

Joint Submission by Asia Pacific Forum on Women, Law and Development (APWLD)¹ and Landesa²

Gender-responsive climate policy with a focus on adaptation and capacity-building, and training for delegates on gender issues – SBI 44

1. Introduction

At COP20, Parties adopted the [Lima Work Programme on Gender](#) (Decision 18/CP.20), which aims to further advance the implementation of existing gender mandates across all areas of the UNFCCC and to advance the integration of gender equality in all climate policies. Parties and accredited UNFCCC observer organisations were encouraged to submit views on the matters to be addressed at an in-session workshop on gender-responsive climate policy with a focus on adaptation and capacity-building, and training for delegates on gender issues³.

The Asia Pacific Forum on Women, Law and Development (APWLD) and Landesa Center for Women's Land Rights welcome the opportunity to share views on the scope, potential outcomes and information to be covered during the in-session workshop. Our submission focuses on three priorities we feel are essential for effective and gender equitable climate adaptation policies:

- Empowering local women's movements;
- Ensuring secure land rights for women;
- Capacity building that empowers women;
- Financing gender-responsive adaptation.

2. Background information

The fact that climate change impacts differently and more deeply on women is well documented.⁴ Climate change threatens to deepen existing gender inequalities and deny women, particularly in the Global South, the right to development. In 2014, Parties adopted the Lima Work Programme on Gender, recognising the need to include gender mainstreaming in every area of the climate regime. This imperative has been reinforced with the adoption of the Paris agreement that states in its preamble: "*Parties should, when taking action to address climate change, respect, promote and consider their*

¹ APWLD is the Asia-Pacific region's leading feminist network with about 200 members in 25 countries in the region. APWLD fosters feminist movements in Asia Pacific to have impact at the local, national, regional and international level. We develop capacities, research, advocacy and activism to claim and strengthen women's human rights. APWLD empowers women in the region to use law as an instrument of change for equality, justice, peace and development. See more at: www.apwld.org.

² Landesa is an international nonprofit organization dedicated to securing land rights for the rural poor. Landesa has worked in over 50 countries and has contributed to over 110 million families gaining legal land rights, using a combination of robust research, collaborative law and policy design, dedicated advocacy, and tailored evidence-based interventions. The Landesa Center for Women's Land Rights contributed to this submission. See more at: <http://www.landesa.org/what-we-do/womens-land-rights>.

³ UNFCCC, *Decision 18/CP.20*, paragraphs 12 and 13.

⁴ Human Rights Council, *Resolution 10/4 'Human rights and climate change'*, March 2009.

respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as **gender equality, empowerment of women and intergenerational equity**⁵. This obligation is reinforced in adaptation and capacity-building as Articles 7 and 11 state respectively: “Parties acknowledge that adaptation action should follow a country-driven, **gender-responsive, participatory and fully transparent approach**”⁶; and “Capacity-building ... should be an effective, iterative process that is participatory, cross-cutting and **gender-responsive**”⁷.

In Asia Pacific women constitute the majority of small-scale farmers and are often responsible for the use of natural resources and management. The impacts of climate change are affecting natural resources and many women in developing countries have had to adapt to the changing climate. Women have already implemented adaptation actions on the ground and acquired a strong knowledge and expertise on adaptation to the changing environmental landscape.

Yet the stresses climate change places on communities often results in deepened exploitation of the most vulnerable where gender-responsive adaptation policies are absent. In Bangladesh, for example, a persistent link has been suggested between the loss of lands and livelihoods due to climate change and early, child or forced marriage⁸. Researchers also found that climate change increased demands for dowry payments, as other forms of livelihoods become less dependable and that child marriage and dowry may in turn form local adaptation strategies.⁹

Gendered climate inequalities in Papua New Guinea (PNG)¹⁰

The loss of land for the matrilineal cultures of the Carteret Islands, PNG, is more than just displacement – it is the loss of identity, of culture, and of generational heritage. Rising sea levels have already submerged their island homes, and the PNG government has resettled them in relocation camps outside of Buka Town. Along with their homes, the women of the Carteret Islands have lost their traditional forms of natural resource-based livelihood as agricultural yields are contaminated by the increased salinity and yields are no longer seasonally dependable. They have lost their independence, traditions and culture, and now face a life of uncertainty in the relocation sites. The loss of matrilineal land can decrease perceived community value and increase women’s risk to gendered vulnerabilities.

⁵ UNFCCC, *Paris agreement*, FCCC/CP/2015/L.9/Rev.1, Preamble.

⁶ *Ibid*, Article 7.

⁷ *Ibid*, Article 11.

⁸ Margaret Alston et al (2014), *Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh?*, Women’s Studies International Forum, <http://artsonline.monash.edu.au/oxfam/files/2014/05/Are-climate-challenges-reinforcing-child-and-forced-marriage.pdf>.

⁹ Also see Human Rights Watch (2015), *Marry before your house is swept away*, <https://www.hrw.org/report/2015/06/09/marry-your-house-swept-away/child-marriage-bangladesh>.

¹⁰ APWLD, *Women Warming Up! Building Resilient, Grassroots Feminist Movements for Climate Justice in Asia Pacific*, December 2015, p. 11: <http://apwld.org/wp-content/uploads/2015/12/CJ-FPAR-regionalreport.pdf>

3. Multiple benefits of gender-equitable adaptation policies

Effective adaptation policies have the potential to provide multiple benefits to impacted communities. The Paris agreement acknowledges the importance of climate justice, a concept that suggests remedies must be provided by those with historical responsibility for climate change to the victims of their (in)action. Effective gender-responsive adaptation policies should aim to deliver climate justice, the right to human development as well as women's human rights and gender equality. Consequently states must do more than assess the gendered impact of adaptation policies. They must aim to empower women and produce outcomes that advance human development as well as enable communities to better adapt to climate change.

Gender-equitable adaptation is critical not only to *prevent* gender discrimination but also to *advance* women's rights and *reduce* gender inequality. Gender-equitable adaptation policies are not solely designed to increase resilience to the impacts of climate change, but also aim to increase women's political, social and economic decision-making power. Empowering women through enhancing their land and tenure rights is critical as research shows that women as empowered rights-holders are better able to contribute to climate adaptation.

4. Workshop inputs

a. Adaptation Policies: Empowering Women and Increasing Democratic Participation

Women's empowerment is essential to increasing their capacity to shape just climate adaptation policies. The most effective and lasting way to empower women and increase their decision-making capacity is to support women's local movements.

Building women's local movements is essential to both effective and gender-responsive adaptation plans and policies and ensuring multiple benefits such as increasing human development, advancing gender equality, adaptation and mitigation to climate change. APWLD's Climate Justice Feminist Participatory Action Research (CJ-FPAR) programme¹¹ has demonstrated that **supporting and strengthening local women's movements is vital to advancing women's democratic engagement with local authorities and shaping localised, just climate adaptation policies**. It also demonstrates that **democratic participation of women in local decision-making enhances the formulation of gender-responsive adaptation policies**.

Women's movements, networks, collectives and organisations have been critical to addressing the threats and responses to climate change, yet they are often left out of policy decision-making. "*Climate policies that are gender-responsive rely on empowered women's movements that link up the local level and shape local policies and work in solidarity with global women's movements, national women's machineries and United Nations agencies and bodies.*"¹² They are a critical element of the means of

¹¹ For a detailed presentation of the programme, see: APWLD, *Women Warming Up! Building Resilient, Grassroots Feminist Movements for Climate Justice in Asia Pacific*, op. cit.

¹² UN Women, Report of the Expert Group meeting, *Implementation of gender-responsive climate action in the context of sustainable development*, November 2015, p.7:

implementation. Women with agency and social power are able to make significant contributions to adaptive strategies. They often play a unique role in the stewardship of natural resources and have the knowledge to shape adaptive mechanisms in vulnerable areas. Collectively, women are often able to build on the traditional knowledge and experience they have adapting to local environments and better understand the slow onset impacts of change on their food, resources and communities.

Despite the clear evidence of a direct link between gender relations and a community's capacity to adapt to climate change, women's voices in decision-making structures and processes are currently inadequate. Gendered power relations make it impossible to simply invite some women to participate in climate discussions. Instead, it is necessary that women are able to collectively understand, document, discuss the impacts and design their own solutions. Women's collective approaches can be designed to empower women by, for example, delivering energy to women that they consequently own and manage (advancing energy democracy).¹³ *"Energy democracy movements are just emerging, and currently visible examples include localities where women are organizing to move to low-cost reliable solar or bio-fuel cookers that deliver multiple health and environment benefits."*¹⁴

Building the capacity of the Mugal indigenous women in Nepal

In Nepal, the CJ FPAR programme was implemented with the Mugal indigenous women who live in a remote region near the Himalayan chain where melting ice has had a devastating impact on the community. Particularly women have borne the brunt of the changing climate as they are in charge of agriculture production, feeding their family and fetching water.

Through the FPAR programme, a women's group was formed in Mugu and Mangri villages, Nepal in August 2014. This was the first time that these indigenous women had come together to talk about their rights and the changing climate. The group, now comprised of 12 members, has since coordinated an interaction programme on the rights and situation of indigenous women in Mugu with local stakeholders, including the district development office, district agriculture office, district security office, district forest office, women's development office and local media. They provided previously undocumented information about landslides and are advocating for the construction of a new drinking-water facility as well as a canal to bring water to operate the watermill recently built to replace those destroyed by landslides. They are now a prominent force in addressing climate change and are working with the Village Development Committees to integrate traditional knowledge in climate adaptation measures. This ground-breaking event was the first time that government officials had ever participated in a meeting to discuss the unique struggles of indigenous women in their communities, and it was facilitated through the strong women's movement that was developed through FPAR.

