of female honour causing many women to leave their homes too late because they waited for a male escort. In addition, men were able to warn each other of the danger as they met in public spaces, but only conveyed the information back to their families sporadically.⁷ Similarly, one factor in the higher female mortality rates following the 2004 tsunami (although not caused by climatic factors) was women being unable to climb trees⁸.

In the European heat wave in 2003, the excess mortality for women was 75% higher than that for men of all ages⁹. Similarly, the excess mortality in the 1995 heat wave in Greater London was also more pronounced for women, in ways that cannot be entirely accounted for by age¹⁰. While there seems to be no simple explanation for this, suggested factors are likely to include poverty,

4 Peterson, K. (no date) *Gender Issues in Disaster Responses*, cited in *Soroptimist International of the Americas* (2008) *White Paper: Reaching out to women when disaster strikes*. April 2008. Available: <http://www.soroptimist.org/pdf/DisaterWhitePaper0408.pdf> [15 September 2009]

5 Global Humanitarian Forum (2009) *Human Impact Report. Anatomy of a silent crisis*. Geneva: Global Humanitarian Forum

6 Nelson, V., Meadows, K., Cannon, T., Morton, J., Martin, A. (2002) *Uncertain predictions, invisible impacts and the need to mainstream gender in climate change adaptations*. *Gender and Development* 10: 2: 51-59

7 Schmuck, H. (2002) *Empowering women in Bangladesh*, cited in Cannon, T. (2002) *Gender and climate hazards in Bangladesh*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

8 Oxfam. (2005). *The Tsunami's Impact on Women. Briefing Note*. Available: http://www.generoyambiente.org/admin/admin_biblioteca/documentos/tsunamiwomen.pdf [24 July 2009]

9 Fouillet, A., Rey, G., Jouglu, E., Frayssinet, P., Bessemoulin, P., Hémon, D. (2007) *A predictive model relating daily fluctuation in summer temperatures and mortality rates*. *BMC Public Health* 2007: 7: doi:10.1186/1471-2458-7-114

10 Rooney, C., McMichael, A., Kovats, R., Coleman, M. (1998) *Excess mortality in England and Wales, and in Greater London, during the 1995 heat wave*. *Journal of Epidemiology and Community Health*. 52: 482-486

deprivation, living alone, vulnerability to associated air pollution, and the increased difficulty that women above the age of 60 have in regulating their internal temperature.

By contrast, in Hurricane Mitch, which hit Central America in 1998, more men than women died, with suggestions that this was due to men's increased propensity to risk-taking, and their higher propensity to work outdoors¹¹. However, the groups worst affected by the storm were small producers, street children and female-headed households, and there were reports of increased domestic violence due to raised levels of aggression in men¹². There have been reports in some cases of women not using emergency shelters because of fear or experience of violence or harassment by men in them¹³.

An analysis of disasters in 141 countries found that, where women had equal rights, there was little or no difference in the number of women or men that died, but where women's rights were compromised, female mortality was higher than that for males¹⁴. The authors also report accounts of rescue efforts in which male survivors were prioritised over female.

As the Human Development Report 2007/8 points out, it is not just the disaster itself that affects people, but also the aftermath. "Malnutrition is not an affliction that is shaken off when the rains return or the flood waters recede. It creates cycles of disadvantage that children will carry with them throughout their lives. Indian women born during a drought or a flood in the 1970s were 19 percent less likely to ever attend primary school, when compared with women the same age who were not affected by natural disasters. The incremental risks associated with climate change have the potential to reinforce these cycles of disadvantage."¹⁵

Because of their traditional roles in the home and as carers, both in developed and developing countries, women often experience an increased workload as they attempt to rebuild their households and care for other family members. As Farjana Akter of Bangladesh-based organisation VOICE describes: "Women are the main victims of climate change. During floods and storms they have been confronting crisis in their daily lives. Houses are under water but they still need to cook and look after their family. They made a temporary room for cooking in the embankment. This difficulty hampered their reproductive health and women also faced serious problems with sexual harassment due to moving to embankments or roadside lands."¹⁶

¹¹ Bradshaw, S. (2004) *Socio-economic impacts of natural disasters: a gender analysis*. Santiago: Women and Development Unit

¹² Delaney, P., Shrader, E. (2000) *Gender and post-disaster reconstruction: the case of hurricane Mitch in Honduras and Nicaragua*. Washington DC: World Bank

¹³ WEDO (2008) *Gender, climate change and human security. Lessons from Bangladesh, Ghana and Senegal*. New York: WEDO

¹⁴ Neumayer, E., 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). pp. 551-566.

¹⁵ United Nations Development Programme (2008) *Human Development Report 2007/08. Fighting climate change: Human solidarity in a divided world*. UNDP

¹⁶ Akter, F. (2009) *Climate and people's livelihoods*. Available: <http://www.forum-adb.org/inner.php?sec=4&id=41&b=1> [6 August 2009]



Flooding creates chaos and difficulties in every single part of life.

Picture: sdnbd.org

These challenges may in turn affect women's ability to return to paid employment, particularly as women tend to work in the informal sector, which is often hit hardest and slowest to recover when disasters occur¹⁷.

CASE STUDY: Hurricane Katrina's female victims¹⁸

Hurricane Katrina, which hit the US Gulf Coast in late August 2005, caused around two thousand deaths, mainly in the state of Louisiana, whose largest city, New Orleans, was particularly badly affected. Levee breaches left 80% of the city flooded.

Women were disproportionately represented among those left in the city following the storm. Despite making up 54% of the population of the city, 80% of those who were left were women. In many cases, this was because they lacked the means to leave. They did not have access to the private transport that the authorities assumed in their emergency planning, or have the resources to pay for petrol or accommodation on leaving the city.

As a result of the disaster, the tourist economy was almost completely destroyed, leaving the largely female immigrant workforce that had underpinned the New Orleans tourist industry highly vulnerable, out of work and lacking the official documentation that would allow them to find work elsewhere.

In developing countries, women's work tends to involve subsistence farming or work on plantations, which is also likely to be affected by extreme weather events. Even official responses to disasters can discriminate against women: in Morocco, government funding made available for job creation to counter the effects of drought was regarded as primarily for males¹⁹.

While a direct causal link between climate change and individual events cannot be assumed, it is predicted that, with climate change, we are likely to see more severe dramatic weather events, with associated human impacts.

¹⁷ Masika, R. (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁸ Butterbaugh, L. (2005) *Why did Hurricane Katrina hit women so hard? Off Our Backs*, 1 September 2005;

Redwood, L. (2009) *Globalization and Tourism: The Effects of Hurricane Katrina on Immigrant Women Laborers*. Paper presented at the annual meeting of the American Studies Association, 24 April 2009

¹⁹ Nelson, V., Meadows, K., Cannon, T., Morton, J., Martin, A. (2002) *Uncertain predictions, invisible impacts and the need to mainstream gender in climate change adaptations*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

2.2 Migration

Climate change is already forcing people from their homes, whether in response to disasters such as hurricanes, or more gradual changes such as drought which affects their access to basic needs such as food and water. Whatever action is taken to reduce emissions, some warming is still inevitable, and while predictions vary, vast numbers of people will be affected. In a 2008 report, the International Organization for Migration states that, with 4°C of warming “Predictions of 200 million people displaced by climate change might easily be exceeded”²⁰, while Christian Aid predicts that between 2007 and 2050, 250 million people will be permanently displaced by climate change-related phenomena such as floods, droughts, famines and hurricanes²¹. Global Humanitarian Forum estimates that 26 million of the total 350 million currently displaced worldwide have been forced to move due to climate change²².

Again, there is evidence that migration caused by climate change will have a greater impact on women. Indeed, it has been estimated that women constitute up to 80% of global refugee and displaced populations, and typically in emergencies 70-80% of those needing assistance are women and children²³. Based on these figures, it can be estimated that of the current 26 million climate refugees, up to 20 million are female²⁴.

Migration may be of whole families or communities, but in many cases a single individual from a family, usually (although not always) male, will migrate in order to find an alternative livelihood. In such cases, women who are left behind tend to have increased care and domestic responsibilities, which may compromise their ability to do income-generating work. As Bangladeshi NGO Prodiplan describes: “Due to the impact of climate change, migration increases. During migration in many cases the children and women are left at home without proper arrangements for food and other survival supports. The children and women left behind are socially and physically insecure. For food and security many of the women choose informal extra-marital sex relations and children embark on hazardous occupations.”²⁵

Responses in Peru to the powerful Pacific Ocean warming phenomena known as El Niño, now intensified by climate change, suggest that there is a risk that temporary female-headed households are not recognised by male-led rural community organisations²⁶, which may lead to them being excluded from access to services or information, or involvement in decision-making.

Forced migration also weakens people’s familial and other supports, which, as the World Development Movement points out, “Is likely to have a particular impact on women and their coping capacity because they are the ones who keep the household functioning”²⁷.

20 Brown, O. (2008) *Migration and climate change*. Geneva: International Organization for Migration

21 Christian Aid (2007) *Human Tide: The real migration crisis*. London: Christian Aid

22 Global Humanitarian Forum (2009) *Human Impact Report. Anatomy of a silent crisis*. Geneva: Global Humanitarian Forum

23 Aguilar, L. (2004) *Climate change and disaster mitigation. Gender makes the difference*. Gland: IUCN

24 Calculated by WEN from Aguilar, L. (2004) *Climate change and disaster mitigation. Gender makes the difference*. Gland: IUCN; and Global Humanitarian Forum (2009) *Human Impact Report. Anatomy of a silent crisis*. Geneva: Global Humanitarian Forum

25 Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

26 Reyes, R. (2002) *Gendering responses to El Niño in rural Peru*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

27 Jones, T. (2008) *Carbon evictions. The UK’s role in forced migration of climate refugees*. London: World Development Movement

CASE STUDY: Migration in Pakistan²⁸

Pakistan is understood to be one of the world's most vulnerable countries to drought, and climate change is predicted to increase the intensity, frequency, duration and extent of drought in the region. Between 1998 and 2002, Balochistan province was affected by severe drought, in which three quarters of all livestock died and more than a quarter of the region's population was displaced.

Two types of migration occurred: firstly migration of able-bodied males to seek work; followed by a second phase in which whole families moved in order to survive. In the first phase, the women left behind experienced increased workloads, with additional tasks such as tending livestock, without any increased participation in decision-making. Lack of male family members was sometimes a barrier to accessing services such as healthcare. Those men who had migrated often suffered from exploitation, poor living conditions and low wages due to the over supply of labour. Sometimes women were refused relief if male members had left to seek work, whether or not they were sending back money.

When whole families moved to urban slums or relief camps, women faced challenges adapting to the new environment. Problems included harassment and lack of security, unreliable water supplies which increased their workload, and gender insensitive conditions such as lack of privacy. The long journey to a relief camp caused its own physical and mental stresses exacerbated by instances of sexual harassment on these journeys. Pressure on families was so severe that there were reports of children being offered for domestic employment, and of female children being sold.

While in some cases, migration, particularly male migration, may result in increased decision-making powers and open up new opportunities for women²⁹, such positive outcomes are far from certain. These opportunities need to be acknowledged and actively encouraged in strategies for addressing migration caused by climate change.

There is also a serious danger that migration will be increasingly treated as a security issue, rather than a social issue, which will strongly impact on women who are amongst the most vulnerable in climate-induced conflicts. The European Commission outlines in a paper on climate change and international security that the threat of migration is mainly to be met by increased policing of borders and "stability operations" in the countries the (climate) refugees come from, whilst admitting at the same time that these are not going to solve the underlying problems.³⁰

2.3 Water³¹ and energy

"In many countries, climate change means that women and young girls have to walk further to collect water, especially in the dry season. Moreover, women can be expected to contribute much of the labour that will go into coping with climate risks through soil and water conservation, the building of anti-flood embankments and increased off-farm employment."

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Water is essential for both life and livelihoods, but the water system stands to be severely affected

²⁸ Zahur, M. (2009) *Climate change, migration and gender. Reflections from Balochistan, Pakistan drought 1998-2002*. Bonn: GenderCC/Gender Disaster Network

²⁹ Masika, R. (2002) *Gender, development and climate change*. Oxford: Oxfam

³⁰ European Commission (2008) *Climate Change and International Security: Paper from the High Representative and the European Commission to the European Council, March 2008*. Available: http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/reports/99387.pdf [4 September 2009]

³¹ Thanks to Petra Kjell, Progressio, for her contribution to this section. / Kjell, P. (2009) Progressio

by climate change³². Already today one third of the world's population faces water shortages, a figure that is expected to rise to two thirds by 2025^{33 34}. Climate change is expected to account for about 20 percent of the global increase in water scarcity this century³⁵. Even with a moderate 1°C increase in temperature it is estimated that the small glaciers in the Andes will disappear, threatening water supplies for 50 million people. With a 2°C increase there could be a 20 to 30% decrease in water availability in some vulnerable regions³⁶. Climate change is also likely to cause an increased frequency and intensity of floods and deteriorating water quality. For example, in south west Bangladesh and other areas where salinity is a problem, salt water intrusion exacerbated by climate change will affect the availability of fresh water³⁷. In addition, ecosystems suffer wide and often irreversible changes when water is in short supply or of poor quality, conditions which may aggravate the problem by reducing the ecosystem's ability to function as a water purifier, water storage and water generator³⁸.

Women are generally the primary caretakers of the family and are often first to become aware of environmental changes, as resources become scarce, increasing their workload and leading to problems with sustaining their families³⁹. This is particularly relevant when it comes to water. As a result of the traditional gender roles in many developing countries, women tend to labour to provide water for household needs, such as cooking, washing, hygiene and raising small livestock. Children, in particular girls, often share these responsibilities. In Africa, women do 90% of the work of gathering water and wood, for the household and for food preparation⁴⁰. Men on the other hand are primarily in charge of water for irrigation or livestock farming, but they are also the primary decision makers about water resource management and development at both the local and national level⁴¹.

CASE STUDY: Women protecting the páramo in Ecuador⁴²

“My first thought for the future is about the preservation of the páramo,” says Kichwa indigenous farmer-turned-environmentalist Fabiola Quishpe.

Fabiola lives in the remote Andean community of Apahua in Ecuador, some 4,000m above sea level. She lives in the páramo, a sensitive area of grassland that acts like a giant sponge, soaking up water and gently releasing it into the valley below.

But despite its vital role, providing water for hundreds of thousands of people, the páramo's delicate ecosystem is under threat. In recent years, up to an estimated 30% of it has been destroyed, which means that water resources for agriculture and consumption in villages like Fabiola's, as well as a vital ecosystem, are at risk.

Fabiola says: “Water is a very important liquid and it is necessary for all human beings, and for all who live and exist as part of this pachamama (mother earth). We need water in order to be able

32 See for example Bates, B., Kundzewicz, Z., Wu, S., Palutikof, J. (eds.) (2008) *Climate Change and Water. Technical Paper of the Intergovernmental Panel on Climate Change*. Geneva: IPCC

33 UN Water and FAO (2007) *Coping with water scarcity: Challenge of the twenty-first century*, <http://www.fao.org/nr/water/docs/escarcity.pdf> (accessed 31 July 09)

34 UN-FAO (2007) *Press release: Making Every Drop Count*. Rome: FAO. February 14, 2007

35 UN Water and FAO (2007) *Coping with water scarcity: Challenge of the twenty-first century*, <http://www.fao.org/nr/water/docs/escarcity.pdf> (accessed 31 July 09)

36 Stern, N. (2006) *Stern Review: The Economics of Climate Change*. London: HM Treasury

37 Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

38 Cap-Net, GWA and UNDP (2006) *Why Gender Matters. A tutorial for water managers*, Cap-Net and GWA

39 BRIDGE (2008) *Gender and climate change: mapping the linkages*, Institute of Development Studies, University of Sussex, Brighton

40 Hemmati, M., Gardiner, R. (2002) *Gender and Sustainable Development*, Heinrich Böll Foundation

41 BRIDGE (2008) *Gender and climate change: mapping the linkages*. Brighton: Institute of Development Studies

42 Kjell, P. (2009) *Progressio*

to improve our lives, for cultivation – we must look after the páramos properly. And that's why we are worried because our páramos, our environment, is contaminated, is not well cared for, and so it's in danger."

"The women are the ones who work here. The men, the husbands, they go away to work down there [in towns], they migrate, often to the coast. They come back here when we have festivities and for the harvest seasons. But the people who mainly live here are women."

But Fabiola, along with other villagers in her community, have been working with Progressio-partner the Institute of Ecuadorian Studies (IEE) to change all that.