"Women are concerned and aware about their loss of food production and medicinal herbs. They have started taking part in farming new kinds of vegetables and demanding with the VDC (Village

http://www2.unwomen.org/~media/headquarters/attachments/sections/how%20we%20work/intergovsupport/egmreport_bonn_final_25-november-2015.pdf?v=1&d=20151125T232255

¹³ See more at: <http://energydemocracyinitiative.org/>

Development Committee) for other income generating programmes, water facility and new variety of seeds and plants and agricultural training.”¹⁵

Local adaptation responses by women in Bangladesh

In Bangladesh, women’s group formed through FPAR initiated adaptive measures to deal with the challenges of increased salinity and soil erosion. The women established 32 hanging vegetable gardens made from earthen basins set over triangular bamboo stands which are helping them grow fresh vegetables for the household and also earn income from selling the surplus. They also established two rain water harvesting systems for collecting drinking water for the community and two crab farms for creating alternative livelihood. The FPAR process also empowered the women to engage in decision-making and one woman was subsequently appointed to the local policing committee.

Increasing climate resilience and decision-making in central Vietnam

Women organising to address climate change can act as a catalyst for women’s democratic engagement in local decision making. For example, in Vietnam, women groups who came together to address climate change succeeded in including 60 local women in the historically male-only Village Rapid Response Teams in charge of preparedness and management of disasters. Besides participating in the usual activities of the team, the women organised themselves into a sub-group to conduct their own activities, such as starting a movement within their communities called “Green and Clean Roads in the Village”. Women farmers then adapted their crops to include watermelon, more resilient to salinity. Those initiatives have both strengthened climate resilience and increased democratic engagement of women.

“The first day of joining the rapid response team, there were a small number of other women whispering that this is the work of men and that women should never do it. But some time later, when we women were cleaning village roads and helping the community during a disaster, everyone started to change their views and behaviour. Now others are saying that it is true that women can also do the work that previously only men did!” Mrs. Nguyen Thi Hoa, Hai Duong Commune, CJ-FPAR Participant

“I love being in the rapid response team because it made me more confident and meaningful to help other people. I can tell villagers how to prepare for before disaster season. The basic knowledge in preparedness has helped me and my community to cope with disaster better and to make the environment more protective for a better climate change adaptation”. Mrs. Le Thi Thu Dieu - Huong Phong commune

“In the community, women have very important voice, especially in advocacy and communication with support from family and community. Thanks to the participation of women in the rapid response team,

¹⁵ Toma Lama, Mugal Indigenous Women Upliftment Institute (MIWUI), Nepal, cited in *Women Warming Up! Building Resilient, Grassroots Feminist Movements for Climate Justice in Asia Pacific*, op. cit.

the spirit for preparing before disaster of local women becomes positively and more actively, awareness among local women also changes, the women engaged in training are able and willing to share others, especially they are very good at propagation of environmental sanitation.” (Mrs. Tran Thi Thanh, Chairwoman of Huong Phong Women’s Union)

“Model of women participating in rapid response teams is very effective and should be extended to other villages. In this commune, the women’s movement as rice jar of compassion, piggy saving, green and clean road is well done, especially in garbage collection, over 90 % women participation. Compared with men, women participation is always full with rational work arrangement. Thanks to the participation of women, men are more aware of sharing housework with women than before. Currently, 100 % of households in the village are preparing food that in the past is extremely low.” (Mr. Ngo, Deputy Chairman Huong Phong Commune People’s Committee)

b. Women’s land rights increase adaptive capacity¹⁶

Secure land rights for women is a critical, yet little understood and often ignored, element of effective climate change adaptation policies and outcomes. Emerging research suggests that when women hold secure rights to land, climate change strategies—in particular those related to adaptation—are more successful, and responsibilities and benefits are more equitably distributed. While women grow the bulk of the food in many countries, they rarely control the land that they till.¹⁷ Their rights to access, use, control and manage land are often diluted or denied, and are in many cases dependent on relationships with male family members. Laws and social norms often limit or ignore women’s land and property rights and routinely exclude women from decision-making on land and natural resources. Women are thus excluded, much of the time, from planning for adaptation that could improve sustainable use of land in response to climate change.¹⁸ Yet, given women’s key role in household food and agricultural production, the *“responsibility for adaptation is likely to fall on their shoulders—including finding alternative ways to feed their family.”*¹⁹

Without secure control over the land they farm or the proceeds of their labour, women often lack the incentive, security, opportunity, or authority to make decisions about ways to conserve the land and its long-term productivity. When women lack secure management control over their land, they may be unable or unwilling to invest in adaptation that require upfront expenditures or long-term climate-

¹⁶ For additional resources, please consult the annexed Landesa issue briefs on women’s land rights and climate change adaptation and short fact-sheet, [Women Gaining Ground: Securing Land Rights as a Critical Pillar of Climate Change Strategy](#) (2015).

¹⁷ S. Asfaw, et al, *Gender in Climate-Smart Agriculture: Module 18 for Gender in Agriculture Sourcebook* (World Bank Group 2015), at 1.

¹⁸ A. Davis, L. Roper & U. Miniszewski, *Climate Justice and Women’s Rights: A Guide to Supporting Grassroots Women’s Action*, at 8 (2015), available at http://www.inwf-resourcecenter.org/Files/ECM001/PUBLICATIONS/1503050634_INWF-GGF-AF_Climate%20Justice%20and%20Women's%20Rights_2015.pdf.

¹⁹ Brody, A., Demetriades, J., & Esplen, E., *Gender and Climate Change: Mapping the Linkages: A Scoping Study on Knowledge and Gaps*, at 5 (BRIDGE Development - Gender 2008).

resilient investments. In Burkina Faso, for example, women do not invest in the parcels they till because they do not own them.²⁰

Women's land tenure is fundamental to the success of adaptation and other efforts to tackle climate change. Secure land rights make women and their communities more resilient and capable of adapting to and recovering from climate change impacts. On the other hand, land-tenure security provides an incentive for landholders to invest in adaptation measures, such as soil conservation, sustainable pasture use, growth of drought-resistant crops, and development of alternate water sources.²¹

With secure land rights, women farmers could be more likely to adopt and invest in climate adaptive strategies.²² For example, households where women have land rights report greater yields and increased food security²³ in part because of access and incentive to invest in climate adaptive agriculture methods and inputs. In Ethiopia, for example, small farmers with land rights were 60% more likely to invest in terracing prevent soil erosion.²⁴ Finally, when women have secure rights to their land, they are able to apply untapped knowledge to designing and implementing adaptation measures on their land. In Brazil, compared to men, women knew nearly twice as many plant species for cultivation or collection,²⁵ resulting in a greater range of climate-resilient plant cultivation.

c. Gender-responsive capacity building

"The knowledge on climate change makes the women better equipped to participate in shaping relevant policies and actions to address the issues affecting them." Amihan National Federation of Peasant Women, Philippines²⁶

Capacity building that aims to empower women is critical. It allows women to make their own informed decisions around solutions they want to implement to meet their adaptation needs. The Feminist Participatory Action Research provides a model for the kind of capacity building that can both empower women to understand climate change, and ways climate policies that impact on women, but also their worth and importance in shaping adaptive strategies. When capacity building is designed in this way multiple benefits can be derived that advance gender and climate justice as well as human development.

²⁰ Saulière, S., *Climate Change and Women Farmers in Burkina Faso: Impact and Adaptation Policies and Practices*, at 4-5 (Oxfam 2011) at <https://www.oxfam.org/sites/www.oxfam.org/files/rr-climate-change-women-farmersburkina-130711-en.pdf>.

²¹ Mitchell, D., *Assessing and Responding to Land Tenure Issues in Disaster Risk Management: Training Manual*, at 34 (Food and Agriculture Organization 2011) at <http://www.fao.org/3/a-i2115e.pdf>.

²² Asfaw at 3-4.

²³ Landesa, *Land Rights and Food Security: The Linkages between Secure Land Rights, Women, and Improved Household Food Security and Nutrition* (2012) at <https://www.landesa.org/wp-content/uploads/Landesa-Issue-Brief-Land-Rights-and-Food-Security.pdf>.

²⁴ K. Deininger & S. Jin, *Tenure Security and Land-related Investment: Evidence from Ethiopia*, 50(5) EUROPEAN ECONOMIC REVIEW 1245-1277 (2006) at <http://www.sciencedirect.com/science/article/pii/S0014292105000577>.

²⁵ Merétika, A.H.C, Peroni, N., & Hanazaki, N., *Local knowledge of medicinal plants in three artisanal fishing communities (Itapoá, Southern Brazil), according to gender, age, and urbanization*, 24(2) ACTA BOTANICA BRASILICA 386-394, 391 (2010), at <http://www.scielo.br/pdf/abb/v24n2/a09v24n2.pdf>.

²⁶ From APWLD, *Women Warming Up! Building Resilient, Grassroots Feminist Movements for Climate Justice in Asia Pacific*, *op. cit.*

d. Gender-responsive adaptation financing

Despite the clear importance of supporting local women's movements to deliver gender-responsive adaptation policies with multiple benefits, climate financing is designed to deliver top-down, large scale programmes that exclude women from decision making. Currently only 16% of all climate funding is directed to adaptation projects²⁷. The vast majority are large scale and financed through multinational banks or private sector companies who have a poor record of consulting with local communities or upholding women's rights. The proposed modalities of the Green Climate Fund (GCF) confirm this tendency. Despite the GCF adopting a gender policy and a multi-year gender action plan, its funds are inaccessible, complex and restrictive²⁸. The funds are difficult for even national governments to access let alone local communities or women's networks. To date five national entities have been accredited out of 14 international and regional entities for the GCF. Among them, multi lateral financial institutions are included who are simultaneously funding harmful, polluting projects and development projects that have undermined human rights. Consideration must be given to ensuring women's movements are able to access the funds and be supported to develop their own initiatives and proposals. Country focal points should hold national workshops with local women's movements to develop methods of access. A women's climate fund at the global or regional level should be established exclusively designed to support gender-responsive programmes.