*Esperanza Gomez in her home,
photo Santiago Serrano/Progressio.*

"In our community we are 17 women working together to recover our native seeds and protect our water resources. We have noticed that when women work together the family benefits."

So popular was the idea of working together that the villagers decided to form a women's association. Across the region, 150 women have become involved in the scheme. Already, says Fabiola, they've seen a significant change.

"Now people don't let their animals graze on the páramo, they don't burn it; we are getting back all the wild grass varieties, the bushes and native animals we lost. People don't even think about damaging the grasslands anymore, instead, they see it as a source of water and know that it's important for conserving water. If we don't have water how are we going to survive?"

Fabiola hopes that improving the natural water sources in villages like Apahua will mean better living conditions, more crops and improved health.

"Rural people eat, breathe and sleep agriculture," she says. "We depend on and live from our farms. Because of this the environment is necessary. Improving it means that people can live in the countryside, they don't have to migrate to towns, as there is work here for them, and it improves our health too."

In developing countries, women and girls spend an estimated 40 billion hours every year hauling up water. This can mean spending as much as 8 hours a day carrying up to 40kg of water on their heads or hips⁴³. Girls are often given the task of collecting water, carrying 15 to 20 litres of water from the water point to their home⁴⁴. The strain of water collection already causes ill health in women, and often their children, since mothers often take their children with them, feeling it is

⁴³ Cap-Net, GWA and UNDP (2006) *Why Gender Matters. A tutorial for water managers*, Cap-Net and GWA

⁴⁴ Interagency Task Force on Gender and Water (2004) *A Gender Perspective on Water Resources and Sanitation. Commission on Sustainable Development, 2004. United Nations Department of Economic and Social Affairs*

unsafe to leave them while they travel long distances for water⁴⁵. During a scenario of increased water stress, women and girls may have to walk further to collect water, leaving even less time for other activities, such as gaining an education and earning an income. Failure to collect sufficient water, or complete other household tasks, sometimes results in verbal or physical abuse from other family members⁴⁶. The longer walks can increase the risk of harassment or sexual assault, particularly in conflict zones. In urban areas, time commitments can also increase through long hours waiting at communal water points. Furthermore, increased water stress can result in collecting water from sources that are more susceptible to pathogens and bacteria, increasing the risk of spreading of diseases, and further increasing the workload for women in caring for the sick⁴⁷. 3.4 million people a year die from water-related diseases, most of whom are children and millions more, primarily women and children, suffer debilitation from water-borne diseases⁴⁸.

While men's roles in productive usage of water are largely recognised, women's roles receive less attention. 70% of farmers worldwide are women, but they often have little access to decision making structures and their needs can be different from men's as they are more likely to rely on rain fed agriculture, supplemented by small-scale or hand irrigation. Legal constraints can limit women further. In most countries water allocation for agriculture is linked with land ownership, yet in many places women have little or no rights to own land⁴⁹. Globally, women only hold title to less than 2% of private land⁵⁰. Similarly, resources that are available may not be suitable for women. For example, water pumps can have handles that women cannot reach or manipulate or that they haven't been trained to repair. Also, due to these limitations, women are often the first to be affected in times of water shortages for productive use.^{51 52}

There are often social implications for water scarcity too: in some areas of Bangladesh, parents are reluctant to let their daughters marry because they are concerned that they will lose valuable household help with water collection. Conversely, those living in areas less affected by fresh water scarcity are reluctant to arrange marriages with people from areas that are experiencing the worst problems.

Because of women's largely unrecognised role in domestic and productive water usage it is important to further involve women in decision making in water management, in particular with the increased water shortage due to climate change. Women's considerable knowledge about water resources, including water quality and reliability, is often ignored as they rarely participate in decision making structures^{53 54}. As a result women's ability to adapt to climate change is likely to be severely reduced. Women's and men's different responsibilities lead to different needs and priorities, as well as different knowledge about changes in conditions and their impacts⁵⁵. It is important that policies and programmes ensure that women are not put at further disadvantage. A gender-equity approach to water management should recognise that men and women have particular needs, knowledge, interests and aspirations, and thus contribute to the conservation of

⁴⁵ Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

⁴⁶ Centre for Global Change in Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

⁴⁷ Thaxton, M. (2004) *Gender Makes the Difference: Water*, IUCN

⁴⁸ Cap-Net, GWA and UNDP (2006) *Why Gender Matters. A tutorial for water managers*, Cap-Net and GWA

⁴⁹ Cap-Net, GWA and UNDP (2006) *Why Gender Matters. A tutorial for water managers*, Cap-Net and GWA

⁵⁰ Interagency Task Force on Gender and Water (2004) *A Gender Perspective on Water Resources and Sanitation*. Commission on Sustainable Development, 2004. United Nations Department of Economic and Social Affairs

⁵¹ Cap-Net, GWA and UNDP (2006) *Why Gender Matters. A tutorial for water managers*, Cap-Net and GWA

⁵² Thaxton, M. (2004) *Gender Makes the Difference: Water*, IUCN

⁵³ Hemmati M and Gardiner R (2002) *Gender and Sustainable Development*, Heinrich Böll Foundation

⁵⁴ Thaxton M (2004) *Gender Makes the Difference: Water*. IUCN

⁵⁵ BRIDGE (2008) *Gender and climate change: mapping the linkages*, Institute of Development Studies, University of Sussex, Brighton

water resources in different, but equally important, ways⁵⁶.

In developing countries, fuel collection, like water collection, is women's work requiring them to walk long distances each day to obtain a sufficient amount of fuel to meet their household's needs. As with water, disruption by disasters or climate induced changes adds to women's already considerable burden. For example, climate change may affect forest ecosystems, reducing their productivity and therefore the amount firewood available.

In temperate developed countries, fuel poverty particularly affects women because of their greater likelihood of living in poverty: in the UK, 19.2% of single pensioner households and 16.8% of lone parent households, the majority of which are female-headed, experience energy poverty⁵⁷. Fuel poverty is caused by low income, high energy prices, and poor energy efficiency, and is more severe in the UK than other European countries because of the UK's relatively old housing stock, and the poor quality of much newer housing. It is also reinforced because those on the lowest incomes lack the resources to improve their insulation, are less likely to have the more efficient gas central heating, and are less likely to be able to take advantage of payment methods that reduce the cost of the fuel consumed. Since the sources of energy used to heat homes, mainly gas and coal in the UK, are contributing to climate change, it is even more important that these issues are addressed holistically.⁵⁸

CASE STUDY: Fuel poverty in the UK⁵⁹

Mrs Crisp, a 70 year old widow, owns a semi-detached property in which she has lived for 44 years. The property has a very old central heating system dating back to the 1960s, and there is no central heating in the lounge, which is warmed by a gas fire. The central heating is usually run for two hours in the morning and evening during winter, although Mrs Crisp puts it on all day on a Sunday if her children and grandchildren are visiting.

She is usually out of the house for several hours a day in winter and often spends time in the library, partly because she enjoys reading and partly because she appreciates the warmth. She lives on a state pension and council tax benefit. Mrs Crisp recently received a local authority grant to replace the roof and provide loft insulation, but despite her economic use of the heating, it still costs 11 percent of her income in the winter months.

⁵⁶ Siles J (2004) *Gender Makes the Difference: Watershed Management*, IUCN

⁵⁷ UN Economic and Social Council (2006) *Engendering the energy and climate change debate*. New York: UN Economic and Social Council

⁵⁸ Johnson, V., Simms, A., Cochrane, C. (2008) *Tackling climate change, reducing poverty*. The first report of the Roundtable on Climate Change and Poverty in the UK. London: New Economics Foundation

⁵⁹ Wright, F. (2004) *Older and colder*. The views of older people experiencing difficulties keeping warm in winter. London: Help the Aged



Mary Phillips, 72, joins Friends of the Earth and Help the Aged outside the Royal Courts of Justice to protest at the Government's failure to end fuel poverty.
© Amelia Collins/Friends of the Earth.

2.4 Food

“In the agricultural sector, rural women in developing countries are the primary producers of staple food, a sector that is highly exposed to the risks that come with drought and uncertain rainfall.”

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The 2007-2008 global food crisis has illustrated ways in which climate change can affect food supplies with drought, rising oil prices and the rush to biofuels leading to a dramatic rise in food prices. While prices have since fallen, the general consensus is that in the long term, food prices are likely to rise⁶⁰. Because of women's probability of living in poverty, and the existence of food hierarchies, women tend to be affected most acutely.

Whether involved in agriculture or not, women in both developed and developing countries have a key role as providers of food for their families, and so the effects of climate change either directly on food production, or indirectly on food prices, are of particular relevance to women.

CASE STUDY: Rice production in Cambodia⁶¹

Loan Veang, 43, is a farmer and has been deputy chief in Plung village in northern Cambodia since 2006. She is responsible for women's affairs, gender and health education. She and her husband, Sath Cheurn, have a one-hectare rice farm, and as parents of six sons and one daughter, they have to ensure that enough food is available for the family. In addition, Sath Cheurn goes fishing and grows some vegetables near their home. During their free time, they will do traditional basket-weaving to earn extra income.

Recently, especially since 2000 they have experienced irregular rainfall. “Our farming depends on having water in the rice field, so if we have no water, how can we farm?” Loan Veang asks. “Widows and orphans have real difficulty in adapting to climate change. They are weak and easily get ill. They have to work as an employee on someone else's farm in exchange for money. Or, if this is not enough, they have to borrow money from others to feed their children.”

Loan Veang's story is supported by Ath Bun Chan, 45, who is a farmer and vet, and works on the

⁶⁰ Johnson, V., Simms, A., Cochrane, C. (2008) *Tackling climate change, reducing poverty. The first report of the Roundtable on Climate Change and Poverty in the UK*. London: New Economics Foundation

⁶¹ Sophea, L. (2009) *Development and Partnership in Action*. Phnom Penh

village development committee. He says that “Living conditions for farmers like us are really difficult. We have to provide food for our children and family. We have to find income for our expenses and make sure that it is enough for our family, or we have to borrow money from the nearby villagers.” However, he says that things are not so difficult for his family if compared to the widows or families who have no income and are unable to find work in the rice fields. They have to face many obstacles by themselves, especially to find income to feed their children and for their daily needs. “In Stung Treng, women and young people are really the most vulnerable”, explains Ath Bun Chan.

Development and Partnership in Action (DPA) has been working with the community to address the problems DPA is raising awareness of disaster preparedness and damage reduction, and is preparing a strategic disaster plan with particular focus on climate change.

In poor households, throughout the world, women go without food for the benefit of their children or male family members⁶². As food prices rise, for poor households in developed countries and urban households in developing countries, there tends to be a reduction in the quality or quantity of the food they are able to purchase, with women most likely to make sacrifices.

Female-headed households, both in developed and developing countries, are much more likely to be poor, so will feel the effects of food price rises caused by climatic factors most acutely. A recent report by the Asian Development Bank found that in Bangladesh of the 20-30% female-headed households, 95% are living below the poverty line⁶³. In developed countries such as the UK, lone-parent and single-pensioner households - the majority of which are female headed - are most likely to be living in poverty.

The resulting poor nutritional status of women makes them more susceptible to disease and infection, particularly in developing countries where there is little social provision and limited or no access to medical care. Poor nutrition also makes women more vulnerable when disasters happen, and makes the physically strenuous tasks of water and fuel collection more difficult. Research in India has found that girls’ nutrition suffers most during periods of low consumption and rising food prices, and that rainfall shortages are more strongly associated with deaths among girls than boys⁶⁴. Climate change exacerbates all these problems.

Beth Montazana from the Social Action Centre in the Philippines identifies this vulnerability among Filipinos: “When there is not enough food for consumption for a certain month, the mother prepares to eat less, giving priority to her husband and her children.”⁶⁵ A further consequence of the disruption of agriculture by climate change evidenced in the Philippines is that many children and young girls have stopped attending school.⁶⁶

Furthermore, in many developing countries, because of food hierarchies which award males much of the available meat, fish is a major source of protein for women. If salinity in fresh water

⁶² Masika, R. (2002) *Gender, development and climate change*. Oxford: Oxfam

⁶³ Asian Development Bank (2001) *Country briefing paper: Women in Bangladesh*, cited in Cannon, T. (2002) *Gender and climate hazards in Bangladesh*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

⁶⁴ United Nations Development Programme (2008) *Human Development Report 2007/08. Fighting climate change: Human solidarity in a divided world*. UNDP

⁶⁵ Haburas, cited in Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

⁶⁶ Haburas, cited in Reid, H., Simms, A., Johnson, V. (2007) *Up in smoke? Asia and the Pacific. The threat of climate change to human development and the environment*. London: New Economics Foundation

systems affects fish populations, this will have a disproportionate effect on women's nutrition and health⁶⁷. In Bangladesh it has been reported that "Given the already precarious nutritional state of large numbers of girls and women in Bangladesh...any further increase in discrimination would have serious consequences"⁶⁸.

Climate change is predicted to reduce food production in many developing countries, both through disasters such as droughts, tropical storms or floods which destroy whole crops entirely, and incremental change, such as altered rainfall which affects crop yields. In Sub-Saharan Africa, women produce 80% of crops⁶⁹. It is therefore women who are most affected by such changes, whether the product of their labour is used to feed their own family, or generate an income.

Lack of control or ownership of land in many areas is also a barrier to women addressing the impacts of climate change on food production: in sub-Saharan Africa women own only one per cent of the land despite producing four fifths of agricultural products⁷⁰. Similar gendered patterns of land ownership exist in other regions.

2.5 Health

*"Although women in most countries have a longer average life expectancy than men, the quality of women's health is low compared to that of men in their households and communities... While health threats related to global warming linger, women are faced with more immediate health risks than men, due to their role in the gendered division of labour"*⁷¹.

Fatma Denton

Climate change vulnerability, impacts and adaptation: why does gender matter?

Poor nutrition and the physical demands of water and fuel collection contribute to health problems, and look set to worsen as the effects of climate change are increasingly felt. Since women tend to have lower quality and quantity of healthcare than men⁷², it is also less likely that these problems will be treated when they do arise.

Existing health inequalities also mean that women are disproportionately exposed to epidemics. Diseases particularly affecting women during El Niño in Peru included malaria, dengue fever and cholera⁷³.

Additionally, a number of problems that are likely to be made worse by climate change, including poverty, natural disasters and conflict, can cause women and children to seek alternative livelihoods, effectively forcing them into prostitution, which increases their vulnerability to contracting HIV/AIDS.

It has been suggested that women may suffer more mental strain in certain situations, due to

⁶⁷ Simms, A., Magrath, J., Reid, H. (2004) *Up in smoke? Threats from, and responses to, the impact of global warming on human development*. London: New Economics Foundation

⁶⁸ Del Ninno, C. et al, (2001) The 1998 floods in Bangladesh: disaster impacts, households coping strategies, and response, cited in Cannon, T. (2002) Gender and climate hazards in Bangladesh, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

⁶⁹ Simms, A., Reid, H. (2005) *Africa – Up in smoke? The second report from the Working Group on Climate Change and Development*. London: New Economics Foundation

⁷⁰ Simms, A., Reid, H. (2005) *Africa – Up in smoke? The second report from the Working Group on Climate Change and Development*. London: New Economics Foundation

⁷¹ Denton, F. (2002) Climate change, vulnerability, impacts and adaptation: why does gender matter? In Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

⁷² Cannon, T. (2002) Gender and climate hazards in Bangladesh, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

⁷³ Reyes, R. (2002) Gendering responses to El Niño in rural Peru, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

cultural norms, such as being shamed when seen by men in wet clothing⁷⁴. However, in other situations men's mental health may fare worse because of less comprehensive coping mechanisms and their lower likelihood of seeking help after trauma such as a disaster⁷⁵.

When other family members fall ill, women experience an increased workload. This is true even in developed countries, where, even when women are in full-time employment outside the home, they are often expected to take time off from work to care for sick children, rather than a male partner doing so⁷⁶.

While not of the same magnitude as developing countries, populations in developed countries are also likely to experience health problems as a result of climate change, with women particularly vulnerable. For example, the UK's Department of Health identifies a number of negative health effects that are likely to be worsened by climate change, including food poisoning, heat-related deaths, skin cancers, respiratory allergies and injuries and mental health problems. Those living in poverty, who include a disproportionate number of women, are likely to be particularly vulnerable because of a number of factors including poor nutrition and education, stress and poor living environment.⁷⁷

In both developing and developed countries where a national health service does not operate, climate change may lead to increased health costs, with women, because of higher rates of poverty and lower levels of income, likely to feel the financial effects most acutely⁷⁸.