5. Scope of the workshop and outcomes

Given the limited time allocated we propose that the 3 hours workshop be used as an opportunity to identify further work required to support Parties to support develop equitable adaptation plans, policies and actions. We propose the workshop focus on:

- a. Understanding gender differentiated adaptation: Participants strengthen understanding of the ways climate change impacts differently and more deeply on marginalised women.
- b. Empowering Women, Multiple Benefits: Participants identify the key elements to gender-responsive adaptation
 - a. Empowering women to make informed decisions
 - b. Building women's local movements and leadership
- c. Women's land and tenure rights: Participants strengthen understanding of the relationship between land tenure and climate policies and identify policies to advance women's land rights as key to more effective adaptation interventions.
- d. Enabling environment for gender responsive-adaptation policies: Participants discuss the enablers for gender-responsive adaptation, including financing, civil society engagement, use of quotas for women in decision making

²⁷ OECD in collaboration with CPI, *Climate Finance in 2013-14 and the USD 100 billion goal*, November 2015: <http://www.oecd.org/environment/cc/OECD-CPI-Climate-Finance-Report.pdf>

²⁸ https://www.boell.de/sites/default/files/HBF_SCCF_Gender_Brief_Formatted.pdf

It is of the utmost importance that the workshop allows those who are most impacted by climate change, in particular women from the global South, to participate. The workshop should include indigenous women, rural and displaced women as well as experts working in civil society, research the UN system and the UNFCCC. Colleagues from relevant constituencies, such as farmers, indigenous peoples, workers and environmental groups should also be invited to participate in the workshop.

The workshop should begin with short presentations by the most relevant experts of this issue, i.e. marginalised women that who lack secure land tenure and struggle with the impacts of climate change, and give the floor to the relevant governmental and international organizations representatives. This short contextualization of the issue would trigger a discussion with the attendees that will lead to a final session on formulation of recommendations to take forward and to be included in the workshop report for consideration at SBI 45 (November-December 2016).

- Identification of the capacity gaps and needs of women in terms of awareness and education about climate change and climate policies ;
- Discussion on best practices/mechanisms that empower women to make decisions on social, economic, political aspects of climate change (e.g., FPAR, energy democracy);
- Overview on why women's rights to land matter for climate change strategy;
- Review of research on links between secure land rights for women and more effective climate change adaptation;
- Discussion of ways to integrate women's rights to land and natural resources, including within communities, into National Action Plans on Climate Change, and domestic legislative framework;
- Identification of support and resources for local research on women's land rights and climate change adaptation.

6. Annexes

Annex A – “Empowering women’s movements for climate resilient communities’; APWLD Discussion paper submitted for UN Women’s ‘Expert Group Meeting on Implementing gender-responsive climate action in the context of sustainable development’

Annex B – Key findings of APWLD Regional Report “Women Warming Up! Building Resilient, Grassroots Feminist Movements for Climate Justice in Asia Pacific”

Annex C – Govind Kelkar, Adivasi Women, “Engaging with Climate Change”

Annex D - Case Studies on Women’s Land Rights and Adaptation to Climate Change

Annex E – Links between Adaptation and Women’s Land Rights

Annex F – Women Gaining Ground: Securing Land Rights as a Critical Pillar of Climate Change Strategy

“Empowering women’s movements for climate resilient communities”

Discussion paper submitted for UN Women’s ‘Expert Group Meeting on Implementing gender-responsive climate action in the context of sustainable development’

Kate Lappin, Asia Pacific Forum on Women, Law and Development (APWLD)

Climate change poses the largest threat to human rights, and indeed to human existence, that humanity has faced. Climate change deepens and produces gender inequalities and its effects are most acutely experienced by women of the global South. Governments have pre-existing international legal obligations to both mitigate the threat of climate change and to address its impacts in ways that promote human rights and gender equality. This paper argues that these legal obligations can only be met by **advancing local women’s movements and transitioning to gender equitable economies.**

The current increase of at least .8c has already caused devastating impacts on the lives of women in most affected countries. The current INDC commitments point to a 3.6c increase by the end of the century even if governments met their intended targets. These figures point to an urgent need to transform the global economic system designed to increase consumption, production and profit growth as well as to prepare for the consequences of climate change. Coupled with transformation of global economic rules, National Adaptation Programmes of Action (NAPAs)¹ can in fact provide an opportunity to re-design societies in ways that are equitable, just and sustainable.

Governments are required to act cooperatively, in accordance with the international legal principle of solidarity, to address grave, systemic human rights and environmental threats.² Responses to climate change must be designed in ways that respect, protect and fulfil women’s human rights. Gender Equality has been identified as a core principle in developing n (NAPAs), yet few local women’s rights movements have been engaged in the development or implementation of such plans.

1. Women’s movements strengthen climate resilience

The largest global study on violence against women found that the key to achieving progressive changes to laws and policies on violence against movement was the existence of autonomous feminist movements acting at the national level³. Similarly, APWLD contends that climate policies and NAPAs that are most likely to lead to community survival and are gender equitable are contingent on the existence of empowered women’s movements. For climate policies, however, these movements must be at the most local level and shape localised policies.

¹ While the development of NAPAs has primarily focused on Least Development Countries (LDCs), we argue that all countries require NAPAs to be coupled with national plans to implement the SDGs.

² These legal obligations have been elaborated through the ‘Oslo Principles’, a set of international legal principles that detail existing international law that compels governments and other polluters to act immediately to avert climate change and in doing so uphold human rights obligations. <http://www.osloprinciples.org/principles/>

³ Htun, M & Weldon, L (2012), *The civic origins of progressive policy change: combating violence against women in a global perspective, 1975-2005*, American Political Science.

Since 2013, APWLD has been supporting a Climate Justice Feminist Participatory Action Research (FPAR) programme with 9 grassroots communities in 8 countries in the Asia-Pacific region. The results of this programme are clear: if we are to address gendered impacts of climate change affecting marginalised communities, we must support and strengthen **women's local movements**. The FPAR process supports local women to document the impacts they are experiencing, design solutions and advocate for relevant policy and resource changes.

2. Climate change exacerbates gender inequalities and conflict.

The increased vulnerability of women to climate change impacts has been well documented⁴. A number of NAPAs recognise that women are exposed to increased risks because of their primary role in care work and agricultural production and that climate change is likely to increase burden of water and food collection, increasing the burden of work on women⁵. It is less often recognised that this heightened vulnerability commonly arises from structural discrimination and patriarchal social relations. Climate change can also act to exacerbate gender inequalities. As communities respond to climate change they develop their own adaptation strategies. Some of these have devastating impacts for women. For example, in Bangladesh, a persistent link has been suggested between the loss of lands and livelihoods due to climate change and early, child or forced marriage⁶. Researchers also found that climate change increased demands for dowry payments and that child marriage and dowry may form local adaptation strategies⁷.

Similarly, in Nepal, women from remote, climate affected areas report increased levels of migration for marriage as well as migration for domestic work as a result of diminished livelihoods⁸.

Climate change exposes women to increased risks of violence, trafficking and conflict. In the last sixty years, at least 40% of all intrastate conflicts have had a link to natural resources and the environment⁹. Gender-based violence is likely to increase, and there will be a growing expectation that violent solutions to disputes are acceptable¹⁰.

“As recognition grows that the natural environment is a factor in many armed conflicts, and that environmental degradation has specific gender-related impacts, conflict prevention efforts must necessarily account for these factors. Women’s knowledge of the natural environment and

⁴ 52nd session of the Commission on the Status of Women (2008), “Gender perspectives on climate change,” Issues paper for interactive expert panel on *Emerging issues, trends and new approaches to issues affecting the situation of women or equality between women and men*, <http://www.un.org/womenwatch/daw/csw/csw52/issuespapers/Gender%20and%20climate%20change%20paper%20final.pdf>

⁵ UNFPA, Making NAPAs work for women, https://www.unfpa.org/sites/default/files/pub-pdf/climateconnections_4_napas.pdf

⁶ Margaret Alston et al (2014), *Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh?*, Women’s Studies International Forum, <http://artsonline.monash.edu.au/oxfam/files/2014/05/Are-climate-challenges-reinforcing-child-and-forced-marriage.pdf>

⁷ Also see Human Rights Watch (2015), *Marry before your house is swept away*, <https://www.hrw.org/report/2015/06/09/marry-your-house-swept-away/child-marriage-bangladesh>

⁸ APWLD (2014), *Climate change destroying livelihoods and traditions of Mugal women in Nepal*, <http://apwld.org/wp-content/uploads/2014/12/flyer-mwui-corrected-12-1.pdf>

⁹ UNEP, Retrieved March 12, 2015, from <http://www.unep.org/disastersandconflicts/Introduction/EnvironmentalCooperationforPeacebuilding/tabid/54355/Default.asp>

¹⁰ APWLD, *Climate Change and Natural Disasters Affecting Women Peace and Security*, March 13, 2015.

*resource scarcity can play an integral role in early warning systems for climate-related resource scarcity and conflict, and in developing a sustainable response to conflict.*¹¹

Climate change is already a driver of migration with estimates that climate induced migration will reach up to 1 billion people by 2050¹². Large-scale migrations may increase the risk of conflict in host communities as tensions and competition over land and resettlement areas arise. This exposes women not only to the traditional threats of a violent environment, but also to the dangers of long migrations such as hunger, dehydration and extreme weather. Sexual violence is a serious threat both in conflict and in refugee situations. Displacement thus greatly increases the threat of increased sexual violence against women. In relocations areas, women see their access to job limited, being forced to take care and provide food to children and elderly, meanwhile men are leaving to find jobs outside of these areas¹³. NAPAs need to integrate with and compliment national plans of action on resolution 1325.