Esperanza Gomez in her home, photo credits Santiago Serrano/Progressio.

2.6 Conflict

There are concerns that, in some areas such as East Africa, climate change will ignite or aggravate conflict over natural resources⁷⁹. Women would be particularly affected because of their role in the collection and management of such natural resources.

Conflict also has a tendency to displace people with many associated effects on women. And as the war in Darfur, which stems partly from natural resource conflict, shows, sexual violence can be used against women as a particularly horrific weapon of war, with long term consequences for

⁷⁴ Cannon, T. (2002) Gender and climate hazards in Bangladesh, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

⁷⁵ Masika, R. (2002) *Gender, development and climate change*. Oxford: Oxfam

⁷⁶ Durrant, S. (2009) The chore wars. *The Guardian*. 11 February 2009

⁷⁷ Johnson, V., Simms, A., Cochrane, C. (2008) *Tackling climate change, reducing poverty. The first report of the Roundtable on Climate Change and Poverty in the UK*. London: New Economics Foundation

⁷⁸ Hemmati, M. (2005) *Gender and climate change in the North: issues, entry points and strategies for the post-2012 process and beyond*. Frankfurt: Genanet

⁷⁹ Nelson, V., Meadows, K., Cannon, T., Morton, J., Martin, A. (2002) Uncertain predictions, invisible impacts and the need to mainstream gender in climate change adaptations, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

those affected⁸⁰.

During conflicts, when men are away from home, women often organise themselves and their lives differently. When men return from war, women are often forced to return to their traditional roles. In fact, women face even greater danger of sexual and other violence in the aftermath of conflict.⁸¹

CASE STUDY: Water conflict in Ecuador⁸²

Esperanza, a mother of three, lives with her family in a community of 350 inhabitants near Ibarra, Ecuador. Water is a luxury for people in this lowland area and only half of the households have access to water for irrigation.

“It’s the big landowners who are benefiting”, she says, “There are people who have big farms and they are the ones that take all the water. The rest of us can’t do anything because they own the irrigation channel.”

For this reason, Esperanza has been heavily involved in a local campaign to secure water irrigation for everyone. Above all, she hopes that piped water will one day be brought directly to the community. Water access is particularly important here as the area is often plagued by drought. The resulting crop failures force them to buy food. With additional changes to weather patterns in recent years, access to water has become increasingly difficult, affecting when Esperanza and her family can plant and harvest their crops.

“The planting season used to be in October to take advantage of the rain. But nowadays it’s not like it used to be - we used to know when it would rain. So, our harvests are not like they used to be, either. In the summer, the plants were sown to take advantage of the water in the month of May, but as there is no rain the plants are drying out.”

2.7 Adapting to climate change

“Climate change will gradually ratchet up these risks and vulnerabilities, putting pressure on already over-stretched coping strategies and magnifying inequalities based on gender and other markers for disadvantage.”

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In developing countries already experiencing negative effects of climate change, women have been identified as particularly adaptive and innovative⁸³. For example, women living in villages in the Ganges Delta in West Bengal in India have constructed elevated bamboo platforms in order to escape the monsoon floodwaters⁸⁴.

Communities on the frontline in adapting to the effects of climate change need, but so far often lack, adequate information about climate change and adaptation strategies. Because of women’s lower literacy levels in many regions, and other barriers to accessing information, such as culture, it is vital that women’s needs are addressed in efforts to provide the necessary information. This is

⁸⁰ Amnesty International (2004) *Sudan, Darfur: Rape as a weapon of war: Sexual violence and its consequences*. London: Amnesty International

⁸¹ Pankhurst, D. (2003) *The “Sex War” and Other Wars: Towards a Feminist Approach to Peacebuilding*. Development In Practice: 13, 2&3, pp. 154-76

⁸² O’Keefe, B., Barrett, J. (2009) Progressio

⁸³ Women’s Environment and Development Organization (2008) What it means for women, in Couldrey, M., Herson, M. (eds.) *Forced migration review: Climate change and displacement*, 31, October 2008

⁸⁴ Watkins, K. (2007). Human Development Report 2007/2008. Fighting climate change: Human solidarity in a divided world. UNDP.

particularly the case given their key role in adaptation.

However, several writers have raised concerns that adaptive measures often rely too much upon women's unpaid labour for their success⁸⁵. Too often, women's time is assumed to be elastic, and in the gendered division of labour, of which Sen writes "Women could be forgiven for seeing it as 'accumulation of labour'"⁸⁶, women's domestic and caring work goes unvalued, despite underpinning the whole economy.

CASE STUDY: Adapting to climate change in Bangladesh⁸⁷

Asiya Begum lives in the village of Charipara in Patuakhali district of Barisal in the South tip of Bangladesh. A widow, Asiya has caring responsibilities for her two sons and elderly mother, and has a small piece of land for cultivating crops, but is unable to use it to its full potential because of increasing salinity, changes in rainfall and lack of irrigation facilities.

Asiya has been a participant of the climate change adaptation and disaster risk project run by ActionAid Bangladesh and funded by Embassy of Denmark since it started in 2008 at her village. Asiya received technical support and saline tolerant rice seed from the project and had good yields that helped her to reduce food insecurity for her family. It also helped her to pay back her loans that she took after Cyclone Sidr in 2007 with an interest rate of 50%.

"The project gave me hope to live again, now I have the knowledge to grow crops even in high saline situations," says Asiya after having higher crop yields during winter, a season when she never had crops before.

However, life is challenging for Asiya as she suffered during Cyclone Sidr in 2007 and has observed recent changes in the climate such as untimely rainfall and a longer winter. She is still trying hard to recover from damages done by Cyclone Aila that struck her village in May 2009. The embankment protecting her village collapsed and saline water damaged her crops, pond water and vegetable garden. She already experienced the effects of land being lost to the river, as people from the neighbouring village have been displaced to Charipara. She fears that Charipara will be lost in the river soon as the intensity of river erosion increased in the last 5 or 6 years.

After Cyclone Sidr, Asiya planned to migrate, probably to the capital city to find an alternative livelihood, knowing her limitations as a farmer. However, her survival would have been extremely difficult as she has no other skills besides farming that can help her adapt in a radically different situation, leaving her land and other assets behind. ActionAid Bangladesh's project gave her hope back. But it is fading again following recent disasters and seeing land taken by the river. The only way she can live at Charipara is if mitigation measures are taken by the government and a sustainable embankment is built to give her and other people of Charipara a chance to live where they belong.

⁸⁵ Masika, R. (2002) *Gender, development and climate change*. Oxford: Oxfam

⁸⁶ Sen, A. (2001) 'Many Faces of Gender Inequality'. *Frontline*. 9 November 2001

⁸⁷ Action Aid (2009) *I hope to stay in my village*. Dhaka: Action Aid Bangladesh

2.8 Millennium Development Goals

The Millennium Development Goals (MDGs) are a set of eight goals set in 2000 that respond to the main global development challenges. Due to be achieved by 2015, the world is now supposedly well past half way to meeting the MDGs, and it is accepted that gender equality is essential to their achievement, while climate change poses a significant threat to them being met. Development charity ActionAid is dismayed by the lack of progress towards the goals which they attribute in large part to the “widespread failure by the international community to recognise, and then act on, the hard facts of discrimination against women and girls”⁸⁸.

We have already revealed above how climate change is likely to reinforce, rather than reduce, gender inequality, making the goals doubly hard to reach. Unless approached with a specific commitment to achieving gender equality whilst tackling climate change, the extreme poverty and hunger experienced by women is likely to increase, girls are less likely to receive a primary education, child mortality rates and maternal health are likely to worsen, women will be particularly affected by diseases such as malaria, burdened with natural resource management without reaping fair rewards, and be excluded from development projects.

For the Millennium Development Goals to be met, or even for substantial progress towards them, practical and strategic gender needs must be addressed in climate change policies and programmes, and for this to be effective, women must be involved in their development. Women’s prescribed gender roles need to be challenged and changed, with empowerment a key element of any successful strategy.

2.9 ‘Solutions’ to climate change

“The more serious structural problem is that groups such as small-scale farmers and forest dwellers do not have opportunities to engage in carbon markets, partly because the markets themselves are remote; and partly because they lack marketable rights in land and environmental resources. Marginal women farmers in Burkina Faso or Ethiopia are not well placed to negotiate with carbon brokers in the City of London—and carbon brokers seeking to minimize transaction costs have an inbuilt preference for large suppliers of mitigation credits.”

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Recent years have seen various ‘solutions’ to the problem of climate change advanced, many of which have a negative impact on the poor whilst striving to allow the current system of privileging an elite in developed countries to continue.

Most have sought to reduce greenhouse gas emissions whilst allowing consumers in developed countries to maintain the same levels of consumption. For example, biofuels have been posited as a replacement for oil, which would enable current global transport and distribution systems largely serving the developed world to continue much as today. Unfortunately, such a move displaces food production, either by using food crops such as maize to produce fuel, or using agricultural land to produce non-edible fuel crops. As a result, decisions by the EU and US to support such biofuel production through tax credits, import tariffs and tax concessions were a major factor in the recent dramatic increase in food prices – around 70% according to a World Bank report⁸⁹ - which have impacted upon the ability of people in the developing world to adequately feed

⁸⁸ Elliot, L. (2008) UN poised to play catch-up. *The Guardian*, 2008

⁸⁹ Mitchell, D. (2008) *A Note on Rising Food Prices. Policy Research Working Paper 4682. Washington D.C.: World Bank*

themselves. Meanwhile, for the UK to produce just 10 per cent of its road transport fuel from within its borders, it would have to devote all of its arable land to biofuel production⁹⁰.

A recent report by the Food and Agriculture Organization considered the gendered effects of large-scale biofuel production, and concluded that women in particular would be adversely affected for a number of reasons. These include the way in which so-called marginal land, which is often used by women for household food production, is targeted for biofuel production; loss of biodiversity resulting in reduced food security; high water consumption of biofuel crops, which compete directly with household needs and increase women's workload; replacement of solid biofuel crops needed for local households; and exploitation of female biofuel plantation workers.⁹¹

In addition, various forms of emissions trading have been introduced which create a market for greenhouse gases, enabling organisations or individuals to buy or sell the right to produce carbon dioxide (and sometimes other greenhouse gas) emissions. Examples of this include carbon offsetting schemes, which allow individuals to 'offset' flights and other greenhouse gas-generating activities, and emissions trading schemes such as the Clean Development Mechanism and EU Emissions Trading Scheme.

While climate justice campaigners have criticised such systems as unjust, and pointed out a number of loopholes in the current schemes that make them ineffective, there are also concerns that they are inherently damaging to women's interests.

CASE STUDY: Carbon offsetting in Uganda⁹²

In Uganda, a voluntary commercial forestry carbon offset project funded by FACE (Forests Absorbing Carbon Emissions) is reported to have had particularly damaging effects on local women. The project, at Mount Elgon National Park has kept local people out of areas they previously used for collecting food and other natural resources, often using violence, including rape. This has led to deprivation in local communities, and as a result, some have turned to prostitution, which has increased the incidence of HIV and AIDS amongst local women.

A World Forest Coalition report has raised similar concerns. They point out that women's reproductive role, related unpaid labour, and lower levels of formal education put them at a disadvantage in such market systems. Because of their lower monetary wealth, women are more dependent on the natural resources that forestry projects tend to enclose or privatise. At the same time, their stewardship role is rarely recognised or rewarded. While there are some projects that are led by, or benefit, women (for example, the Green Belt Movement in Kenya), this type of project is rarely fully commercial, and so cannot be made viable by such a system of financing.⁹³

Because of the tendency for funding to be given to cheap, large-scale industrial projects, few of the activities funded by the Clean Development Mechanism benefit women. Smaller projects, more likely to be run by, and beneficial to, women are unlikely to be funded. Unfortunately, since the system is based on market mechanisms, it is unlikely that this problem can be addressed without fundamental reform of this type of scheme.

Carbon trading and similar market-based mechanisms emerge from a male-dominated system

⁹⁰ World Development Movement (2008) *Corporate power versus the planet*. London: World Development Movement

⁹¹ Rossi, A., Lambrou, Y. (2008) *Gender and equity issues in liquid biofuels production, Minimizing the risks to maximize the opportunities*. Rome: Food and Agriculture Organization on the United Nations

⁹² World Forest Coalition (2008) *Life as commerce: The impact of market-based conservation mechanisms on women*. Montevideo: World Rainforest Movement

⁹³ World Forest Coalition (2008) *Life as commerce: The impact of market-based conservation mechanisms on women*. Montevideo: World Rainforest Movement

and masculine model of development and economic growth and primacy, in which certain work (typically conducted by men) is recognised and rewarded, while other tasks (those typically conducted by women) are not. While the private sector often completely ignores gender issues, even the public schemes, such as those funded by the World Bank, have failed to ensure in practice that its operations do not have a negative impact upon women⁹⁴. It is unlikely that such problems will be resolved without more women, or at the very least gender-sensitive perspectives, being involved in the planning and development of just and sustainable climate change financing schemes.

One further problem is that the majority of these financing schemes focus on funding mitigation activities, whereas much less finance is available for adaptation, which is of particular importance to women because of their key role in adapting to climate change⁹⁵.

In developed countries, taxation may be a method of reducing greenhouse gas emissions, and when such policies are applied to luxury, carbon-intensive activities such as flying or using large, inefficient vehicles, they may be successful and even find a degree of public support. However, taxes on essentials, such as household energy are deeply regressive and will exacerbate poverty, hitting female-dominated groups, such as lone parent families and single pensioners, hardest. Here, other methods, such as increasing energy efficiency, must be found in order to reduce inequalities, rather than widen them.⁹⁶

⁹⁴ Aguilar, L (2009) *Training manual on gender and climate change*. Global Gender and Climate Alliance

⁹⁵ Aguilar, L (2009) *Training manual on gender and climate change*. Global Gender and Climate Alliance

⁹⁶ Johnson, V., Simms, A., Cochrane, C. (2008) *Tackling climate change, reducing poverty. The first report of the Roundtable on Climate Change and Poverty in the UK*. London: New Economics Foundation

3. WOMEN'S CONTRIBUTION TO CLIMATE CHANGE

It is widely accepted that historic responsibility for the build-up of greenhouse gases in the atmosphere lies with the world's industrialised nations, and the greenhouse gas emissions of 69 developing countries, representing 2.5 billion people, along with the poor in many other countries, effectively make no contribution to climate change⁹⁷. However, there is evidence that within the societies which do contribute to climate change, women's contribution tends to be less than men's. This section explores why this is the case.

3.1 Poverty

"Women living in poverty are least responsible for climate change"

Oxfam Canada

With a few exceptions, those living in poverty tend to contribute less to climate change compared with those not experiencing poverty. For example, in the UK and other developing countries, those living in poverty are less likely than others, to own private transport, take flights, have powerful electrical appliances or purchase many consumer goods - all elements that make considerable contributions to the carbon emissions of many of their fellow citizens. While poverty may also result in individuals being unable to take steps to reduce the greenhouse gas emissions, such as installing adequate insulation in rented housing, such inaction (involuntary or otherwise) is certainly not limited to those on the lowest incomes. So, since, more women than men in a given society live in poverty, on average, women will have a smaller carbon footprint for reasons of poverty.

This principle applies across the scale: lower income (and expenditure) tends to equate to a lower carbon footprint. Women's average earned income is lower than men's: in the UK, in 2008, mean hourly earnings were £12.88 for women, compared with £15.54 for men, meaning that the gender pay gap was 17.1% for full time employees⁹⁸, rising to 22.6% for all employees, which takes into account the high number of women that work part-time⁹⁹. So even if not living in poverty, women tend to be less affluent and financially secure than men because of their lower income and greater participation in the informal labour market.¹⁰⁰ As a result, households with a single adult female are likely to have more modest consumption patterns, with associated lower environmental impact.