- Rising tides in the Carteret Islands of Papua New Guinea have already led to a relocation of Islanders. The Islands are matrilineal and displacement means women lose an essential part of their identity, livelihoods and status. Control and decision-making over land has been linked to lower rates of violence against women. Conversely women from the atolls are relocated to Bougainville – an Island with some of the highest rates of violence against women in the world. Through FPAR they are advocating for gender sensitive relocation plans that prioritise access to land for women and culturally appropriate services.

3. Women’s leadership and civic participation is critical for gender equitable climate adaptation

The FPAR project demonstrates that stronger outcomes result from local women’s movements democratic engagement. In some cases, women’s movements were able to secure representation for women in relevant policy bodies.

- In Vietnam, the livelihoods of women in coastal communities, dependent primarily on rice and aquaculture, are threatened by high tides, sea-water intrusion, sea-bank erosion, water pollution and typhoons increasing in both frequency and strength. Through the FPAR women organised local disaster drills, first-aid classes and early warning systems. In saline fields they altered their crops to include watermelon. Through their advocacy the local government recognised the need to include women and agreed to appoint more than 60 local women to 12 of the previously male-only Village Rapid Response Teams. The women have also organised themselves at the sub-district level. The result has both strengthened climate resilience and increased democratic engagement of women.

¹¹ Radhika Coomaraswamy, *Preventing Conflict, Transforming Justice, Securing the Peace: A Global Study on the Implementation of UN Security Council Resolution 1325* (2015) forthcoming.

¹² Morris, N (2008), *Climate change could force 1 billion from their homes by 2050*. The Independent, retrieved 15 September 2015, <http://www.independent.co.uk/environment/climate-change/climate-change-could-force-1-billion-from-their-homes-by-2050-817223.html>

¹³ APWLD, *Climate Change and Natural Disasters Affecting Women Peace and Security*, *op. cit.*

“The first day of joining the rapid response team, there were a small number of other women whispering that this is the work of men and that women should never do it. But some time later, when we women were cleaning village roads and helping the community during a disaster, everyone started to change their views and behaviour. Now others are saying that it is true that women can also do the work that previously only men did!” Mrs. Nguyen Thi Hoa, Hai Duong Commune, CJ-FPAR Participant

- *“I love being in the rapid response team because it made me more confident and meaningful to help other people. I can tell villagers how to prepare for before disaster season. The basic knowledge in preparedness has helped me and my community to cope with disaster better and to make the environment more protective for a better climate change adaptation”.* Mrs. Le Thi Thu Dieu - Huong Phong commune
- *“In the community, women have very important voice, especially in advocacy and communication with support from family and community. Thanks to the participation of women in the rapid response team, the spirit for preparing before disaster of local women becomes positively and more actively, awareness among local women also changes, the women engaged in training are able and willing to share others, especially they are very good at propagation of environmental sanitation.”* (Mrs. Tran Thi Thanh, Chairwoman of Huong Phong Women’s Union)
- *“Model of women participating in rapid response teams is very effective and should be extended to other villages. In this commune, the women’s movement as rice jar of compassion, piggy saving, green and clean road is well done, especially in garbage collection, over 90 % women participation. Compared with men, women participation is always full with rational work arrangement. Thanks to the participation of women, men are more aware of sharing housework with women than before. Currently, 100 % of households in the village are preparing food that in the past is extremely low.”* (Mr. Ngo, Deputy Chairman Huong Phong Commune People’s Committee)

Organising women to address climate change has increased women’s democratic engagement in local decision making. In the most remote and mountainous villages of Nepal, Mugal women have been forced to adapt to changing weather patterns, increasing landslides and diminished traditional crops. As a result, they spend increasing hours collecting water for irrigation, they are unable to store food underground in the ice and have had their mill and roads washed away by landslides. Through the FPAR the women documented their experiences and organised the first ever engagement between district government officials and women of the villages. They provided previously undocumented information about landslides and are advocating for the construction of a new drinking-water facility as well as a canal to bring water to operate the watermill recently built to replace those destroyed by landslides. They are now a prominent force in addressing climate change and are working with the Village Coordination Councils to integrate traditional knowledge in climate adaptation measures.

4. Just Transitions – Transitioning economies with gender justice

The concept of 'just transitions' has been developed by trade unions to recognise that some jobs will be lost as economies transition from fossil fuel industries to renewables. But the concept has not been fully developed to address the threats women in the global South face to their right to Decent Work. In the Philippines, for example, the increasing move to the contractualisation and casualization of labour means that women in the flood zones of metro Manila are regularly unpaid when floods and typhoons make it impossible to work¹⁴.

The necessity to plan transitions to new, sustainable economies provides opportunities to re-think the value of labour and promote Decent Work for women in industries that are currently under-valued yet sustainable: care work, service industries as well as renewables. Transitioning to new economies should also feature moves to **energy democracy**¹⁵ and restoration of public goods, public services and public sector employment that has been demonstrated to advance women's human rights as well as safeguard the environment. This transition requires systemic shifts in global economic governance as well as changes to national fiscal and monetary policies. It will require the restoration of the capacity of states to regulate in the public interest without being aggravated by investor protections within preferential trade agreements, debt obligations or world trade organisation limitations.

5. Climate Funds

While a number of funds include gender equality as a guiding principle, few have provided funds to build local women's movements, the core ingredient to both build resilience and advance gender equality. With evidence that women's local movements are essential to adaptation and to just transitions, it is essential that affirmative measures are taken to fund local women's democratic movements as well as fund their initiatives for adaptation.

Developing countries have noted that the various funds created to fund adaptation and climate projects are often inaccessible, complex and restrictive¹⁶. These barriers are magnified for civil society, particularly grassroots groups when they are eligible to apply for funding. Participants in the FPAR project had not been engaged in developing NAPAs nor informed about climate funding opportunities.

To date, 5 national entities have been accredited out of 14 international and regional entities for the GCF. Among them, development banks that are simultaneously funding harmful, polluting projects and development projects that have undermined human rights. More than national direct access, **local direct access should be promoted**, with funding reserved to local women's groups. This criteria should apply to all funding lots including capacity building, technology transfer and infrastructure development.

6. Gender Safeguards

Climate projects have the potential to undermine women's rights, displace people and increase resource and wealth inequalities. To avoid this there must be compulsory, systematic, ex ante gender impact

¹⁴ Marya Salamat, *Urban poor women suffer most during rainy season*, July 10 2015, <http://bulatlat.com/main/2015/07/10/urban-poor-women-suffer-most-during-rainy-season/>

¹⁵ See more at: <http://energydemocracyinitiative.org/>

¹⁶ https://www.boell.de/sites/default/files/HBF_SCCF_Gender_Brief_Formatted.pdf

assessments and impact reporting on gender indicators. The active participation and decision making in the projects of women's local movements and free, prior and informed consent of Indigenous women must be a core safeguard.

- **FPAR CASE STUDY:** In Indonesia, women living in Kalimantan Forest are suffering the impacts of a REDD project implemented without their informed consent. No impact analysis of women and the forest was conducted, despite women's crucial role in forest resource management in the area. The draft strategy developed before the implementation of the project contained no gender-disaggregated data, no gender analysis, no gender action plan and no gendered safeguards to protect the rights of women. When the project began its implementation, women reported being left out of planning meetings and are given no say in the implementation of these programs. Information is portrayed on posters that the largely illiterate female population cannot read, or that use language that women cannot understand without proper explanation, such as "climate change" and "carbon emissions". As a result, the project has taken away women's ability to access the forest as they always have- for food, for medicine, for fuel, and for income. Women must seek other employment and are given only the lowest paid and least-skilled jobs like seeding and planting.

The necessity for climate finance to be provided in the form of grants, rather than loans, has been argued by LDCs and civil society in all negotiations. This is particularly evident if funds are to support women's movements and gender equality programmes.

7. Recommendations:

- NAPAs must be developed for all countries, not just LDCs. Therefore all principles developed in relation to NAPAs through the EG should apply to all countries.
- NAPAs must be informed by a full understanding of existing inequalities, women's experiences and include clear objectives to document, challenge and reduce inequalities while advancing gender equality.
- NAPAs should include developing and supporting local women's movements to build capacity to identify threats and needs, to design local solutions using localised and traditional knowledge, to utilise tools and technology and to participate in decision making.
- National implementation plans for the SDGs, Beijing Platform and NAPs for the implementation of UN SCR1325 must incorporate and be integrated with NAPAs and national gender equality strategies. National women's machinery should work with civil society and climate machinery in an integration plan.
- Climate commissions or agencies responsible should include gender divisions who work closely with civil society to support local movements.
- Quotas should be established to ensure the inclusion of women's movement representatives in all climate and development bodies at the local, national, regional and international levels.
- Civil society, UN Women, and trade unions should develop the concept of 'just and equitable transitions' to ensure transition plans expand to transitioning to just, sustainable and equitable economies that promote Decent Work for women and redistribute the gendered division of labour/job opportunities.

- NAPAs should aim to transition to equitable, sustainable and just economies including Decent Work for women and transitions that reduce and redistribute the burden of unpaid care work.
- Climate funds and other funding agencies should reserve dedicated funds to support women's local movements.
- Review and reform eligibility criteria for all climate funding bodies to enable small, local women's movements to access funds. Further, develop modalities that allow movements to utilise and report on funds in culturally and linguistically diverse ways.
- Gender safeguards including ex ante human rights and gender impact audits must be compulsory for all climate / sustainable development projects.

CLIMATE JUSTICE, GENDER JUSTICE, DEVELOPMENT JUSTICE AT COP 21



Demands of Grassroots Feminist Movements in Asia-Pacific!

Grassroots movements from Bangladesh, India, Indonesia, Nepal, Papua New Guinea, the Philippines, Thailand and Vietnam conducted a feminist participatory action research (FPAR) with climate affected women. These are our key findings:

Climate change is an issue of gender and development justice



Women in the Global South, particularly women living in poverty, are more vulnerable to the impacts of climate change. They are exposed to increased risks because of their primary role in care work and agricultural production and because climate change is increasing the burden of water and food collection, which usually falls on women. For example, the indigenous women of coastal areas of Bangladesh and of the remote mountainous region of Nepal are struggling to survive as they are losing their agricultural lands due to salinity and landslides respectively. In the Philippines, women constituted the majority of the death toll caused by typhoon Haiyan. In the Carteret Islands in Papua New Guinea, women farmers that have been displaced from their home islands due to rising sea levels are now struggle to feed their families in the relocation areas and face increased levels of gender-based violence.

This is unjust because these women have contributed the least to climate change and yet are bearing its greatest brunt. Women of the Global South are owed an historic debt given the development and industrialisation of rich countries has been at their expense.

The importance of a transition to just and equitable economies

To repay this historic debt and allow women from the Global South to survive, we need an unprecedented shift in the ways societies are organised. The shift must deliver an equitable development model that enables the redistribution of wealth, resources,

power and carbon between countries, between rich and poor and between men and women. This embodies the need to challenge the common roots of the interlinked crises of inequalities and climate change: a global economic system dependent on increasing unsustainable production, consumption and resource extraction that concentrates profits and power in ways that have served to subvert democracies and a more equal distribution of resources.

The importance of building local women's movements

If we are to challenge the roots of the climate crisis while addressing its gendered impacts, we must support and strengthen local women's movements, in order to engage with local authorities and shape localised climate adaptation policies. Women's movements, networks, collectives and organisations have been critical to addressing the threats and responses to climate change and yet are often left out of policy decision-making. Without women's movements, it will not be possible to develop gender equitable policies, protect women's human rights, curb deepening inequalities resulting from climate change and transition to more equitable and just economies and communities. They are a critical element of the means of implementation. Women's organising to advance climate justice has acted as a catalyst for women's democratic engagement in local decision making. For example, in Vietnam, women's groups who participated in the FPAR programme have succeeded in including 60 local women in the historically male-only Village Rapid Response Teams in charge of preparedness and management of disasters. Besides participating in the usual activities of the team, the women have build on feminist collectivity in practical ways. They have organised themselves into a sub-group to conduct their own activities, such as starting a

movement within their communities called “Green and Clean Roads in the Village”.

“The first day of joining the rapid response team, there were a small number of other women whispering that this is the work of men and those women should never do it. But some time later, when we women were cleaning village roads and helping the community during a disaster, everyone started to change their views and behaviour. Now others are saying that it is true that women can also do the work that previously man only did!” - Mrs. Nguyen Thi Hoa, Hai Duong Commune, CJ-FPAR participant

Need for Gender Safeguards

Climate change mitigation and adaptation projects have the potential to undermine women’s rights, displace people and increase resource and wealth inequalities. To avoid this there must be compulsory, systematic, ex ante gender impact assessments and impact-reporting on gender indicators. The active participation and decision-making in the projects of women’s local movements and free, prior and informed consent of Indigenous women must be a core safeguard.



Our key demands

Based on these key findings, APWLD is going to COP 21 with women living on the frontline of climate change and to demand climate justice, and in particular that governments:

- Commit to a radical and urgent transition from extractive, profit-based economies to people centred models that are just, equitable, gender-sensitive and locally driven.
 - Commit to a comprehensive, ambitious and binding new climate agreement which aims to limit global warming below 1.5°C above pre-industrial levels and that ensure a ‘paradigm shift’ in global governance and economies focused on redistribution of wealth, power and resources, guided by science and principles of equity.
 - Human rights, gender equality, indigenous peoples rights, food security, just and equitable transitions should be recognised as objectives of the Paris agreement, and incorporated in all elements of the document and in all climate actions and decisions.
 - The Paris agreement must respect all agreed principles of international law, in particular CBDR.
 - Ensure the active participation of the most affected by, including women, in all climate decision-making processes/in any climate related-policies, programmes or actions; quotas should be established to ensure the inclusion of women’s movement representatives in all climate and development bodies at the local, national, regional and international levels.
- Ensure the elimination of all fossil fuel and establish a target of 100% safe, clean and renewable energies by 2030 for developed countries and 2050 for developing countries.
 - Establish a global carbon budget that should be equitably distributed between countries and people according to their historical responsibilities and their national capacity.
 - Adopt a global adaptation goal that aims to increase climate resilience and adaptation capacity of communities and peoples, especially the ones at the fore front of climate change and especially women.
 - Climate finance should be public, new and additional, predictable and benefit developing countries and communities most affected by climate change. Climate finance should be gender-responsive and prioritise local driven projects; gender equality should be a principle and an objective of all funding and mechanisms that allow direct access to the most affected at local and community levels, with dedicated funds to support women’s local movements.
 - Gender safeguards including ex ante human rights and gender impact audits must be compulsory for all climate / sustainable development projects.

Adivasi Women Engaging with Climate Change

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- Social Visibility of Chenchu NTFP Collectors



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1

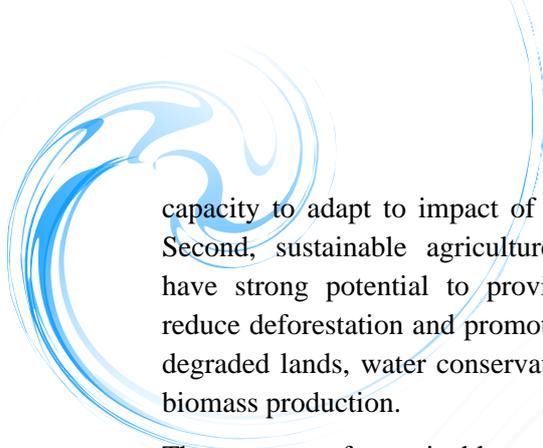
Introduction

Hundreds of millions of indigenous women and men throughout the world, who manage their forests and crops sustainably contribute to the sequestration of greenhouse gas (GHG) from the global atmosphere. Nonetheless, maintaining control over these resources through colonial and corporate attempts to nationalize or privatize them has been a historical struggle. In many areas in Asia, adivasis and indigenous peoples continue to struggle to save their natural resources from deforestation and damaging extraction of minerals, oil and gas, as well as against further expansion of mono-crop plantations. Indigenous communities advocate at various local, regional and international forums to maintain sustainable production and consumption systems (UNFPIL, Tauli-Corpus and Lynge, 2008). This effort is arguably as important as ever.

Climate change presents an additional challenge as it further impacts most adivasi and indigenous communities. It is increasing risks of managing natural resources and agricultural productivity on which many indigenous farmers — a significant amount of whom are women—and other rural populations depend (IAASTD, 2009; IFAD, 2009). Many are searching for ways to effectively adapt to erratic rainfall, drought and other projected impacts of global warming along side means to mitigate the cause.

Indigenous peoples' legal control and sustainable use of natural resources in their ancestral domain provide two significant benefits on these adaptation and mitigation fronts. First, legal control and sustainable use of natural resources improve the livelihoods of indigenous peoples, thus increasing their economic resiliency and





capacity to adapt to impact of a climate change. Second, sustainable agriculture and forest use have strong potential to provide a GHG sink, reduce deforestation and promote rehabilitation of degraded lands, water conservation and increased biomass production.

The success of sustainable practices by adivasi and indigenous peoples, however, rests in large part on the inclusive relations between community members and the strength of the entire community when faced with external pressures, such as privatization and globalization trends. Gender relations are a critical component of both.

This study aims to decipher the gendered impact of climate change in adivasi/indigenous societies in Asia, and increase understanding of how these are exacerbated by structural shifts in adivasi socio-economic systems resulting from their colonial history, more recent efforts at privatization, and gendered roles within the adivasi communities. In conclusion, policy recommendations are offered for enhancing women's resiliency to this impact.

As sustainable agriculture and harvesting or cultivating of non-timber forest products (NTFPs) are of critical importance to many adivasi people's livelihood, these areas are of particular interest

and the lens through which gender relations are examined. Furthermore they are representative of how socio-economic conditions can influence indigenous women's resiliency to impacts of climate change, in particular, due to gender relations—the often unequal placement of women and men in relation to each other, which limit the expression of capabilities and has profound impact on livelihoods. In the case of adivasi women, gender relations impact the sustainable management of natural resources, for example, by the lack of women's right to manage and control land and limited participation in community governance of forests.

Three sources are drawn upon for this study: (1) available materials (both published and unpublished) on gender dimensions of climate change, (2) the author's experience of working with adivasi and indigenous peoples in India, China, and several countries in South East Asia, and (3) field visits during 2006 to 2008 in Mahboobnagar and Visakhapatnam in Andhra Pradesh, Khuti and Ranchi in Jharkhand, Bastar in Chhatisgarh, Supa wind farms in Maharashtra, Kohima in Nagaland, Khasi and Jaintia Hills in Meghalaya, India as well as Mosuo and Naxi areas in Yunnan, China.



2

Climate Change and Vulnerability of Indigenous Women

The United Nations Intergovernmental Panel on Climate Change (UN IPCC) has observed an increase in average global temperature. Greenhouse gas (GHG) emissions due to human activities¹ have increased steadily—70 percent between 1970 and 2004 (IPCC, 2007: 5) and additional studies have highlighted the compounding negative impacts of global warming on human livelihoods in the context of the current global food and energy crisis. These include: dwindling crop yields from agriculture and forestry in most tropical and sub-tropical regions; decreased availability of water in many water-scarce regions; desertification and land degradation processes, exacerbated by change in rainfall patterns; rising sea levels affecting, in particular, livelihoods of coastal communities; dwindling natural resource productivity, and in some cases, irreversible loss of biodiversity (Michaelowa, 2001; Lambrou and Piana, 2006; IFAD, 2009).