While in some households, income from a single (often male) earner may be shared among a number of individuals, both male and female, and it may be difficult to allocate the emissions resulting from spending on behalf of the household, this is not always the case. In some such cases, women lack control of this income, and so spending may be on their behalf, but uncontrolled by them. This is supported by the Department for Work and Pensions which acknowledges that, particularly in low-income households, men sometimes benefit at the expense of women from shared household income.¹⁰¹

A Swedish study came to a similar conclusion, noting men's higher consumption in a number of

⁹⁷ Jones, T., Hardstaff, P. (2007) *Climate Calendar. The UK's unjust contribution to climate change*. London: World Development Movement

⁹⁸ Office of National Statistics (2008) *2008 annual survey of hours and earnings*. Newport: ONS

⁹⁹ Women and Work Commission (2009) *Shaping a fairer future. A review of the recommendations of the Women and Work Commission three years on*. London: Government Equalities Office

¹⁰⁰ Hemmati, M. (2005) *Gender and climate change in the North: issues, entry points and strategies for the post-2012 process and beyond*. Frankfurt: Genanet

¹⁰¹ Department of Work and Pensions (2009) *Households Below Average Income. An analysis of the income distribution 1994/95 – 2007/08*. London: DWP

areas including eating out, alcohol, sport and leisure activities, such as boating that consume large amounts of petrol¹⁰². So, particularly in households with a single adult female, expenditure, and corresponding greenhouse gas emissions, is likely to be considerably lower than in equivalent male households.

3.2 Women's roles

Prescribed gender roles mean that women tend to participate in different activities to men in society, which may result in them making a smaller contribution to climate change. These prescribed gender roles also contribute to women's inequality as roles typically assigned to women, such as domestic work and child care, tend to be devalued in an unequal society and command lower payment. Furthermore, gender socialisation means that women tend to spend their income more altruistically, generally prioritising family needs, especially those of children, and giving more often to charity than men¹⁰³.

Female-headed households are much more likely to include dependent children: in the UK more than 90% of lone parents with dependent children are women¹⁰⁴. In these cases, household income will be spent on essential items for the household, including food, fuel and clothing for several individuals¹⁰⁵, leaving less for consumption of extras such as foreign holidays or consumer goods. Such consumption, and higher levels of it, is more likely in households which do not have dependent children, such as the majority of those headed by a single male. While increasing gender equality might lead women's pollution impact to increase, there are reasons to suggest that this would be more than compensated by other changes that would reduce emissions. In addition, gender equality might lead to more of a balance in female- and male-headed lone-parent households - where expenditure and resultant emissions are shared between a number of individuals - or even reduce the number of lone-parent households.

There is also evidence that women are more likely to use the income that they earn, or are able to control, more prudently than men. In many cases this may equate to spending with a lower environmental impact. For example, report commissioned by the UK's Department for International Development (DfID) found high expenditure on batteries for young men in South Africa to listen to taped music, with, in some households, recreational equipment, such as TVs and radios, being bought before labour-saving equipment for domestic chores. Similarly, men in Zimbabwe refused to spend money on solar stoves for their household, seeing technology as a male preserve, and in some cases expressing concerns about the use their wives would make of the time saved by using the new stoves.¹⁰⁶

Other studies in Latin America and Asia have found that many men spend a third to a half of their income on goods or services for themselves before sharing the remainder with other family members¹⁰⁷. While the average citizen of many of these countries makes no net contribution to climate change, there is evidence of income being used by women to meet basic needs, rather than

¹⁰² Johnsson-Latham, G. (2007) *A study of gender equality as a prerequisite for sustainable development*. Stockholm: Environment Advisory Council

¹⁰³ Charities Aid Foundation (2009) *Giving trends and statistics*. Available: <http://www.cafonline.org/Default.aspx?page=7044> [4 August 2009]

¹⁰⁴ Calculated by WEN from Office for National Statistics (2007) *Focus on Families 2007 edition*. Palgrave Macmillan, Basingstoke (http://www.statistics.gov.uk/downloads/theme_compendia/fof2007/FO_Families_2007.pdf)

¹⁰⁵ Johnsson-Latham, G. (2007) *A study of gender equality as a prerequisite for sustainable development*. Stockholm: Environment Advisory Council

¹⁰⁶ Clancy, Skutsch, Batchelor (no date) *The gender-energy-poverty nexus. Finding the energy to address gender concerns in development*. Available: <http://www.sparknet.info/uploads/file/gender-energy-poverty.pdf> [2 September 2009]

¹⁰⁷ Chant, Sylvia (2003) "New contributions to the analysis of poverty" cited in Johnsson-Latham, G. (2007) *A study of gender equality as a prerequisite for sustainable development*. Stockholm: Environment Advisory Council

spent on consumer goods with a likely associated increase in emissions. In developed countries, women often tend to prioritise purchases that meet specific household needs (that they are likely to have responsibility for) such as washing machines, rather than new ‘gadgets’.

In aviation women seem to have less of an impact. In the UK, for example, aviation has been the fastest growing source of emissions over the last ten years¹⁰⁸, and the country has the highest per capita greenhouse gas emissions in the world from flying, contributing on average 13% of the average individual’s climate change impact¹⁰⁹. An analysis of figures collected by the Civil Aviation Authority (CAA) for terminal passengers, both from the UK and abroad, at eight major UK airports in 2007/8 shows that on average, there are 13% more male passengers than female¹¹⁰. There are likely to be several reasons for this difference.

Firstly, men fly considerably more for business reasons – the figures show that there were more than three times more UK male business passengers than UK female business passengers, and nearly twice as many male business passengers from outside the UK than corresponding female passengers¹¹¹. While only one in five of the passengers covered by the survey were business travellers¹¹², because many of these passengers travel first, or ‘business’, class, the associated climate impact is higher because these passengers are allocated more space, meaning that fewer passengers can be accommodated, and the emissions per passenger are higher. While the CAA does not collect figures for it, the use of private jets by the most affluent individuals for business purposes represents the height of environmentally damaging behaviour, and again is likely to account for more males than females.

Second, safety fears and cultural prescriptions that women should not travel alone often prevent women travelling, or lead to extra travelling by (often male) individuals accompanying them. Third, because of their typically lower income and increased likelihood of living in poverty, women are also less likely to be able to afford to take flights.

A Swedish study supports this supposition, finding that women travel fewer kilometres by plane, car, boat and motorcycle than men, and that men make up 75.9% of Swedish car owners¹¹³. The same study also found that, in the US, men constitute two thirds of long-distance commuters. By contrast, women were found to be more dependent on, and favourably inclined to, public transport. A similar situation is found by development researcher Dr Margaret Skutsch, reporting that despite changes over the last decades, cars are still used more by men, with women using public transport more¹¹⁴. In the UK, 27% more men than women hold driving licences, and women are 38% more likely not to have access to a car, as well as twice as likely to be a non-driver in a household with a car¹¹⁵.

108 World Development Movement (2007) *Flying in the face of the poor: Aviation and climate change*. London: World Development Movement

109 Link, A., Hartigan, B., Budd, J. (2008) *Three Tonne Club Handbook*. London: Women’s Environmental Network

110 Calculated by WEN from Civil Aviation Authority (2008) *CAA passenger survey report 2007/2008*. London: Civil Aviation Authority

111 Calculated by WEN from Civil Aviation Authority (2008) *CAA passenger survey report 2007/2008*. London: Civil Aviation Authority

112 Calculated by WEN from Civil Aviation Authority (2008) *CAA passenger survey report 2007/2008*. London: Civil Aviation Authority

113 Johnsson-Latham, G. (2007) *A study of gender equality as a prerequisite for sustainable development*. Stockholm: Environment Advisory Council

114 Skutsch, M. (2002) *Protocols, treaties and action: the ‘climate change process’ viewed through gender spectacles in Masika, R. (ed.) (2002) Gender, development and climate change*. Oxford: Oxfam

115 Calculated by WEN from Department for Transport (2007) *National Travel Survey*. Newport: ONS

3.3 Women's behaviour and consumption patterns

While it is likely that women's and men's behaviour is influenced by the gender-related factors of wealth and occupation, as discussed above, it is also likely that gendered differences in environmental behaviour occur even when these factors are taken into account.

There is evidence that women in developed countries are more likely to consider the environmental impact of purchasing decisions. An Emap survey in 2007 found that women were 12% more likely than men to purchase environmentally-friendly products and services, and 10% more likely to give consideration to what companies said about their impact on the environment¹¹⁶. Research by the Organisation for Economic Co-operation and Development (OECD) found that women were more likely to be sustainable consumers, and behave in pro-environmental ways, such as recycling and paying attention to energy efficiency in the home and transport¹¹⁷. Furthermore, a Europe-wide survey in 2008 found that while men were likely to point to the responsibility of government and industry to take action, women more often said that they would like to take action themselves, although did not always know how¹¹⁸.

According to a survey of UK women by Women's Environmental Network (WEN) and the National Federation of Women's Institutes (NFWI), 86% of respondents wanted to see manufacturers design more environmentally-friendly products and 85% wanted to see carbon labelling on products¹¹⁹. In addition, 86% of the women surveyed said that they were taking steps to be more energy efficient in the home, although because of the nature of the survey, no comparative figure is available for men. While these results should be treated with caution because the sample was largely self-selecting and likely to have been influenced by the nature of the organisations carrying out the research, considered alongside other research and the fact that women are responsible for much of the shopping and other domestic tasks in households, they do suggest high levels of pro-environmental awareness and behaviour among women.

A number of recent surveys and polls of vegetarianism in the UK consistently showed higher rates of vegetarianism among women, varying from 1.3 to 3.5 times higher than the rates among men¹²⁰. Whether this decision is consciously for environmental reasons, the effect is the same – it is estimated that the climate impact of a vegetarian diet is as low as half that of the average meat-eater's diet¹²¹. Given that food makes up 16% of the average UK footprint¹²², it is clear that the decision to avoid consuming meat can have a not insignificant impact on the contribution of the citizens of the developed countries to climate change.

Regarding aviation, one of the largest single contributors to greenhouse gas emissions in developed countries, the Department for Transport figures note that “The proportion of males (78%) supporting unrestricted air travel was significantly higher than the proportion of females (71%)”. Similarly, males were twice as likely as females to support economic expansion without environmental limits while females were 45% more likely to oppose expansion on economic and

¹¹⁶ Emap Advertising, (2007) “The Inside... on the Environment” panel. London: Emap Advertising. February 2007

¹¹⁷ OECD (2008), *Environmental Policy and Household Behaviour: Review of Evidence in the Areas of Energy, Food, Transport, Waste and Water*. Paris: OECD

¹¹⁸ Eurobarometer (2008) *Special Eurobarometer 300: Europeans' attitudes towards climate change*. Brussels: European Commission

¹¹⁹ Women's Environmental Network/National Federation of Women's Institutes (2007) *Women's Manifesto on Climate Change*. London: Women's Environmental Network/National Federation of Women's Institutes

¹²⁰ Calculated by WEN from *The Vegetarian Society (2009) General statistics since 2000*. Available: <http://www.vegsoc.org/info/statveg.html> [5/07/09] and *The Vegetarian Society (2009) Summary of RealEat polls 1984 – 2001*. Available: <http://www.vegsoc.org/info/realeat.html> [5/07/09]

¹²¹ Institute for Ecological Economy Research (2008) *Organic: a climate saviour? A Foodwatch report on the greenhouse effect of conventional and organic farming in Germany*. Berlin: Foodwatch

¹²² Link, A., Hartigan, B., Budd, J. (2008) *Three Tonne Club Handbook*. London: Women's Environmental Network

environmental grounds. In addition, female air travellers were 33% more likely than males to say they would be willing to pay more for air travel to reflect environmental harm.¹²³

Key to tackling climate change is addressing high levels of material consumption in developed countries, which is encouraged by an advertising industry worth \$430 billion in 2006¹²⁴. Women are often targeted with unnecessary products by advertisers trying to persuade them that a particular product will make life easier, or help them become more attractive. Women are often susceptible to these marketers because of the double, or even triple, burdens of paid work, domestic chores and child care that many women carry and with the consequence that they make the majority of consumption decisions. The unequal pressure on women in Western society to meet a certain standard of appearance also contributes to the pressure on women to consume, as WEN's work on health and cosmetics has highlighted¹²⁵.

There is also evidence that women – largely responsible for the majority of childcare in both the developing and developed countries - are more likely to consider the needs and interests of children than men¹²⁶ which may also make women more likely to try and reduce their environmental impact for the sake of children's futures.

3.4 Perpetuating the system

The world economic system is patriarchal, and while women play an increasing part in the world economic system that has created climate change, few hold positions of real power that allow them to change or challenge it. It remains men that dominate decision making in the most polluting industries, failing to give enough priority to tackling climate change.

According to eco feminist thinkers such as Ariel Salleh, Caroline Merchant and Mary Mellor, there is a strong link between the environmental degradation, due to the lack of value given to the environment, with the global patriarchal economic system¹²⁷. This system fails to properly value both the work of women and ecosystems.

A look at those directing some of the corporations contributing most to climate change, and doing the least to address it, shows that the drive to continue business-as-usual is highly male-dominated.

¹²³ Department for transport (2008) *Public experiences of and attitudes towards air travel*. London: Department for Transport

¹²⁴ Mobile Marketing Association (no date) *The Role of Mobile Advertising in Messaging*. Available: <http://www.mmaglobal.com/articles/role-mobile-advertising-messaging> [5/07/09]

¹²⁵ Women's Environmental Network (2003) *Getting lippy*. London: WEN

¹²⁶ Nyman, C. (2003) *Mine, yours or ours? Sharing in Swedish couples*, cited in Johnsson-Latham, G. (2007) *A study of gender equality as a prerequisite for sustainable development*. Stockholm: Environment Advisory Council

¹²⁷ Salleh, A. (1997) *Ecofeminism as Politics: Nature, Marx and the Postmodern*. Zed Books: London; Merchant, C. (1996) *Earthcare: women and the environment*. London: Routledge; Mellor, M. (1997) *Feminism and Ecology*. Cambridge: Polity

The table below shows the FTSE 100's largest greenhouse gas-emitting companies¹²⁸, along with their chief executive and the number of women on their executive committee.

Company	Proportion of FTSE 100 emissions (%)	Chief Executive (male/female)	Number of individuals on executive committee	Number of female individuals on executive committee
Shell ¹	23	Peter Voser (m)	8	0
BP ²	17	Tony Hayward (m)	10	1
Scottish Power ³	17	Nick Horler (m)	10	2
Corus Group ⁴	6	Kirby Adams (m)	7	2
BHP Billiton ⁵	4	Marius Kloppers (m)	7	1
TOTAL	67%	100% male	42	6

Of the six women out of a total of 42 individuals – less than 15% - holding the most senior positions in these companies, three are in charge of human resources or a similar department, where they are likely to have little direct power to challenge or change the business' operation or direction. According to the magazine *Ethical Consumer*, the UK's greenest energy supplier is Good Energy¹²⁹, whose Chief Executive and founder, Juliet Davenport, is female¹³⁰.

Similarly, recent research into the main environmental NGOs in the UK and Europe has shown that males currently represent all the CEOs of the organisations comprising the environmental sector grouping advising the European Commission. These figures are particularly stark given that more than two thirds of the workforce in the voluntary sector is female. As the authors observe: "Professional environmental and environmental justice campaigning organisations...often appear to demographically mirror the employment profiles of the businesses and institutions they challenge".¹³¹

In the 1997 negotiations leading up to the Kyoto Protocol, Delia Villagrasa reports how "The business sector was an almost exclusively male 'club', especially in the case of the decision-making lobbyists". They highlighted the way in which the main business lobbyists succeeded in weakening the results of the negotiations considerably¹³².

¹²⁸ Henderson Global Investors (2005) *The Carbon 100*. London: Henderson Global Investors

¹²⁹ *Ethical Consumer* (2008) *Electricity suppliers (green)*. *Ethical Consumer* 114, September/October 2008

¹³⁰ Good Energy Group Plc (2009) *Shareholder information. Company structure*. Available: http://www.goodenergygroup.co.uk/shares_company.asp [24 September 2009]

¹³¹ Buckingham, S., Kulcur, R. (2009) *Gendered geographies of environmental injustice*. *Antipode*, 41, 4, 2009

¹³² Villagrasa, D. (2002) *Kyoto Protocol negotiations: reflections on the role of women*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam, p.41-42

CLIMATE CHANGE SCEPTICS - Denying the problem

While most of the world has woken up to the reality of climate change, albeit slowly, and is now making moves to address the crisis, there are still a number of individuals who deny either that climate change is occurring, or that it is caused by human behaviour. In March 2009 the world's largest-ever gathering of global warming sceptics took place in New York City to ask, "Global warming: Was it ever really a crisis?"¹³³ Of the 80 speakers, 78 were male (97.5%)¹³⁴. Apparently this level of male domination is not unusual – at a smaller meeting of 50 climate change sceptics in Australia in 2004, 49 (98%) were male¹³⁵. And of the 100 initial signatories of an open letter in December 2007 from climate sceptics to the UN published in the *National Post* and headed "Don't fight, adapt", 99 (99%) were male¹³⁶.