In recent years attention is increasingly drawn to means for communities to adapt to these impacts,

as well as help mitigate them. Studies by the United Nations International Strategy for Disaster Reduction as well as a 2006 report by Nicholas Stern, for example, assess the major economic impact of climate change and argue for the immediate attention of the international community, stating that the advantages and long-term savings of implementing effective adaptation and disaster risk reduction strategies far outweigh expected costs. The international community has responded to these calls and increasing scientific certainty of global warming, by garnering political will for mitigation and adaptation on multiple fronts.

A central question, however, is who in these communities are the most vulnerable to projected impacts?

In discussing the distribution of adverse effects of climate change, the UN IPCC points out, “Those in the weakest economic position are often the most vulnerable to climate change....They tend to have limited adaptive capacities, and are more climate dependant on climate sensitive resources



¹Human activities including industry, agriculture, deforestation/forest degradation, energy use, transport, residential and commercial building energy use, waste and waste water treatments.

such as local water and food supplies” (IPCC, 2007:9). In India, the National Action Plan on Climate Change has targeted the protection of “the poor and vulnerable sections” of society through “an inclusive and sustainable development strategy, sensitive to climate change” In China, the government has made efforts to promote education, training and public awareness on climate change impacts on agriculture, forests, livestock industry and rural-urban inequality (People's Republic of China: 2007). This linkage between vulnerability, exclusion and inequality can appear self-evident. What is less evident however, are the multiple interdependent causes of vulnerability of women due to inequality in gendered social systems, including among adivasi and indigenous peoples. Further, how do we learn from local adaptation practices and make them work to the benefit of the vulnerable women and men?

Gender-dimensions of climate change

The gender dimension of climate change is gaining visibility as the stakes of climate change become increasingly clear. Post-disaster recovery efforts and economic development programmes have proven that women and men are affected differently by natural hazards and environmental stress because of differences in traditions, resource use patterns, and gender specific roles and responsibilities. Furthermore, gender inequality

exacerbates women's vulnerability to adverse changes in the climate as it limits women's political voice, economic opportunity, health, education, and access to information in particular. These constraints effect virtually every aspect of women's lives, including those related to climate change, leaving poor and elderly women most susceptible.

Drawing examples from disasters in three countries in Africa and Asia (Bangladesh, Ghana and Senegal) a May 2008 study by Women's Environment and Development Organization (WEDO), highlighted the following impacts of climate change on human security and the vulnerability of women.

An additional broad assessment, while not exhaustive, illustrates fundamental ways in which gender inequalities can increase the vulnerability of women when coping with natural disasters and environmental stresses (UNIFEM, 2008: 8-9).

- Rural women are often dependant on the natural environment for their livelihood. Maintenance of households and women's livelihoods are, therefore, directly impacted by climate related damage to or scarcity of natural resources;
- Limited rights or access to arable land further limits livelihood options and exacerbates financial strain on women, especially in women-headed households;

Impacts on human security and vulnerability of women		
C L I M A T E S T R Y C H A N G E	Impacts on human security	Vulnerability of women
	Crop Failure	Household food provision; increased agricultural work
	Fuel Shortage	Household fuel provision; food-fuel conflicts
	Shortage of Safe, Clean Water	Household water provision; exposure to contaminated sources
	Resource Scarcity	Economic drawbacks; lack of land tenure; resource -dependent livelihoods; school dropouts, early marriage
	Natural Disasters	Greater incidence of mortality; reduction of life expectancy
	Disease	Lack of access to healthcare; increased burden of caring for young, sick and elderly
	Displacement	Loss of livelihoods; lack of adequate shelter; conflicts
	Civil War/ Conflict	Loss of livelihoods and lives; sexual violence and trauma

Source: WEDO, 2008

- Poor women are less able to purchase technology to adapt to climate change due to limited access to credit and agricultural services (e.g. watering technology, farming implements, climate appropriate seed varieties and fertilizers);
- Damage to infrastructure that limits clean water, hygienic care, and health services can be especially detrimental to pregnant or nursing women (10-15% of all women at any given point) as they have unique nutritional and health needs;
- Public and familial distribution of food may be influenced by gender and make women and girls more susceptible to poor nutrition, disease and famine, especially when communities are under environmental stress;
- Increased time to collect water (due to drought, desertification or increased salinity) and fuel (due to deforestation or extensive forest kill from disease infestations) decreases time that women can spend on education or other economic and political enterprises, and increase their risk of gender-based violence.



Gender and Climate Change: Lakshmi from Rajasthan

Alluding to gender dimensions of climate change at the village level, a recent UNDP (Delhi) poster 'Countering Climate Change' carries the statement of 25-year-old Lakshmi from Rajasthan and reflects the interdependency between women's empowerment and climate.

“Rainfall is erratic — it is sometimes less and sometimes more. So the crop is not good and the food is not sufficient. To earn more, men have to work at the factory and we (women) have to work very hard both in the house and the fields. Our daughter passed 9th class but we made her leave school to help us work in the fields, get water and do the housework.”

Vulnerability of Indigenous Women

Indigenous peoples are arguably among the most vulnerable populations for a complexity of reasons. Most notable is their substantial dependence on natural resources, making them vulnerable to changes in the quality and quantity of natural resources. The indigenous peoples of Asia face additional challenges as they are often discriminated against and live in excluded communities in Asia (IFAD 2002). They are frequently absent from decision-making processes, and the ecological systems upon which they depend are increasingly controlled by non-indigenous peoples and corporations.

The 2006 Human Development Index (HDI) for Scheduled Tribes (adivasis) in India shows that their HDI is about 30 percent below that of all-India and, on an international scale, they would fall among the poorer countries of Africa (Sarkar et. al 2006). They are subject to displacement in the name of development projects from which

they derive little or no benefit. Often they are subject to legal discrimination, like in peninsular India, where they are subject to non-judicial forms of punishment and imprisonment. Due to very limited access to education, health facilities, new technologies, agricultural inputs, credit and infrastructure development, their economies have remained virtually cut off from the country's economic growth and technological development. A 2006 study by DFID and the World Bank draws attention in particular to the socio-economic exclusion of dalit (lower castes) and Janjatis (indigenous peoples) in Nepal from access to assets, services, voice and agency. As a result, indigenous communities can suffer from chronic problems of extreme poverty, insurgency, violence, discrimination and plunder of material resources by external actors and forces of privatization and globalization.

While not diminishing the impact of these conditions on indigenous men, attention is required to the compounding factors women experience, which contribute to their further disempowerment. Gender—characterized by

differences in traits and attributes—commonly transfers into differences in power including unequal access to resources, opportunities and development. These gender-based power relations are often produced and sustained to serve specific interests and values of the dominant groups of people and/or communities.

Poverty among indigenous women and, thus, their vulnerability to climate change is attributable to these same relations of gender and power embedded in the structural inequalities of larger social, political and economic institutions that determine, inter alia, legal rights and ownership, customary and religious practices, and economic, business and livelihood options. Among adivasi women, for example, access to land, credit, and resources can be further restricted than the already limited access to indigenous peoples on the whole, and they may experience inequality in the market and workplace even within their communities, all of which exacerbates poverty—a pattern which will be explored more fully in chapter 4.

Traditionally, adivasi/indigenous women have played an important role in preserving their



cultural heritage, including managing local resources sustainably. They have been producers and providers of food for their communities. They have been “the custodians of biodiversity for many of the world's ecosystems and practitioners of medicine, pharmacology, botany, nutrition and keepers of agricultural technology that sustains poly-cultures critical to maintaining biodiversity” (International Indigenous Women's Forum Declaration, 2005). There is a general agreement, however, among academics and within indigenous communities that these traditional positive roles of women are on a decline.

According to adivasi women in a national conference of adivasis at Ranchi, Jharkhand in February 2007, women's declining social stature within society and growing vulnerability over the past 50 years, can be attributed to the following: (1) increasing erosion in women's use and control rights to land and housing; (2) lack of access to new technologies and agricultural extension services; (3) human insecurity and displacement; (4) lack of participation in decision-making processes on use of community resources (forests, pastures, water); and (5) inadequate knowledge and control over marketing (GLRF, 2007:4-5).

These are aggravated by lack of attention to such issues in development and the lack of infrastructure, including communication information technologies, in women's communities and personal lives.

In Asia, this has contributed to many adivasi women living at the margins of society. They “suffer from multiple discriminations both as women and as indigenous individuals. They are subjected to extreme poverty, trafficking, illiteracy, lack of access to ancestral lands, non-existent or poor health care, and to violence in the private and public sphere” (GLRF & CWLR 2006:20). These result in a complex web of severe constraints that increase women's poverty making it difficult to overcome, among other challenges, the impact of natural hazards and environmental stress to their lives and livelihoods.

Lucky Sherpa (currently a Member of Parliament, Nepal) succinctly said, “Indigenous women, in their day to day struggle for livelihood experience a triple discrimination: as women in Nepal, as members of the indigenous community, and as women of the indigenous community” (Kelkar, personal communication, June 2006).



3

Restructuring of Indigenous Economies & Gender Relations in Asia

Indigenous capabilities for management of natural resources and preserving biodiversity have been evident for centuries. While there are theories that exhaustive resource use and exploitation by some ancient (considered indigenous) societies contributed to their collapse, resource management by the majority of small-scale indigenous societies has been ecologically balanced (Kalimantan, Langub, 1996). This balance, however, has been challenged during various historical attempts by ruling regimes and corporate agents to control natural resources and, in turn created a new geography of power that gave rise to normative orders beyond the indigenous collectivity, rupturing the remnants of dignity associated with indigenous culture and knowledge.

Indigenous people's relationship to the natural environment was significantly altered by the restructuring of political economies, with significant impacts on women. When forests were under local indigenous control, particularly in matrilineal societies, women played an important role in forest-based production of goods and often enjoyed high status based on their knowledge of flora and fauna and their role in religious rituals with strong ties to the forest. While women certainly continued to use forests after state centralization, they often had to do so clandestinely and in short visits. In addition, many forests were cut and replaced by mono-crops that provided few of the resources that women previously controlled and utilized. With limited access to a much altered forest, women's power and value in the community was reduced.

More recently, women's access to land and other productive resources have been declining due to privatization—a system which favors the elite, enabling them access to resources and education

at the exclusion of others. This has affected even matrilineal communities, like the Khasi and Jaintia in Northeast India where women have decreased access to productive resources, yet they continue to bear the principal responsibility for household food security (Kelkar, Nathan and Walter, 2003; Nathan and Kelkar, 2004; Kelkar 2008). This gender-based household responsibility burdens women to look for other and additional means of livelihood, including those that increase their risk of violence, human trafficking, and sexual exploitation. This risk is further heightened by widespread illiteracy, familial and social violence, and restricted livelihood options.

To this day women are more vulnerable and more excluded than men even among the excluded groups of adivasi and indigenous peoples. Like the caste Hindus, adivasis and indigenous peoples in Nepal have social norms governing gender relations that reinforce women's inequality, subordination and dependency. Women's access to and control over land—the primary means of production traditionally—is dependent for example on their relation as a daughter, wife or mother to a land-owning man.

Nevertheless, these vestiges of hierarchical arrangements are increasingly questioned by civil society and new forums of dialogue on human rights by non-state actors, including the United Nations Permanent Forum on Indigenous Issues (UNPFII) and are challenged by the increasingly significant role of non-governmental organizations in the establishment of global norms. In multiple ways these actors and forums are influencing the formalized apparatus of politics, redefining the scope of human rights, and involving hitherto commonly excluded women and men. This socio-political dynamic shows that “excluded norms and actors are one of the factors in the making of

history, even though they only become recognized when formalized” (Sassen, 2006: 279).

Impacts of Privatization and Globalization

Most recently, the additional pressures of privatization and globalization of the world's economy have shifted power further away from indigenous peoples within their local economies and strengthened the authority of non-indigenous peoples. This integration of adivasi communities into modern socio-economic systems has led to significant changes in the nature of overall social, economic and, ultimately, gender relations (Nathan and Kelkar, 2004; Mukhim, 2008):

- Privatization of common properties and productive resources—mainly land, forests, and water bodies limits public access;
- Production increases for sale in the public market, as compared to earlier forms of

production for self-consumption;

- The growing dominance of men in community management, ownership and control of land and forests;
- Large-scale involvement of women in agricultural production, including livestock, fisheries and non-timber forest products (NTFPs), a phenomenon called the feminization of agricultural labour;
- Separation of land from labour. Labour no longer providing a claim to land and the ability to claim land without labouring on it;
- The gradual or rapid decline of NTFPs in the unregulated commons (community forests with free access to use);
- Domestication and shift of valuable NTFP species into the home gardens or privately-owned fields;



- Few remaining community or sacred forest groves and village forests—used to maintain the church and support the poorest—are small, shrinking and deteriorating in quality, stressed by increasing demand and limited resources;
- The growing atomization of households and individuals, as compared to earlier forms of social reciprocity, e.g. mutual exchange of labour and support for human and economic security; and
- Traditional institutions of community governance eroded by an inability to adapt to or overcome new and technological challenges.

The market-driven processes affiliated with privatization affect indigenous women and men differently, and unfortunately has not mitigated the decline in indigenous women's socio-economic position, but arguably exacerbated it. For example, women's increased involvement in agriculture, fishery, forests and livestock has not resulted in

increased ownership or control rights to such livelihood resources and their produce. Women's work in management and processing of NTFPs from home gardens for sale in public markets have not led to their visibility as farmers or decision-makers of the community economy. And the atomization of the household—compounded by the emigration of men and increased role of women in agricultural production—has made many adivasi women responsible for virtually all household sustenance (production, care and provision of food) while also depriving them of day to day support from other members of the community.

It would be simplistic and misleading to state that the erosion of indigenous women's position in their communities is caused solely or even collectively by colonialism, privatization, globalization or environmental stress due to climate change. The interdependency of changes in economic practices and gender equality is complex. Nonetheless, these factors undeniably contribute to the complex pattern of constraints



indigenous women presently face. This complexity is illustrated in the following observations of non-timber forest products (NTFPs) harvesting in India.

Non-Timber Forest Products

A 2004 field study in Meghalaya and Bastar Chhattisgarh, India, found that most non-timber forest products (NTFPs) for sale in the local market come not from forests, but from home gardens or swiddens (Nathan, 2004). Valuable trees, such as tamarind and mahua, are increasingly planted in domestic areas—the swiddens, gardens, orchards, or other places within community settlements. The cause, cited earlier in a 2000 extensive survey of NTFPs, is attributed to the commercialization of NTFPs and the resultant tendency for common property systems to be privatized, limiting access. The trend is so prevalent the authors state, “increased commercialization of NTFPs is likely to lead to a

breakdown of common property systems” (Neumann and Hirsch, 2000, 43).

There is an additional observed correlation between privatization of forests, and loss of biodiversity due to divergent values of NTFPs and their management. Corporate forest management in Asia often leads to mono-cropping or the intensive production of the species—a condition conducive to larger-scale commercial harvesting. It effectively discourages rotational cultivation and has serious implications for the survival of traditional, staple varieties of crops. A study of the impact of the Sloped Farmland Conversion Programme on agro-biodiversity in Dulongjiang, China, reported that since commercialization, many crops and varieties that used to be planted in the swiddens have basically disappeared. The survey identified 49 crop varieties and of these 5 seed varieties have totally disappeared; the seeds of 17 varieties are planted by very few households; and the seeds of 8 varieties are



regularly planted. The remainders are no longer planted. Biodiversity is at further risk, as many of the varieties whose seeds still survive can only be planted in swidden fields and many of these will lose their viability if they are not planted regularly (ICIMOD Tebtebba-IFAD, 2007).

Use of forests by smallholders, women or men, on the hand typically does not jeopardize biodiversity. Smallholders use the forest not only for commercially valued species but also for those species that have local value. Furthermore, being aware that their livelihoods depend on forest resources, adivasi and indigenous peoples are arguably more likely to maintain high plant variety as well in the structure of forests managed by them.

It is worth noting, however, that this is not always the case. A number of adivasi communities have been attracted by the growing market and have turned large tract of original forests into broom

grass plantations, thereby shifting their traditional subsistence farming strategies to accommodate cash crops to generate income for the household (Mukhim, 2008). Other attempts to democratize control over NTFPs have also had problems. Various Joint Forest Management (JFM) projects in India that aim to institute village-level control over access to NTFPs, have found this difficult to implement; social sectors depend on forest products to varying degrees, leading to inequity in harvesting and use. In addition, those in better-off socio-economic sectors and those relying less on forest resources for income, can very easily decide to set aside areas of forest for regeneration. The issue of deforestation, mono-cropping and biodiversity is therefore complex, since there are demands by communities for food security as well as other income for additional subsistence needs, and processes are influenced by power relations between socio-economic groups.



4

Adivasi / Indigenous Women's Relationship to Natural Resources: Compounding Challenges

Field visits by the author to India and China in 2006 and 2008, and decades of development work with women, reveal that in many cases indigenous women bear the burden of gender discrimination as well as the brunt of changes to their environment. This is evidenced when examining their ownership and control of resources, participation in decision-making processes, production of goods, gender roles in the household and local economy, and in unfortunate extremes, women's risk of gender-based violence.

Ownership and Control of Resources

Devolution of forest management out of community hands and into private companies or individuals has resulted in greater socio-economic disparity in many forest societies. Income generated from forests and power has accumulated under local elites, who have commonly excluded women and the poor from usufruct, ownership and control rights to land and forests. Hence, forest-based adivasi and indigenous societies have in many cases experienced deepened gender inequalities (Kelkar and Nathan, 2003).

Among the matrilineal Khasi, for example, women's status has traditionally depended on their claim to and ownership of ancestral property. Women's ownership of land, however, is no longer the determinant feature of the Khasi property system, in large part due to privatization. In some villages, formerly community-owned forests are not deemed to constitute 'ancestral property' in the process of registration as private lands. Instead the land may be deemed 'self-acquired' property, the right to which is governed by different principles and controlled by men who legalize ownership. In other villages, however, forests were privatized and the land was divided and distributed to those whose lands or households were adjacent to the

forest, and titles given in the names of women and men (Nathan, 2004).

As important as the legalities of ownership, control rights to resources have been changed in land and forest management. In the traditional systems of Khasi, Jaintia and Garo in India, and Mosuo in Yunnan, China, for example, women's ancestral property was managed by her uncle or brother. The direct role of the maternal uncle or brother remained even after the men married into other clans. This was possible since marriages often took place within the same village. But, increasingly husbands are effectively managing land and forests, as well as the capital they generate—a key economic resource for households. This capital, however, may also be deemed 'self-acquired property' and is passed on from father to son, bypassing the traditional matrilineal economic system. While women in land-holding Khasi families are in a better position than if they were completely propertyless, the rise of the timber industry has enabled men, as husbands, to increase control of the family's economy.

In landless Khasi families, the main source of cash income is wages from logging, which are typically earned and controlled by men and has contributed to very strong male domination in these households (Nathan, 2004). During field visits in 2006 and more recently in 2008 in Jharkhand, Chhattisgarh and Andhra Pradesh, India, women often cited threats by their husbands—including beatings and expulsion from the house—were their husbands to demand but be denied money for liquor. The women, without claim to land or the house, had little with which to bargain. Comparatively, being thrown out of the house is something that a house-owning Khasi woman is not likely to be subjected to (Kelkar, 2008a).

The Nagas, on the other hand, are patrilineal communities where women have no inheritance rights over land or housing. Nonetheless, women have significant influence in the economy as a consequence of their important role in agricultural production, their central role in the sale of agricultural commodities, and their cash earnings through shawl weaving (Nathan, 2004). This forms the basis of their relatively high position in Naga society.