While there are few areas where a complete gender equality would be expected due to low levels of female representation at the top of the majority of professions, including science, such gender disparity, at a level of just one woman in 40 or 50 people, or 2%, is significant. A sample survey of the 1269 authors and contributors listed for the 2007 IPCC assessment reports found that 19% were female – around ten times higher than the female representation among the sceptics¹³⁷.

¹³³ *Global Warming. Was it ever a crisis? (2009) Welcome.* Available: <http://www.heartland.org/events/NewYork09/index.html> [6/07/09]

¹³⁴ *Calculated by WEN from Global Warming. Was it ever a crisis? (2009) Conference Program.* Available: <http://www.heartland.org/events/NewYork09/PDFs/NY09Program.pdf> [15 September 2009]

¹³⁵ *Fyfe, M. (2004) The global warming sceptics.* Melbourne: The Age

¹³⁶ *National Post (2007) Don't fight, adapt.* Available: <http://www.nationalpost.com/news/story.html?id=164002> [2 September 2009]

¹³⁷ *Calculated by WEN from IPCC (2007) Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge/ New York: Cambridge University Press; IPCC (2007) Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge: Cambridge University Press; IPCC (2007) Climate Change 2007: Mitigation. Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge/ New York: Cambridge University Press*

4. GENDERED ROLES IN TACKLING CLIMATE CHANGE

As with other aspects of climate change, the ways in which the problem is being addressed are also gendered. While women are key decision-makers at the household level, and often lead in community-based activity, they remain under-represented at the national and international levels, with the consequence that gender considerations are often insufficiently acknowledged in national policies and international negotiations. This chapter explores the consequences of this power disparity.

4.1 International negotiating power

Since the United Nations Framework Convention on Climate Change (UNFCCC) was brought into force in 1994, and the first Conference of Parties (COP) held in 1995, gender considerations and representation have been sorely lacking from the international climate change negotiations. This has been despite understanding from the international women's movement following the 1992 Rio Earth Summit that female perspectives would be incorporated into environmental decision-making.¹³⁸

Although an international women's forum was run in parallel with the first COP in 1995 and attended by 200 people, there was little further action on the gender aspects of climate change until COP7, in 2001, when the first official mention of women appeared in the Marrakech resolution¹³⁹. Although as Margaret Skutsch points out, neither of the most important treaties, the UNFCCC nor the Kyoto Protocol, mentioned the words 'gender' or 'women' even once¹⁴⁰. One reason suggested for the lack of female participation in the negotiations in the lead-up to the agreement of the Kyoto Protocol in 1997 was the focus on economic arguments, with little attention being paid to more practical issues: "Perhaps women felt they could not penetrate this masculine perspective – and stayed at home"¹⁴¹.

Analysis by Ulrike Röhr in 2006 showed that female representation in COP delegations up until 2005 was low, varying from around 15% at COP3 (1997) to 28% at COP9 (2003)¹⁴². Yet according to Delia Villagrana, the relatively few women who were present played a key role in the negotiations, suggesting that few agreements would have been reached without them because of their commitment and skills in networking, often interacting with other delegates outside the formal sessions. In particular, female leaders of the German and Swiss negotiating teams in 1997 have been praised for proactively linking with developing countries, helping their much smaller teams integrate into the negotiations. Likewise, female negotiators from developing countries including Peru and Zimbabwe were noted for their unifying role¹⁴³, suggesting that training in a more typically female negotiating approach might be of benefit to all involved in the negotiations. Today, a glance at the top negotiators for the most powerful actors: Todd Stern for the US, Artur Runge-Metzger for the EU, and Li Gao for China, as well as Yvo de Boer who heads the UNFCCC, suggests that female views and approaches are still unlikely to be adequately represented.

¹³⁸ Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹³⁹ Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹⁴⁰ Skutsch, M. (2002) *Protocols, treaties, and action: the 'climate change process' viewed through gender spectacles*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁴¹ Sargent, M. (1997) *How the women stayed at home*, cited in Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹⁴² Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹⁴³ Villagrana, D. (2002) *Kyoto Protocol negotiations: reflections of the role of women*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

Although in 2008 a number of countries' official delegations did include a relatively high proportion of women, including some in leading roles – for example, two thirds of Australia's representatives, and 42% of the UK's, including the head of the negotiating team, Jan Thompson, were female. Other countries with at least 40% female delegates included Bolivia, Finland, Norway and South Africa. But this level of representation is far from the norm: 46 countries' delegations did not include a single woman. While many of these were developing countries unable to send more than a few representatives, and which needed support to better represent their country's interests in the negotiating process, others included Luxembourg and Kuwait with 14 representatives.¹⁴⁴ Gender representation at COP15 in Copenhagen is covered in the next section.

Although female representation does not guarantee that gender issues will be properly taken into account, and conversely men may bring strong gender perspectives to the negotiations, the evidence suggests that key male negotiators are not making gender considerations enough of a priority, and that the best way to address this is to have more female representatives involved in the negotiations. However, given the current disproportional male representation in this area, it is vital that men are aware of and actively champion gender issues, rather than wait for gender equality in representation if gender issues are to be properly addressed at the negotiating table.

The existence of the Women Environment Ministers Network, which has taken a role in formulating gender sensitive statements at events that form part of the climate negotiation process¹⁴⁵, is positive, but by its nature lacks representation from many countries (although steps are being taken to address this), and is not a substitute for genuine gender considerations being integral to the negotiating process. Indeed, the group's tactic of issuing statements to try and gain recognition of neglected issues and viewpoints is similar to that of many civil society organisations that lack representation in the negotiating process.

Female representation at international climate change negotiations appears to receive most contribution from civil society organisations, with, at the COP3 negotiations and until recently, women leading many of the regional 'nodes' of Climate Action Network, the coalition of environmental non-governmental organisations (NGOs)¹⁴⁶. Such NGO delegations have tended to include a higher proportion of women because of their greater representation in the sector generally, particularly from host country organisations, which are likely to send several staff, rather than a single senior staff member, who is more likely to be male¹⁴⁷.

Explicit representation for consideration of women's perspectives is extremely low: at COP11 in 2005, there were just 28 representatives from only five women's organisations: LIFE, WECF, Native Women's Organisation of Canada, Coordinator of the Women's Programme of Green Earth, and Women's Cooperation Center Mashhad. Ulrike Röhr's analysis found that: "At the nine COPs examined there were a total of 23 representatives explicitly representing women's organizations, half as members of the larger NGO delegation and the rest as small women's delegations unto themselves."¹⁴⁸

¹⁴⁴ Calculated by WEN from UNFCCC (2008) *Provisional list of participants. Part one. Poznan: Conference of the Parties 14: 1-12 December 2008*

¹⁴⁵ *Network of Women Ministers and Leaders for Environment (2008) Meeting Summary. Network of Women Ministers and Leaders for Environment, UNFCCC COP-13 in Bali, Indonesia. December 11, 2008. Available: http://www.wedo.org/wp-content/uploads/nwml-meeting-bali-december-2008-_2_.pdf [24 July 2009]*

¹⁴⁶ Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹⁴⁷ Buckingham, S., Kulcur, R. (2009) *Gendered geographies of environmental injustice*. *Antipode*, 41, 4, 2009

¹⁴⁸ Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

Again, women played a key role in ensuring the effectiveness of work carried out by NGOs around the COP3 negotiations. Delia Villagrasa observes that: “It was women who ensured that NGOs worked together, despite their differences on some of the issues, and who ensured that debates did not get bogged down in detail and that coherent and strong messages went out to the world.”¹⁴⁹

However, while the relatively small number of women present appear to have had a considerable effect on the outcomes of the negotiations, whether as part of government or NGO delegations, it is important to recognise that they have a right to be there as a matter of gender justice, regardless of whether their presence is an aid to the effectiveness of the negotiations.



Vandana Shiva, international negotiator; outspoken and articulate proponent of ecological-feminism in the COP process
Photo: WEN 2009

4.2 National decision-making

Currently, only 19% of UK MPs are female¹⁵⁰. This figure is comparable with many other developed countries, for example the US where 17% of both senators¹⁵¹ and members of the House of Representatives¹⁵² are female.

The importance of female representation in decisions about national policies on climate change is two-fold. First, lack of female representation means that it is less likely that women’s interests will be adequately taken into account during decision making, meaning, for example, that steps are not taken to address problems in a gender sensitive way, and that policies may be introduced that are unhelpful to women, for example, by increasing their workload, exacerbating gender discrimination, widening inequalities or hindering female empowerment.

Second, there is evidence that developed countries with higher levels of female political representation have been most successful in reducing their carbon dioxide emissions. Of the 16 countries ranked by the UNDP as having high human development which had reduced their overall carbon dioxide (CO₂) emissions between 1990 and 2004, 13 had a higher proportion of female elected representatives than average (14.9%).¹⁵³ Whether or not this is significant is open

¹⁴⁹ Villagrasa, D. (2002) *Kyoto Protocol negotiations: reflections of the role of women*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁵⁰ Parliament.uk (2009) *MPs by gender*. Available: http://www.parliament.uk/mpslordsandoffices/mps_and_lords/gender.cfm [16 July 2009]

¹⁵¹ US Senate (2009) *Senators of the 111th Congress*. Available: http://www.senate.gov/general/contact_information/senators_cfm.cfm [16 July 2009]

¹⁵² US House of Representatives (2009) *Representative Offices*. Available: http://www.house.gov/house/MemberWWW_by_State.shtml [16 July 2009]

¹⁵³ Buckingham, S., Eli da Veiga, J. (2009) *Beyond Poverty: closing the gender gap as a mitigation strategy*. Conference paper given to the *Climate Change: global risks, challenges and decisions conference*. Copenhagen,

to debate, but given evidence already presented that women tend to be more concerned about environmental issues than men, it does not seem unreasonable to suggest that there is some basis for the correlation. Certainly changing the gender-balance of a group with responsibility for decision-making in a particular area has been shown to influence the outcome of the decisions, with female policy-makers tending to favour education and behaviour change measures over technological solutions¹⁵⁴.

However, equal representation is needed because it is just, and furthers human rights, regardless of any environmental gains it may bring. It is not the case that women should earn greater representation by their ability to secure environmental gains, despite evidence to suggest that better female representation would bring such benefits.

Furthermore, there are increasing concerns among some experts that the pressure to address climate change is leading to other issues, such as human rights and equality, being compromised or given less attention, rather than prioritised as part of the process of tackling climate change.

4.3 Decision making in other sectors

In the absence of adequate international agreement or national policies to ensure sufficient emissions reductions, the role of other sectors, especially certain businesses, in contributing to this goal could be considerable. Thus far it has been largely negative, with, for example, business lobbying weakening the Kyoto Protocol¹⁵⁵. As shown in Section Three, the power in such businesses lies predominantly in male hands.

The Women's Manifesto on Climate Change found that women represented only 17% of FTSE boardroom appointments, and constitute only 19% of scientists and engineers¹⁵⁶. But it does not necessarily have to be this way – examples from other countries show that this discrepancy can be quickly addressed. When the Norwegian government introduced legislation in 2003 which required companies' boards to include at least 40% women, the corporate sector resisted. But from just 6% female representation, the target was met ahead of schedule, with research suggesting that the policy had improved the "quality of the debate" and financial performance¹⁵⁷.

Such results are supported by events in Iceland in which the government nationalised two of the country's failing banks, which had only a single female executive between them. The male bosses were replaced by women, with a government minister commenting: "It's typical, men make the mess, then women come in to clean it up"¹⁵⁸. Meanwhile, in August 2009 it was announced that German Chancellor, Angela Merkel, was ranked the number one on the Forbes list of the world's most powerful women because of her role in leading Germany out of recession sooner than expected¹⁵⁹. And a similar sentiment was expressed recently by Deputy Leader of the Labour Party Harriet Harman, who pointed out that: "Women make up half the workforce of insurance companies and banks. Why shouldn't they have a say on boards as well?" She added that: "You get better decision-making in a team if it's a balanced team with women and men working

March 2009.

¹⁵⁴ Buckingham, S., Eli da Veiga, J. (2009) *Beyond Poverty: closing the gender gap as a mitigation strategy*. Conference paper given to the Climate Change: global risks, challenges and decisions conference. Copenhagen, March 2009.

¹⁵⁵ Villagrasa, D. (2002) *Kyoto Protocol negotiations: reflections of the role of women*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁵⁶ Women's Environmental Network/National Federation of Women's Institutes (2007) *Women's manifesto on climate change*. London: WEN/NFWI

¹⁵⁷ Reier, S. (2008) 'Women take their place on corporate boards'. *International Herald Tribune*. 21 March 2008

¹⁵⁸ Taylor, B. (2009) *The Fairer Sex*. London: RSA

¹⁵⁹ Smith, J. (2009) *What Forbes reveals about women and power*. *The Guardian*. 19 August 2009

alongside each other”.¹⁶⁰

It would be a simplification to suggest that including women where male-dominant management has failed will always be a solution, since token women acting in the same way as the men they have replaced will be ineffective, and women who have made their own way to such positions are often successful because they have ‘bought into’ the system and therefore will not always wish to challenge it. However, it is clear that a different approach and values are needed, and so the arguments for more gender-balanced decision-making seem clear.

Looking at specific sectors, European NGO Enerigia estimates that only 20% of EU energy sector employees are female, arguing that it is therefore unlikely that women’s needs and interests will be taken into account in energy provision¹⁶¹. For this reason, it has been argued that climate funding should also be made available for capacity-building, so that women are able to take advantage of climate-change-related finance¹⁶².

When it comes to science, the Intergovernmental Panel on Climate Change (IPCC), the international academic body for climate science, has been criticised for the lack of gender awareness or analysis in its work¹⁶³. For example, gender considerations were notably absent from the cross-cutting themes identified in the IPCC’s 2003 meeting report, and there has been little improvement in its most recent assessment: a quick search of the 2007 Synthesis report reveals not a single use of the word ‘gender’, and only one mention of ‘women’¹⁶⁴. This stands in stark contrast to other bodies of this kind which publish similar assessments of other key global issues, such as the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD), in which gender issues are given consideration¹⁶⁵.

A summary gender analysis of the COP15 process is given in chapter six which includes research on eighteen international organisations reports and information and their gender awareness.

4.4 Community responses to climate change

Figures suggest that more women are likely to be involved in community based projects to tackle climate change. For example, Every Action Counts, an initiative supported by the UK government, trained more than 900 volunteers to support local community organisations to take action to reduce their environmental impact. Of these, almost two thirds were women¹⁶⁶. Similarly, of Oxfam UK’s most active supporters, 60% are female¹⁶⁷.

¹⁶⁰ Naughton, P. (2009) *Recession? Blame it on the men, says Harriet Harman*. *The Times*. 3 August 2009

¹⁶¹ GenderCC (2008) *Gender, climate change and energy production and consumption*. Berlin: GenderCC

¹⁶² Skutsch, M. (2002) *Protocols, treaties, and action: the ‘climate change process’ viewed through gender spectacles*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁶³ Röhr, U. (2006) *Gender relations in international climate change negotiations*. Berlin: Life

¹⁶⁴ IPCC (2007): *Climate Change 2007: Synthesis Report. Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC

¹⁶⁵ IAASTD (2008) *International Assessment of Agricultural Knowledge, Science and Technology for Development: Global Summary for Decision Makers*. London: IAASTD

¹⁶⁶ Every Action Counts (2009) *Personal communication*, 16 July 2009

¹⁶⁷ Oxfam (2009) *Personal communication*, 23 July 2009



WEN Taste a Better Future event

Photo: WEN

While in many developing countries, women's local environmental knowledge and management skills can play a key role in adapting to climate change¹⁶⁸, in developed countries, women often take a lead role in environmental community activities, such as setting up local food projects, or helping their children's school improve its environmental credentials through the parent-teacher association.

Assumptions that women's participation at the grassroots level may be because of their tendency to work less outside the home should be questioned, due to the other work burdens women tend to carry, such as domestic work and childcare.

Oxfam UK suggests that their female volunteers' work for the charity tends to be of a practical nature, such as running fundraising events, rather than engaging in local political campaigning, which women may have less confidence doing¹⁶⁹. This is supported by a recent report by Girlguiding UK with the Fawcett Society which found that few girls or young women believed that the changes they wished to see in society could be achieved through engagement in politics¹⁷⁰. However, the World Development Movement, whose local supporters predominately focus on political campaigning activities, reports broad gender-balance among its local groups and individual activists¹⁷¹.

Given that less than one in five UK MPs are female¹⁷², it is perhaps unsurprising if women are reluctant, or feel less confident, to engage in institutional politics. However, women are well represented among more radical grassroots political movements, such as the Camp for Climate Action, which began in the UK in 2006, and has since attracted worldwide media interest and inspired similar events in countries including India, Ukraine, Canada, Australia and France. At a recent UK event in London in August 2009, gender issues were the specific focus of several workshops on the camp's programme, and one workshop leader commented on the high levels of attendance at these sessions.

Similarly, UK-based women-led grassroots group Climate Rush aims to raise awareness of climate change, "inspired by the actions of the Suffragettes 100 years ago, who showed that peaceful civil disobedience could inspire positive change"¹⁷³.

¹⁶⁸ Dankelman, I. (2002) *Climate change: learning from gender analysis and women's experiences of organising for sustainable development*, in Masika, R. (ed.) (2002) *Gender, development and climate change*. Oxford: Oxfam

¹⁶⁹ Oxfam (2009) *Personal communication*, 22 July 2009

¹⁷⁰ Girlguiding UK (2008) *Active citizenship: girls shout out! Political outsiders: we care, but will we vote?* London: Girlguiding UK

¹⁷¹ World Development Movement (2009) *Personal communication*, 20 August 2009

¹⁷² Parliament.uk (2009) *MPs by gender*. Available: http://www.parliament.uk/mpslordsandoffices/mps_and_lords/gender.cfm [16 July 2009]

¹⁷³ Climate Rush (2009) *Who are climate rush?* Available: <http://www.climaterush.co.uk/who.html> [2 September 2009]

4.5 Household decision-making

Globally, women hold key roles as household managers, often in addition to other roles such as child-care and paid employment. In developing countries in particular, this means that they often bear the brunt of adapting to climate change, as Section Two has demonstrated.

In households in developed countries, which currently have the largest role to play in tackling climate change, women have a fundamental role as household managers. Theirs is an important job since a large proportion of carbon dioxide emissions are generated from household activities – in the UK, around 27%¹⁷⁴.

As ‘change agents’, women can and do ensure that tasks such as recycling are carried out¹⁷⁵, and energy is used efficiently. As consumers, women are often responsible for the purchase of most of the food and other items such as clothing and household goods, all of which contribute to a household’s emissions. In a survey carried out by WEN and NFWI, 93% of the women surveyed said that they were wholly or largely responsible for buying food, 84% for buying clothing, and 82% for choosing household appliances such as washing machines¹⁷⁶.

Because women tend to be the primary carer for their children, and are also more likely to be involved in the care and education of others’ children, for instance through teaching (since 87% of registered primary school teachers are female¹⁷⁷) or child-minding, they also have an important role as environmental educators, with the potential to help the next generations live more sustainably. In the WEN/NFWI survey, 94% of the women surveyed said that they were trying to make their children or grandchildren aware of climate change and the actions they can take to tackle it¹⁷⁸.



Carmen Reynoso, with 2-year-old Johana, at a women’s support group at the Illinois Welcoming Center. Many immigrants far from their families find such groups to be a resource for improving their lives. PHOTO: John Gress/WPN for The Boston Globe

¹⁷⁴ Energy Saving Trust (2009) *How you can help*. Available: <http://www.energysavingtrust.org.uk/Your-impact-on-climate-change/Climate-change-explained> [16 July 2009]

¹⁷⁵ Buckingham, S., Reeves, D., Batchelor, A. (2005) *Wasting women: the environmental justice of including women in municipal waste management*. *Local Environment* 10, 4

¹⁷⁶ Women/s Environmental Network/National Federation of Women’s Institutes (2007) *Women’s manifesto on climate change*. London: WEN/NFWI

¹⁷⁷ *The Guardian* (2008) *Male teachers are crucial role models for boys, suggests research*. *The Guardian*. 30 September 2008

¹⁷⁸ Women/s Environmental Network/National Federation of Women’s Institutes (2007) *Women’s manifesto on climate change*. London: WEN/NFWI

However, while it is important to recognise women's work at the local and domestic level, there is a danger that this leads to women being further burdened by new initiatives or calls for behaviour change which in turn increase women's workloads, or reinforce gender stereotypes. If men were to take on a greater role at this level, outcomes could be further improved, and women would have more capacity to get involved in decision-making at other levels.

5. Gender at COP15 in Copenhagen

Globally and in the UK, as we have demonstrated, women have less influence in decision-making, are less likely to be elected, and are less likely to become national government scientists, heads of business or hold economic power. They have less secure land and resource rights and are more likely to experience poverty, especially in old age.

Women's Environmental Network argues that climate change adaptation and mitigation must not only achieve climate change objectives such as reducing vulnerability and increasing resilience to climate change disasters, but must also contribute to achieving key development goals including gender equality.

Development and climate change responses can only be equitable if they place women's empowerment and the tackling of gender inequality centre-stage. Opportunities to mitigate global climate changes must be gender sensitive to avoid worsening gender inequalities and be able to build on the powerful energy of women as agents for positive change.

5.1 The COP15 process

The COP15 process in December 2009 was organised by the Danish Government and the UNFCCC. WEN has analysed three significant areas to show how a gender sensitive approach to climate policy is not only vital for those women affected, but the only equitable way to ensure full involvement of them as stakeholders.

We analysed the gender balance of the leading 2,500 individuals representing their countries or organisations as parties and observers, scientific representatives and non-governmental leaders¹⁷⁹.

Female political leadership and representation by key negotiators and leaders at the conference was more significant than previous events but still just reached 22% of those analysed from UN's own data. The largest female constituent group was from civil society, representing the Inter Governmental Organisations and NGOs, at 37%. This group was the first to be excluded from the summit at the final crucial week because of lack of space in the Bella Centre in Copenhagen. Only 90 tickets were allocated on the final week from a possible 15,000 representatives accredited¹⁸⁰.

We have looked at the old forestry framework adopted at Kyoto in 1997, and its new REDD-plus addition showing how women's use of forests in the family and within a community is completely different from men's¹⁸¹.

Finally we have analysed a selection of the main documents, policies and strategies from the Danish Government, other countries and international observer organisations and agencies from a gender perspective. We analysed the policies and literature from 18 international climate stakeholders including the International Energy Agency, the World Wide Fund for Nature (WWF) and the Stockholm Environmental Institute. We specifically asked each organisation if they could supply us with their gender or women's policy¹⁸².

Then we undertook face-to-face interviews with 16 further organisations and government parties to the process. A summary of the responses reveals almost wholesale gender-blindness from a

¹⁷⁹ UNFCCC COP15 2009, Copenhagen registration data

¹⁸⁰ UNFCCC delegation communiqué to all accredited NGO leaders 14 December 2009

¹⁸¹ Principles adopted by the 'Engendering REDD Workshop' held 21-22 May 2009, Washington, DC, USA. Organised by IUCN (International Union for the Conservation of Nature) and WOCAN (Women Organising for Change in Agriculture and NRM) on behalf of Global Gender and Climate Alliance

¹⁸² Interviews carried out at the Bella Centre and Literature collected at the COP15 Summit between 10 and 18 December 2009

wide spectrum of key organisations. These organisations represent billions of citizens worldwide and are responsible for creating policies and economic financing and support for climate adaptations and mitigations globally.

Those organisations with a significant gender policy or working perspective tended to be active on the ground, NGOs and especially development organisations. Few of the environmental intergovernmental organisations analysed had a visible coherent or responsive gender strategy. It was of concern that mainstream organisations like the World Wide Fund for Nature had no gender awareness and yet played a key role in public awareness-raising of the issues to a global audience¹⁸³.

5.2 The REDD-plus framework

Part of the UN process adopted in Kyoto to support mitigation actions for climate change is the REDD agreement (Reducing Emissions from Deforestation and Forest Degradation) which aims to fund and prioritise policies for the sustainable management of forests around the world. It aims to create a financial value for carbon stored in forests and offers incentives for communities to invest in low-carbon paths for sustainable forestry. Three hundred million people live in forests worldwide and rely on them for food, fodder, fuel and medicine¹⁸⁴.

Women often have different roles with regard to forest resource management. They play different parts in planting, protecting or caring for seedlings and small trees, as well as maintaining woodlots and plantations on public lands. Men are more likely to be involved in extracting wood as a timber resource for commercial purposes and women will generally gather forest products for fuel, fencing, food for both the family and livestock and raw materials for medicines and the family¹⁸⁵.

Approximately US \$30 billion is expected to flow to communities under the REDD agreement in one year. Studies and analysis have already shown that in previous cases, cash is not distributed equally or equitably, and investments are unlikely to benefit women¹⁸⁶.

Gender and development organisations led by the IUCN at Copenhagen lobbied successfully to have a new policy, REDD-plus, accepted, at least in principle. The REDD-plus agreement was the only gender related agreement mentioned in the Copenhagen Accord. The original REDD agreement was absent of any gender analysis, or awareness of the different roles that women play in preserving and working in forests and how that affects them economically. The differences were not subtle but required a holistic, gender-aware perspective that was absent in all previous negotiations. The omission is an example of environmental policy gender-blindness.

Incorporating gender considerations into the REDD agreement aims to bring about holistic sustainability, requiring equitable access to the funds, increasing involvement by women in forest management policies and the integration of knowledge and experience of women. It acknowledges that women lack *de jure* right over land in the majority of developing countries denying access and equality, but play a significant stakeholder role in forestry as *de facto* users¹⁸⁷.

¹⁸³ *Face-to-face meetings with two female WWF staff as well as literature and policy analysis, December 2009 and January 2010*

¹⁸⁴ *Principles adopted by the 'Engendering REDD Workshop' held 21-22 May 2009, Washington, DC, USA. Organised by IUCN (International Union for the Conservation of Nature) and WOCAN (Women Organising for Change in Agriculture and NRM) on behalf of Global Gender and Climate Alliance*

¹⁸⁵ *Face-to-face meetings with two female WWF staff as well as literature and policy analysis, December 2009 and January 2010*

¹⁸⁶ *Principles adopted by the 'Engendering REDD Workshop' held 21-22 May 2009, Washington, DC, USA. Organised by IUCN (International Union for the Conservation of Nature) and WOCAN (Women Organising for Change in Agriculture and NRM) on behalf of Global Gender and Climate Alliance*

¹⁸⁷ *Agarwai, 2002, reported in IUCN publication on gender equality within the REDD and REDD-plus framework*

The new REDD-plus policy suggested by IUCN and others asks for the strategy to be re-designed on principles, international agreements and laws adopted by the United Nations women's equal access addressed by the Beijing Platform, CEDAW, MDGs, CBD, UNCCD, Johannesburg Plan of Implementation (WSSD), and Agenda 21¹⁸⁸.

5.3 Women's Representation at Copenhagen

Outstanding global women in the process who represented women positively included Ingibjorg Davidsdottir, director of the Ministry for Foreign Affairs in Iceland; Vandana Shiva, the noted Indian scientist; Mary Robinson, the former Irish President who spoke passionately about human rights along with former Norwegian Premier, Gro Harlem Bruntland; and Margot Wallstrom, vice-president of the European Commission.



*Ingibjorg Davidsdottir, Director, Department of Human Rights and Equality Affairs, Iceland was awarded one of the GenderCC commendations for her dedication to women's rights
Photo: WEN 2009*

Several categories of observer organisations also attended sessions of the COP and its subsidiary bodies. These included representatives of United Nations secretariat units and bodies such as UNDP, UNEP and UNCTAD, as well as its specialised agencies and related organisations such as the GEF and WMO/UNEP Intergovernmental Panel on Climate Change (IPCC). Observer organisations also include intergovernmental organisations (IGOs), such as the OECD and its International Energy Agency (IEA), and non-governmental organisations (NGOs) such as faith groups, development charities, business and environmental stakeholders.

The NGOs represented a broad spectrum of interests, and embraced representatives from business and industry, environmental groups, indigenous populations, local governments and municipal authorities, research and academic institutes, parliaments, labour unions, faith groups, women and youth. Constituency groupings emerged to facilitate interaction, and caucus groups met each day.

The full list of attendees is not available from the UNFCCC for Copenhagen at the time of publication and would represent more than 38,000 interested parties, but the lists are available of those who led the delegations and were granted full observer status. Two Women's Environmental Network representatives attended Copenhagen as members of the International NGO GenderCC, which had 90 representatives, while its director was one of the 1,288 NGO stakeholders with observer status.

¹⁸⁸ *Principles adopted by the 'Engendering REDD Workshop' held 21-22 May 2009, Washington, DC, USA. Organised by IUCN (International Union for the Conservation of Nature) and WOCAN (Women Organising for Change in Agriculture and NRM) on behalf of Global Gender and Climate Alliance*

WEN analysed each of the parties and their countries representatives from lists and data made available by the UNFCCC. The female attendance shows a significant increase on previous COP negotiations – some reporting as little as 7% female representation, with an overall average political leadership of 22% women attending the Copenhagen event.

Analysis of UN Stakeholders	Total Persons Represented	Female	% Female
Persons Leading National Government Climate Negotiations – by country	199	43	22%
Total persons nominated scientific experts – by country	1173	209	18%
Persons Leading Intergovernmental Organisations– with Observer Status	75	28	37%
Persons Leading Non Governmental Organisations with Observer Status	1,288	478	37%
Total persons in all leadership roles at COP15	2,495	758	30%

Source WEN, Calculated from COP15, December 2009 UNFCCC Roster of Leading Delegates

5.4 Literature, Information Exchange and Stakeholders Policy

The review of the major stakeholders’ literature and policy statements shows clearly the lack of gender sensitive policies, with only few of the organisations mentioning women in any form and with the majority not interested in any gender policies for climate change in the future.

Very few of the impressive case studies we looked at were gender aware until we interviewed women’s organisations themselves. These face-to-face qualitative interviews showed that grassroots NGOs, development organisations and those working or serving people directly are more likely to promote women’s projects and have written gender policies, but this was not mainstream by any means.

WEN undertook face-to-face interviews at Copenhagen with a variety of stakeholders to see how many, other than those already committed to women’s empowerment, had inclusive or gender-sensitive strategies, policies or articles reflecting how this is mainstreamed within the organisation. This research reveals how few governments or agencies understand the intrinsic link between women and society enough to mainstream it into their policies and efforts to educate public and stakeholders by making it visible, replicable and accountable.

The main public document distributed by the Danish Government to every delegate was a 160-page glossy brochure welcome from the Climate and Energy Ministry. With an opening statement from perhaps the most famous of Denmark’s female leaders, Connie Hedegaard, the Minister for Climate and Energy, and covering issues like transport, energy, work, business, and environmental studies, there is not one single mention of women or gender in any form in the document.

Summary of analysis of stakeholder information

<i>Stakeholder</i>	<i>Type of Information</i>	<i>Gender Policy Evidence or Promotion of Women as Agents for Change</i>
<i>Responding to Climate Change – Danish Government www.rtcc.org</i>	<i>160 page business, banking, science magazine main introduction for COP15, assorted welcome documents, leaflets and booklets</i>	<i>None</i>
<i>Energy efficiency - International Chamber of Commerce Commissions on Environment & Energy www.iccwbo.org</i>	<ol style="list-style-type: none"> 1) <i>17 case studies from energy enterprises</i> 2) <i>ICC Views on Water</i> 3) <i>Climate Change & Intellectual Property</i> 	<i>None</i>
<i>Kingdom of Morocco - UN Climate Change Plan</i>	<i>Moroccan Government Climate Plan various documents, leaflets</i>	<i>None</i>
<i>World Wide Fund-UK www.wwf.org.uk</i>	<i>The New Copenhagen Climate Deal – 48 page guide to the negotiations</i>	<i>None</i>
<i>International Energy Agency www.iea.org</i>	<i>Worldwide engagement for sustainable energy strategies – overview document</i>	<i>None</i>
<i>World Business Council for Sustainable Development www.wbcsd.org</i>	<i>Sustainable Consumption – Facts & Trends 38 pages from a business perspective incl.14 case studies</i>	<i>None</i>
<i>International Fund for China's Environment (IFCE) www.ifce.org</i>	<i>China's Responses to Climate Change</i>	<i>None</i>
<i>JRC Scientific & Technical Report – European Commission www.publications.europa.eu</i>	<i>A New Scheme for the Promotion of Renewable Energies in Developing Countries</i>	<i>None</i>
<i>International Institute for Sustainable Development www.iisd.org</i>	<i>Better Living for All – Sustainably IISD UNFCCC Policy Briefing Pack on the negotiations, including briefing on REDD, Land Use & Forestry</i>	<i>None</i>
<i>OECD – Organisation for Economic Co-operation & Development & IEA International Energy Agency www.oecd.org www.iea.org</i>	<i>Reporting & Recording Post 2012 Commitments, Actions & Support – 44 page summary paper to assist stakeholders from staff at the Secretariat & summary documents of all OECD's work on climate change</i>	<i>None</i>
<i>United Nations Environment Programme – UNEP www.unep.org</i>	<i>Our Planet Magazine Special Edition on Climate Change & Copenhagen includes articles by Ban Ki Moon, Gordon Brown, Hilary Clinton etc.</i>	<i>One mention of women as “The most vulnerable – the poor, and especially women – will bear the brunt.” p28 article on the Grassroots by Tasneem Essop from SA</i>
<i>World Future Council www.worldfuturecouncil.org</i>	<i>Cultivating the Future: Food in the Age of Climate Change 20 page document assessing food policies</i>	<i>None</i>
<i>United Nations Development Programme Barbados & the OECS www.bb.undp.org</i>	<i>Overview of modelling Climate Change: Impacts in the Caribbean Region with contribution from the Pacific Islands</i>	<i>None</i>
<i>Israel Ministry of Environmental Protection www.environment.gov.il</i>	<i>Coping with Climate Change in Israel Special Issue for Copenhagen</i>	<i>None</i>
<i>International Family Forestry Alliance www.familyforestry.net and The Global Alliance of Community Forestry www.gacf-online.com</i>	<i>Family & Community Forests – a global partnership for sustainable development and a healthy climate</i>	<i>None</i>

<i>IFOAM – International Federation of Organic Agriculture Movements</i> www.ifoam.org	<i>Contribution of Organic Agriculture to Climate Change Adaptation in Africa, Food Security & other documents</i>	<i>Widespread gender policies recognising “the critical role of women throughout the entire food chain, as farmers, consumers and mothers.”</i>
<i>UNA-UK – United Nations Association UK</i> www.una.org.uk	<i>The Road to Copenhagen – key landmarks & active citizenship 22 pages on the challenge</i>	<i>None</i>

<i>Face-to-face interviews carried out on gender policy in Copenhagen</i>		
<i>Stakeholder Interviewed</i>	<i>Policy contribution</i>	<i>Gender Policy Evidence or Promotion of Women as Agents for Change</i>
<i>International Emissions Trading Association</i>	<i>Carbon mitigation technology, no female representatives or gender agreements at COP15</i>	<i>No specific policy but some awareness. His personal belief “if you have a women centred solution, you increase the probability of success.”</i>
<i>ABANTU for Development Ghana West Africa Office</i> www.abantu-rowa.org	<i>Influences development policies from a gender perspective in Africa, wants mainstreaming of gender analysis in cc system</i>	<i>Organisation wholly committed to women’s empowerment not from the rubric of vulnerability, women have contributed</i>
<i>CARE USA</i> www.wecare.org	<i>Provide dignity & security services that reach 55 million worldwide</i>	<i>Women at the heart of their programme. “Lack of Gender Equality is the underlying cause of poverty”</i>
<i>NGO Forum on the Asian Development Bank</i> www.forum-adb.org	<i>Campaign specifically for openness and equity of the ADB and its projects</i>	<i>Strong and specific gender policies and projects including support of many hundreds of women’s ngos</i>
<i>Government of Senegal, Office of the President</i>	<i>45% of the 100 strong delegation were women. Senegal President committed to parity at all levels of public appointments.</i>	<i>No specific CC policy but now considering. Part of the Green Wall project with 17 countries that directly affects women. See empowerment of women’s NGOs as important.</i>
<i>Stockholm Environmental Institute</i> www.sei.se	<i>Research on sustainable development issues to inform policy development, & specifically on vulnerable groups</i>	<i>Have a programme looking at gender and development but not climate yet</i>
<i>Confederation of European Private Foresters</i> www.cepf-eu.org	<i>Umbrella association of national forest owner organisations in the EU serving 16 million owners of 50% of the forest area of the EU</i>	<i>None but used to have a sub group on gender</i>
<i>Committee on Earth Observation Satellites</i> <i>Tuvalu Delegation</i>	<i>Observations of earth and co-ordination of images</i> <i>Help Tuvalu survive sea level rise. “Women are Leaders in Tuvalu”</i>	<i>Awareness of gender but no specific policies</i> <i>Yes specific workshops, policies and understanding of women’s effect on agriculture, cooking and water collection</i>
<i>Seoul Climate Action Partnership</i>	<i>Sustainable Development in Seoul</i>	<i>No specific policies for women but awareness</i>
<i>European Renewable Energy Council</i> www.erec.org	<i>Represent renewable sector at EU level</i>	<i>No awareness or policy for gender sensitive energy strategies</i>
<i>British Council</i> www.britishcouncil.org	<i>Spreading the message of climate change and networking working closely with DIFED on development programmes overseas</i>	<i>The British Council work in the areas of gender and the development of women’s rights but also more broadly in projects which are concerned with equality issues.</i>

<p><i>Centre for Clean Air Policy</i> www.ccap.org</p> <p><i>Wetlands Institute</i> www.wetland-sinstitute.org</p> <p><i>International Trade Unions</i></p>	<p><i>Climate policy think tank working with NGOs at international level</i></p> <p><i>Conserve wetland ecosystems for biodiversity and people who depend on them</i></p> <p><i>Training workers on climate change solutions</i></p>	<p><i>No policies or organisational awareness of gender</i></p> <p><i>Organisation has a statement on how to work with women and recognise women globally as the main water collectors</i></p> <p><i>Yes working with women, especially in developing countries</i></p>
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5.5 GenderCC and gender constituencies' statement

It will take a huge conscious effort on behalf of many leaders to pull together a viable, legally binding outcome from Copenhagen during the next year. The core value that was missing from this and all the outcomes is the lack of prioritising of those most vulnerable and most affected, most notably the poor, who are statistically mainly women.

Just as important, and equally missed so far by politicians and environmental organisations, is the powerful potential that women have as active and ecologically powerful citizens and agents for change, as mothers, consumers, farmers, and equal partners, who should be involved in forming solutions in every possible way. This realisation has united the environment, gender and development movements. Women, as positive agents for change and as primary carers of the small-scale economies necessary for communities to succeed, are undervalued and also ignored. However, they are the group with the greatest potential to initiate change from the grassroots.

It would be foolish indeed if this intergovernmental forum failed to include a gender sensitive mainstream framework for a successful outcome after all the lessons of REDD. The difficulty is that gender-sensitive policies have to address a huge imbalance in equality of access, legal protection and local custom primarily suited to males. If equality is a real goal, then these wider issues must be on the agenda.



Ulrike Roehr and Gotelind Alber co-ordinate gender caucus groups and events at COP15, December 2009
Photo: WEN

GenderCC and the other gender constituencies agreed a statement together summarising their main concerns after Copenhagen.

“Millions of people around the world are very frustrated with the poor outcome of Copenhagen. These people need to be given the possibility to take individual action, starting to make a difference for the climate at a local and national level. And global leaders need to regain trust

of their constituencies, by coming with a proposal to strengthen the UN mechanisms for global climate protection. It remains unacceptable that heads of state continue to present global climate protection as a cost for their country, instead of the only solution for humankind, and, a great opportunity to transform towards sustainable, low-carbon, transparent, democratic, economies. Women want to play a crucial part in this transformation.

We therefore call for

- *increasing the number of women chairs in the UNFCCC*
- *increasing access for women to existing mitigation and adaptation funds*
- *increasing access for participation of women and men from all sectors in national and global climate policies*
- *strengthening a commitment to prioritize the most vulnerable, and strengthening gender-sensitive approaches in the draft Mexico agreement.”*

6. Women as Agents of Change: Positive Climate Change Actions

Women can be either empowered or disempowered, depending on a number of socio-economic factors in their local communities. When women are positively empowered, extraordinary solutions are possible. Across the globe, WEN found positive stories where women are recognised as co-creators, formulating on-the-ground strategies designed to solve multiple problems.

Often, climate-related solutions can also have several positive effects and benefits such as those affecting health, carbon reduction, personal and family relationships, and engender wider economic gains. Projects that bring communities together in a positive way have a knock-on effect in the wider community, often stimulating further actions and awareness, new business opportunities and increased community cohesion.

These projects and the extraordinary women driving them have emerged and flourished *despite* the lack of awareness and mainstreaming of gender-sensitive environmental strategies in the UK and internationally. Innovation and voluntary labour have stretched the imagination and helped create solutions that are practical, multi-faceted, accountable, sustainable and viable in the long run.

If industry, government and inter-governmental bodies adopted a significant focus on gender strategies like these, whole communities would be affected from the ground up. The very poorest and most vulnerable would become noble champions of the new perspective of sustainable living within our means and dividing our resources equitably.

In order to achieve climate justice for women, stakeholders need to value and recognise the powerful effect that gender mainstreaming could have on some of these problems and solutions.

6.1 Cooking and alternative energy sources

Project Gaia is based in Ethiopia, Nigeria and Brazil, and is a success story which has directly affected women in many ways. The development of clean cooking stoves has been a target for many years, as an estimated three billion women cook with smoky stoves across the poorest regions of the world.

More than 1.5 million women die as a direct result from smoke-related lung diseases each year, and poor health is common due to indoor air pollution. In smoke-filled kitchens, women and

children can breathe smoke equivalent to three packs of cigarettes a day. Furthermore, wood is in short supply, while gathering fuel increases desertification.

Gathering wood is more dangerous for women and children in the conflict zone of Teferiber Refugee Camp, in Eastern Ethiopia and other war torn regions, where rapes and attacks are commonplace amongst women and girls leaving the camp for hours to collect wood.

Project Gaia uses alcohol fuels created by wastes such as sugar cane residues that would otherwise cause environmental damage when being burned on the fields or by deoxygenating nearby rivers. The alcohol-fuelled CleanCook stove requires no wood, charcoal, or kerosene, saving between 2.5 to 17 tons of carbon dioxide equivalents (CO₂e) and other gases per year, depending upon whether the stove displaces non-renewable biomass or a mix of fuels.

The fuel is made and delivered directly to the camps saving women many hours of labour and creating green jobs locally. The project won the Energy Globe World Award in 2008 and is being replicated with locally sourced fuel in several countries.

With the time saved from gathering, women are able to go to school, visit the health clinic, start small businesses, and care for their children.

Now I can go to the adult classes in the school because I have more time since I don't have to collect wood. And the stove cooks faster. —Shimelba camp resident

I like the CleanCook very much. Before we had this stove, my two daughters collected wood three days each week. They would make two trips each time, from morning until 7 p.m. at night. —Kebribeyah camp resident

Now I gather fuelwood one time a week and this gives me more time to work in my garden raising cabbage, sweet potato, and other vegetables to sell at the market. —Bonga camp resident

6.2 The Maya Tree in South America

Maya Nut is also called Ramon Nut, Breadnut, Ojoche, Ojite, Ojushte, Ujushte, Capomo, Pisba waihka and Masica. It was once abundant throughout Central America but is now highly threatened and even extinct in parts of its range due to cutting for firewood and to plant corn. Women in South America are in the forefront of the movement to publicise and protect this valuable tree with sustainable projects.

Maya Nut is a 100% organic, non-GMO wild-harvested forest product which grows naturally in fertile rainforest soils. It is much higher in many vital nutrients including antioxidants than foods grown on farmed soils. The Maya Nut is extremely high in Fibre, Calcium, Potassium, Folate, Iron, Zinc, Protein and Vitamins A, E, C and B. A tree can produce more than 52lbs of food each year.

As a food, it is extremely versatile and can be used in a wide variety of sweet and savoury dishes. Maya Nut can be used fresh or dried, roasted or raw in over 80 recipes which have been developed over the past 6 years by The Equilibrium Fund staff and workshop participants. The fresh seeds can be cooked and eaten or can be set out to dry in the sun for future use.



PHOTO The Equilibrium Project

Women are the primary beneficiaries and primary protectors of the Maya nut programme and experience has shown that improving conditions for women results in improved conditions for the entire family. Indeed, women participating are healthier, have higher self-esteem and are more concerned with rainforest conservation and reforestation. These women gain confidence that they can solve family and community problems without outside help.

One acre of Maya Nut forest can sequester approximately 40 tons of carbon over 20 years. For \$500 per acre per year the Equilibrium Fund reforest degraded land with Maya Nut trees to offset carbon inputs, provide high quality habitat for birds and wildlife, protect vulnerable watersheds and feed impoverished families.



Dry Maya Nut seed can be stored for up to 5 years. This makes it an excellent food for regions with frequent drought and food insecurity.

PHOTO The Equilibrium Project

CASE STUDY: Extraordinary Women

Annelies Henstra

*For many years, Annelies Henstra was a lawyer and researcher and lecturer in law. Seeing Al Gore's *An Inconvenient Truth* made her think about how she could use her knowledge to help address climate change, and she concluded that the fundamental problem with society which has led to the problem is that people have lost contact with nature. She met the director of a Dutch think tank, and together they developed this thinking, noting that children in particular have become alienated from nature. Children need to interact with nature for their healthy development, environmental awareness and quality of life.*

*They concluded that children should have outdoor rights, and that access to nature should be a new human right, specifically a children's right, and have started calling for this in the UN Convention on the Rights of a Child. The project started as a pilot for the think tank, but Annelies has now secured funding from the IUCN and support from the Princess' foundation in the Netherlands. She has produced a document called *The Child's Right to Nature* (available at www.waarde.nl) and plans to work with Dutch programme Naturewise on practical nature work with children.*

6.3 Climate action in the UK

In the UK, women have organised actions to reduce their climate impact, and have instigated ingenious and interesting methods that have since been accepted worldwide, such as the fair trade movement.

Women in the UK spend more time shopping than men, and make the majority of purchases that have a direct impact on climate change, such as food, clothing and household goods¹⁸⁹. They spend in excess of £400 million more than men, while research has repeatedly found that women have greener attitudes and are more likely to buy fair trade purchases. They are 12% more likely than men to purchase green products and services and 10% more likely to listen to what companies say about their impact on the environment¹⁹⁰. Organisations such as WEN aim to empower women to use this financial power to support and reward green business and innovative climate solutions.

Although women are significantly under-represented in political parties, business and green organisations, women such as Franny Armstrong (director of "The Age of Stupid"), Tamsin Omond (founder of Climate Rush) and Eugenie Harvey (director of the 10:10 campaign) are at the forefront of some of the most creative and positive initiatives to educate the public. Meanwhile, thousands of unknown women of all ages throughout the UK are also doing their bit – campaigning, reducing their impact on the environment, educating, inspiring and challenging others. Furthermore, women are more likely than men to be involved in community-based projects to tackle climate change, such as WEN's Climate Club and local food projects in the UK.

Almost twice as many female as male volunteers were trained by UK government initiative Every Action Counts to support local community organisations to take actions to reduce their environmental impact¹⁹¹.

¹⁸⁹ Office of National Statistics Expenditure Food Survey 2006

¹⁹⁰ Emap Advertising "The Inside...on the Environment" Feb 2007; Ipsos Mori Climate Change Survey Sept 2006 and others

¹⁹¹ Every Action Counts (2009) Personal communication, 16 July 2009; Energy Saving Trust (2009) How you can

6.4 Women's community responses to climate change

Girlguiding UK

Girlguiding UK is the largest organisation for girls and young women in the UK. With size comes enormous potential – and responsibility – to provide opportunities for girls and young women to voice their opinions on the issues that affect their lives; few of these issues are more pressing than climate change.

Be a Climate Champion – an initiative with Friends of the Earth as part of Girlguiding UK's *Changing the World* project – gave girls and young women the opportunity to test a range of ways to adopt a carbon-sensitive lifestyle and report back with an insight into their experiences. Brownies, Guides and Senior Section members of Girlguiding UK trialled a selection of 10 measures, which focused on three key areas: transport, heating and electricity. More than 1000 girls and young women around the UK took up the challenges, which ranged from switching off electrical appliances to finding out how to install solar panels at home.

Three hundred and fifty-eight girls took on the *pedal power* challenge to walk or cycle to school every day, and more than three-quarters of the girls convinced their families to get involved too. In undertaking this challenge, they found that practicality was one of the major barriers but in some cases it was something that they could overcome. The 1st Pin Brownies in Hertfordshire discovered that the local primary school had no secure area for bikes. The Brownies rallied the school councillors who decided to raise the money to help the school build a bike shed.

More than 500 girls and young women took up the *There's a draught in here* challenge, learning about the effects of draughts and increased indoor heating on the environment. They found the areas at home and in their meeting places where heat was escaping and made recycled draught excluders to reduce their reliance on central heating.

In testing the 10 solutions, Brownies, Guides and Senior Section members saved more than 200 tonnes of CO₂ emissions throughout the project.

The feedback from the girls and young women showed that the largest barriers to participation in a greener lifestyle did not come from issues of cost or lack of enthusiasm but from the difficulties in accessing information to enable people to action their good intentions. The Girlguiding UK and Friends of the Earth project highlighted the fact that girls belong to far-reaching and influential networks. By engaging girls and young women in the UK in tackling climate change, the actions of a relatively small number can have a ripple effect throughout their communities, their country and their world.

CASE STUDY: Extraordinary Women

Kirsten Downer

Kirsten Downer is involved in various local community activities which help fight climate change on a local level. She sees climate change as a symptom of the wider malaise – a disconnection from self, nature and other people, exacerbated by global free market capitalism. This concept of systemic global malaise can seem too scary and big to tackle, but she has found that because all the issues are interconnected, helping fix one aspect simultaneously helps fix the others. To put it another way: decreasing her carbon emissions has increased her quality of life. Growing her own food has been fun, therapeutic and saved on some food miles - and got her talking to her

help. Available: <http://www.energysavingtrust.org.uk/Your-impact-on-climate-change/Climate-change-explained>

neighbours, inspiring some of them to get into plants and wildlife too. She now knows all of her neighbours, and her communal block is starting to feel much more communal.

This 'community-building' ethos inspired Food up Front, a south London enterprise dedicated to encouraging people in London to grow some of their own food. Kirsten has signed up to be one of the Food up Front 'reps' who help show people starting out how to sow some basic crops and give them a bit of moral support.

She is also involved in a local Transition Town movement here in South London, which she helped to found. She is attracted to the transition concept because it's pragmatic, positive and works with the grassroots. Rather than 'protesting against' something, it is about creating positive alternatives. So far, her group has shown a few films screening events to raise awareness among the community about the issues of peak oil and climate change. Their first film screening was mobbed, which shows the local level of concern need for information.

CASE STUDY: Wimbledon Park Primary School

Wimbledon Park Primary School has a strong sustainability focus, and has recently become a flagship school under the Food for Life Partnership, which has seen the school starting to produce some of its own vegetables and herbs, which are used in the school kitchen, reducing food miles to metres. The support for this came in part by parents, with the Parent Teacher and Friends Association, where women make up most of its most active members, building raised beds for vegetable production, raising funds for a greenhouse and digging a pond. In addition, a teacher with skills and a passion for gardening has allowed the project to get off the ground, with her running a gardening club for the pupils.

Dee Russell, head teacher at the school says: "Children shouldn't be underestimated. They often have a much greater understanding of what is going on in the world than they are credited with, and have some very good ideas."

Women reducing food miles

South East Essex Women's Environmental Network group has begun a project in Leigh-on-Sea, which aims to develop an allotment for the community, inviting local people to share the space and its produce, particularly those who are socially isolated, single parents and ethnic minority groups. The group welcomes all who want to experience growing their own food but who lack the confidence or opportunity to do so.

After clearing the overgrown site and building the soil with locally sourced manure, the group is managing the plot using organic and permaculture methods. The group holds regular open days and is now harvesting food which is distributed among those involved in the project, reducing the climate change impact of their diets.

Cultivating the Future

Women living in poverty in the UK are lucky if they live near an affordable source of decent quality fresh food, and even luckier if it's sustainably produced. So for the past decade WEN has been supporting women's groups to grow their own food: food that is healthy, fresh, organic and local. The project started when the organisation, based in the Borough of Tower Hamlets in London's ethnically diverse East End, was approached by the local Jagonari Women's Centre for

support to secure inner city space to grow traditional Bangladeshi vegetables. WEN found that there was very little help out there for these groups, and developed the *Cultivating the Future* project in response.

As the project developed and new groups started, the women involved have realised other health, social and educational benefits. The projects are a chance for people to reconnect with nature and literally get back to their roots, growing traditional vegetables from their homelands. And there are wider benefits for the community: people getting to know their neighbours and thinking about sustainability issues.

Since it started, the project has set up the *Taste of a Better Future* national network of community food growing projects, holding popular Culture Kitchen events that allow women from different groups to come together and share their ideas and experiences whilst enjoying the shared fruits of their plots. Recently, *Getting to the Roots*, a new programme to train volunteers to support new and existing groups has been praised for empowering its participants with the skills, knowledge and confidence.



Cultivating the Future: WEN food growing campaign
Photo: M Gittleson for WEN

Nurses working for a greener health service

The UK's National Health Service (NHS) is the largest public-sector contributor to climate change in England, with a portfolio of buildings that includes both large general hospitals and smaller local health centres. There is huge potential for the NHS to reduce its environmental impact both through new building projects and the modernisation and refurbishment of existing centres. Such change would enable the NHS to reduce its emissions, and also save money and create positive health-enhancing environments that have a major impact on the care environment of patients and service users.

Nurses have the potential to influence the decision-making process relating to their working environment as well as to take action to reduce their organisation's carbon footprint by taking the lead in small improvements and encouraging others to change their behaviour. Switching off lights and computer terminals can reduce energy costs and associated emissions; displaying information about why energy consumption is important and disposing of waste correctly are just a few examples of effective action.

In one NHS Trust in Liverpool, a nurse has taken on the role of environment champion in her team. She has provided input on all environmental issues at the Trust and liaises regularly with the Environment Agency and the Carbon Trust. A new hospital is being built in the centre of a neighbouring park while the old site is being demolished and regenerated into parkland. One of her tasks has been to influence the future design of the hospital and to ensure that it is an

environmentally friendly building. Attending sustainable development meetings has enabled her to ensure that the new hospital has a low impact on the environment which, it is hoped will help to encourage patients and visitors to adopt healthier lifestyles. The new building will incorporate flexible layouts that meet the needs of staff and patients/service users and good design that optimises efficiency, comfort and therapeutic care.

The Women's Institute

The Women's Institute has created several education projects which have sought to tackle members' impact on the climate, as well as raise awareness about the problems and the way they impact on women in other countries. In 2007, 10,000 members took a challenge to save 20% of their carbon emissions, saving the carbon equivalent to driving around the world 2,300 times.

The WI has also run projects in local communities, establishing Eco Teams to assist households in reducing their waste output. It has focused on reducing food waste through the Love Food Champions project and made sure that its 205,000 members are aware of how climate change affects others across the world through the Women Reaching Women project.

CASE STUDY: *Extraordinary Women*

Grace Onions – Saving the planet from the bottom up!

Grace is one half of the enthusiastic team/committee/local group that is Croydon Real Nappy Network (CRNN). She and her good friend Kat are passionate about cloth nappies, and pretty much anything reusable and/or made of natural materials, which can benefit or protect the planet, instead of the disposable option. Cloth nappies impact positively on reducing a carbon footprint in lots of ways, from manufacture (not dependent on fossil fuels) and use (natural materials, healthier) through to disposal (can be used numerous times, will biodegrade readily).

They know from experience just how easy it actually is to use cloth nappies. CRNN's aim is "Promoting modern reusable nappies in the London Borough of Croydon by providing impartial and useful information about using washable nappies to prospective and existing cloth nappy users. They want to dispel some of the myths and encourage people to try using cloth nappies. She also maintains the Real Nappy Exchange for WEN – a national and international database of people wishing to buy, sell or donate all kinds of cloth nappies and related accessories.

For many years now, she has been committed to reducing our impact on the Earth, its wildlife and environment, avoiding synthetic and harmful chemicals - all toiletries and detergents were replaced and food changed to organic – and living the now-familiar mantra of "Reduce, Reuse, Recycle" long before it became popular.

Grace become involved with several other local groups, as well as helping out at her daughter's schools and Heathfield Ecology Centre. Her year is filled with events at fairs and in the town to raise awareness of how our actions can make positive change, both locally and globally. Climate change may have been around since the birth of our planet but humans have only been here a few short millennia. Our selfish and irresponsible actions are exacerbating a natural phenomenon, to the detriment of all. She is proud to be able to show others that there are alternatives out there, which

will help preserve the huge variety of life on this Earth.

6.5 Fair Trade: The People Tree Project

More than 80% of producer partners working for the UK ethical clothing company People Tree's producer partners are women. Through working, women are improving their position in the economy and power to make choices. Better earnings, training and self confidence help women to take leadership roles in their workplace and community and to promote gender equality in society and equal rights for women.

Eighty-three per cent of People Tree partners and consumers supported the statement that People Tree is committed to gender equality in terms of pay and empowerment. Women are involved in the decision making process. All of People Tree's producers pay their female and male producers equally and this has knock on effect with increase confidence, social equality, health, literacy and more decision making powers at home and locally.

For example, we provide training to artisans and their organisations so they can improve their skills, and strengthen their businesses and social impact. And we regularly make 50% advance payments on orders, to help farmers and producer groups to finance Fair Trade. People Tree put money into local communities too, like in Kumbeshwar Technical School, Kathmandu, where they help fund education for children who would not otherwise have access to education.

The company also allows enough time for production by hand, which is very rare in this world dominated by fast fashion. Each group that they work with is unique. Many are founded specifically to deal with a crisis or social issues in a particular area or community.

So, one group promotes livelihoods, agricultural development and seed banks for indigenous Peruvians, another empowers physically disabled people in Kenya, and yet another provides vital income to hand-weavers in rural Bangladesh. Incomes are doubled on average, key changes put place help develop these communities – and their self-esteem.

Inspirational groups like these are transforming lives through Fair Trade partnerships. The fact that they provide us with beautiful alpaca knits, intricately-crafted jewellery, and delicate silks is an incidental bonus.



Contemporary use of traditional skills at People Tree Photo: People TreeProject

7. CONCLUSION AND POLICY RECOMMENDATIONS

This report shows how climate change is a gender issue, and must be addressed as such. Climate change disproportionately affects women because of existing gender inequalities, yet globally, women make a smaller contribution to climate change, and despite their crucial role in tackling and adapting to climate change, women are systematically under-represented in global and national decision-making about how the climate crisis should be addressed.

In order to address this injustice, action must be taken on three fronts:

- **Gender-sensitive strategies to mitigate climate change.** While some degree of global warming is now inevitable, and indeed has already begun, the more radical the cuts in emissions made in the next few years, the better the chance there is of limiting the negative effects of climate change. Climate change has a particular impact on women and it is essential therefore that gender is taken into account in planning mitigation strategies.
- **Addressing gender inequality.** The disproportionate impact of climate change on women is largely due to gender inequality which can be addressed. While climate change is an urgent problem, and inequality cannot be completely eliminated overnight, until it is addressed, women will continue to suffer disproportional climate injustice. As shown in this report, gender equality is also likely to lead to better strategies to tackle climate change.
- **Gender-sensitive strategies for adapting to climate change.** Given the specific impacts of climate change on women, it is vital that adaptation strategies adequately incorporate gender considerations.

As has been argued in this report, the most effective way of ensuring that all three of the above priorities are met is increasing the representation of women in decision-making bodies, particularly at the national and international level.

Below policy recommendations are given for each of these priorities.

7.1 Gender-sensitive climate change mitigation strategies

UK government

The current economic ‘crisis’ can and should be an opportunity for the UK government to reconsider how we can better address inequality and environmental damage, starting by encouraging a drop in consumerism and a move towards an economy less focussed on growth and more on meeting people’s needs, rather than urging us to consume more.

The UK government should introduce progressive policies to reduce greenhouse gas emissions by at least 40% (based on 1990 levels) by 2020 and aim for decarbonisation by 2050, without resorting to offsetting emissions through carbon trading. These policies should reduce inequality, including gender inequality, by:

- Prioritising household energy efficiency, with particular attention given to the lowest-income households.
- Investing in walking and cycling, and ensuring efficient, affordable and safe public

“One corollary of gender vulnerability is the importance of women’s participation in any planning process for adaptation to climate change.”

Human Development Report 2007/08. Fighting climate change:

transport.

- Introducing fiscal measures to radically reduce the emissions generated by the aviation industry.
- Supporting environmental education and pro-environmental behaviour change as well as pursuing technological solutions to mitigate climate change.

International negotiators

- Agree an equitable global deal with clear targets and timelines to reduce greenhouse gas emissions sufficient to give a reasonable chance of keeping warming at or below 2°C.
- Revise or replace the current climate change financing mechanisms, such as the Clean Development Mechanism, to finance projects that are led by, and benefit, women.

7.2 Addressing gender inequalities

UK government

Developed country governments, including the UK, should:

- Look at ways to reduce or eliminate the disproportionate number of women living in poverty, for example by ending the gender pay gap, supporting women into adequately paid employment, providing a benefits system that acknowledges unpaid caring work, and improving the pay and prospects of part-time work.
- Remove and replace policies which reinforce gendered roles, such as the disparity between maternity and paternity leave. More flexibility in parental leave may mean that fathers are able to spend more time with their children and take on greater caring and domestic responsibilities, and that women face less pressure to choose between paid employment and having a family, and less discrimination in the labour market.
- Ensure gender equality in political representation, and in international negotiations on climate change, ensuring that all negotiators have a track record of promoting gender equality and equity, and understand the intersection of gender and other inequalities.
- Invest in capacity building projects, which equip women to take on decision-making roles.
- Implement strategies to ensure women engage with national politics and are able to make their voices heard.
- Raise awareness of gender and equality issues, including the gender dimension of climate change.

Overseas development assistance and climate finance must be assessed to ensure that women and girls are not disadvantaged. Provision should be made to assist developing country governments in progressing towards gender equality as appropriate, such as by:

- Ensuring gender equality in education, including survival skills. In countries affected by flooding, for example, this might include swimming, tree climbing, and risk management.
- Seeking to challenge expectations regarding nutritional inequalities within households, responsibility for household tasks, and childcare.
- Ensuring that women have equal legal status, rights to own land and access other resources.
- Recognising and supporting opportunities, such as unavoidable male migration, for women to take an increased role in decision-making.
- Commissioning research and collecting gender disaggregated statistics in order to better understand the impacts of climate change on men and women, and assess progress towards the elimination of gender inequality.

7.3 Gender-sensitive strategies for adapting to climate change

“The integration of adaptation planning into wider poverty reduction strategies is a priority. Successful adaptation policies cannot be grafted on to systems that are failing to address underlying causes of poverty, vulnerability and wider disparities based on wealth, gender and location.”

Human Development Report 2007/08. Fighting climate change:
Human solidarity in a divided world

UK government

Provision, additional to current development assistance, must be made to help developing countries adapt to the effects of climate change in gender-sensitive ways. Many of the policies also relate to national UK strategies for health and communities, especially in times of disaster and climate chaos.

This should include:

- Increasing female participation in all areas of decision-making relating to adaptation to climate change.
- Ensuring emergency provision takes into account women’s vulnerabilities, including ensuring that warning systems reach all members of the community, and shelters take into account the needs of women.
- Addressing the health and nutritional inequalities which make women most vulnerable to the effects of climate change. These developmental goals should not be neglected with the focus on climate change.
- Recognising women’s knowledge of the environment and natural resources, and incorporating this knowledge into adaptation strategies.
- Providing aid and climate finance for climate change adaptation projects that include women in their design and planning, and consider and seek to eliminate any additional burden on women.
- Making provision for appropriate technology transfer in ways that benefit, rather than increase workloads for, women and include gender targets for green collar jobs.
- Ensure that women have equal access to up-to-date information about climate change and adaptation strategies, recognising their generally lower literacy rate and other barriers to accessing information.

7.4 Conclusion

Climate change is the biggest challenge humanity has faced, and will only be addressed through global cooperation. Yet the world is currently trying to do so using only 50% of its intellectual and social resources. This report has exposed the injustice of environmental policy and explored how women are directly, specifically and unjustly affected.

The changes that are required to tackle climate change have the potential to radically alter global political and economic systems, either for better or worse. We must find initiatives that deal with climate change and at the same time address the injustice of the current system, bringing about a fairer and more equitable global society, rather than allowing climate change policies to reinforce and exacerbate existing inequalities. Changing existing structures and developing the capacity of women to allow their equal participation in decision-making doubles our chances of finding effective solutions. Indeed, climate justice will not be achieved without doing so.

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