Community Decision-Making and Power in the Marketplace

Among adivasi, women can be even further marginalized within their traditional institutions as they often have little representation or voice in village councils. While amendments to India's constitutional in the 1990s in India, which decentralized governance like the Panchayat Raj Extension to Scheduled Areas (PESA), provide that women shall have one-third reservation in local government institutions, this has not been implemented in a number of states of India, and less so in adivasi areas. Male leaders in adivasi communities defend practices that exclude women from decision-making in the communities, even in matrilineal communities like Meghalaya in India, and Mosuo in China, where women are excluded from the village councils.

Patricia Mukhim—a Khasi woman activist and journalist—observed that the recent introduction of formalized village management of the economy, which reinforces men's role as community managers enables them to limit women's participation in community-level decision-making processes regarding natural resource management, including management of forests. Mukhim also attributes this control by men to the establishment of once fallow lands as village reserved forests, and the associated flow of funds into the village through projects like the IFAD-funded Northeast India Natural Resource Management Project, which has also served to increase men's control over the economy—even though their knowledge of the local economy is

limited since they neither play much of a role in production nor in marketing of agricultural produce (Mukhim, 2000).

These power relations bleed easily into the marketplace. In Khasi and Jaintia Hills in Meghalaya, India, for example, adivasi women are frequently at the mercy of more powerful traders who control the movement of goods in the market and women may lose a lucrative enterprise, passed on to male hands because of women's exclusion from markets. Compounding this, subsistence and bartering roles of women are increasingly devalued with the expansion of market structures. Notable exceptions are in the wool-based enterprises of some mountain communities, such as in Uttaranchal, India, where they are moving into monetary economies.

There are, however, examples of advances in adivasi women's empowerment. In East Khasi Hills villages, Meghalaya, for instance, a number of cases were reported in recent years where Khadduh—the youngest daughter who is traditionally obligated to provide support and succour to all members of the family—has asserted her claim to full ownership and management rights of her parental property in order to ease the burden of this responsibility. These claims were made in response to efforts by the uncle or brother of the Khadduh to claim the family income and/or trees for his personal benefit.

Another example lay in the initiative of a forest cooperative women leader—Kalavati Devi. While president from 1996-2000 of the Primary Forest Produce Cooperative Society (PFPCS) in Bajawand block of Bastar District, India, Kalavati led a reform of the cooperative policies that govern distribution of harvesting allocations and payment for tendu leaf, commonly used in Bidis or hand-rolled cigarettes of India. Harvesting allocations, granted via 'collection cards', were traditionally provided to the male head of household, even if the woman was the primary collector of the tendu leaf. After much political

bargaining the policy was changed so the collective's member (i.e. the person, typically a woman, who harvested the tendu leaf) would be allocated the card as well as the related payments. As a result women are better positioned to control the income from tendu leaf sales, household savings were reported to have increased, and women gained influence over the cooperative's decisions on sale conditions of tendu leaf. These policy changes spurred growth of the cooperative and the participation of women members in particular who had the opportunity to regain some of their lost control over forests, and over their own livelihoods.

The weakening of traditional norms among adivasi and indigenous peoples, along with the growing visibility of women in the marketing of agricultural products and in the public sphere overall, angers some men who call for women's return to domesticity. On the other hand women who, having grown familiar with new gender roles and realizing the loss of control over land and other productive natural resources are increasingly demanding autonomy and independence. This underlying social context should be understood in cases where women suffer gender-based violence, including the continued and in some areas increased violence against women in forest areas

of Asia—such as demonizing of women as witches and witchcraft persecution (Nathan, Kelkar and Yu 1998; Toppo 2008; Bosu-Mullick 2008).

“We cannot give birth to land. If men sell the land for plantations, where must our children live?”

A West Papuan Woman participating in 3rd Congress of AMAN, Jakarta, Indonesia, June 2007 (Tebtebba 2008: 76)

In sum, these observations of loss of control by adivasi women over natural resources and the compounding loss of relative power in relation to men, can be largely attributed to four significant constraints: (a) interventions from outside the community—such as colonization, privatization, and globalization—which have by and large been extractive and exploitive; (b) fragility of adivasi's economy and production structures; (c) weakening of traditional institutional mechanisms which could mitigate the damage; and (d) as is typical in gendered relations, a power differentiation between women and men reinforced by social, economic and political structures, whereby women have restricted voice and efficacy in community affairs, as well as limited and often exploitive external contacts.



5

Agriculture: A Lens for Mitigation and Adaptation among Adivasi Women

In Asia, women constitute approximately 70 percent of the agricultural labour force and perform more than 70 percent of farm labour, though it varies by country and region. In India, for example, women constitute approximately 50 percent of agricultural and livestock workers. The country's 2001 census data states that 39 percent of the total workers in agriculture (cultivators and farm labour) are women, and 23 percent in the category of 'other workers' related to fishery and livestock are women. A general pattern throughout Asia however, is the poorer the area, the higher women's contribution—largely as subsistence farmers who work small pieces of land of less than 0.2 hectares (IFAD, 2002; Kelkar, 2007). While the rate of feminization of agricultural labour differs across regions, it reflects common circumstances—the increased employment of women on a casual basis in small unregulated workplaces—and the common causes of distress emigration of men for better paid work in agriculture and non-agriculture sectors, and/or the relegation of less profitable crop production to women (Sujaya, 2006:5).

Indigenous communities of Asia are not immune to the feminization of agricultural work. As is seen worldwide, these women are the chief producers in the swidden fields and the home gardens, holding responsibility for choosing planting seeds and locations, weeding, fertilizing, processing of the produce, and so on. It is Adivasi and indigenous women's very reliance on natural resources and agriculture that make them exceedingly vulnerable to climate change, especially as they often live among the world's most poor with limited access to resources. In Nepal, for example, large-scale emigration of men has left women as de facto farm managers. Yet effective management by women is constrained by women's inability to access credit in a timely

fashion, if at all, since most land titles remain in the men's names and men's signatures are required before credit can be provided. This leads to significant delays in procurement of credit and agricultural inputs, such as fertilizer, with consequential losses to production. As the 2008 World Development Report Agriculture for Development in a Changing World notes, labour regulations are needed that help incorporate a larger share of rural workers into the formal market and eliminate discrimination between women and men.

Three international agreements aim, inter alia, to ensure women's participation in environmental management: (1) the 1979 Convention on the Elimination of All Forms of Discrimination against Women (CEDAW); (2) the 1995 Beijing Platform of Action, and (3) the United Nations Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly in September 2007. Building on these agreements and concerns regarding impacts of climate change on women, civil society—at the 52nd Session of the Commission on the Status of Women (CSW) in 2008—identified climate change and its gender dimensions as a key current challenge to women's empowerment. In particular the agreed Resolution 21 (jj) on Financing for Gender Equality and the Empowerment of Women, urges governments to “Integrate a gender perspective in the design, implementation, monitoring and evaluation and reporting of national environmental policies; strengthen mechanisms and provide adequate resources to ensure women's full and equal participation in decision-making at all levels on environmental issues, in particular strategies related to climate change and the lives of women and girls.” In sum, stakeholders (individuals, civil society, NGOs, and governments) increasingly recognize the growing nexus between two



significant regimes—that which aims to advance gender equality and that which aims to address climate change.

While there is willingness within the national and international communities to invest in agriculture to reduce poverty in the rural sector, the challenge lay in implementing policies that effectively overcome inequality and discrimination against indigenous and women farmers. With the feminization of agricultural work in China, India and other countries in Asia, contemporary rural-urban inequality in these countries is a matter of gender inequality. The persistence of unrestricted violence against women within the home and outside, shows that policy measures to simultaneously reduce poverty and inequality is not a contradiction in terms. This would include policies that foster their ownership and control rights to land and credit; provide access to higher education, technical training and health care; and support their participation in relevant local and national decision-making process and governance.

Transforming the management and ownership entitlement of household resources and building women's capacity can significantly increase productivity, particularly where these resources are under-utilized as with the poor. Furthermore, secure access to and control over natural resources

(land, forests, water and livestock) would make women more able and, likely, willing to make investments in adaptation and disaster risk reduction measures as they would have more invested in their success. In the face of new challenges caused by global warming, this strengthened asset base will be essential for women to cope with strains of climate change.

Mitigation & Adaptation

Mitigation includes efforts that directly address the cause of climate change, such as the emission of greenhouse gases (GHGs). **Adaptation** refers to adjustments in practices, processes or structures to moderate or change the risks of climate change (experienced or expected) and, where possible, take advantage of beneficial opportunities arising from climate change (Lambrou and Piana, 2006). Both mitigation and adaptation measures can be crafted by the international community, states, city municipalities or local communities, families and individuals.

When adaptation measures are taken without governmental directive, they are considered **autonomous adaptation**. Some of these include (Easterling, et al, 2007):

- Changing agricultural inputs, such as to crop varieties with increased resistance to heat, shock or drought; altering fertilizer rates to maintain grain or fruit quality consistent with the climate; and changing amounts and timings of irrigation;
- Harvesting water and utilizing water management to prevent erosion and water-logging in the areas and times of increased rainfall;
- Altering the timing and location of cropping activities;
- Diversifying income by integrating into farming additional activities such as raising livestock; and
- Using seasonal climate forecasting to reduce production risk.

Indigenous peoples have a long record of managing the climate change effects. For instance, Nimi Kumari, a Bohara woman from Banke district of Nepal, explained her strategy to deal with erratic monsoon rains: “As we never know when the rain will come, we had to change. I started to change the way I prepare seedbed, so that we don't lose all our crops. I am also raising different crops depending on the situation ... We also need to use early or short duration paddy and crops that are resistant to baadh (floods) and sukha (drought) if they exist.” (ActionAid and IDS, 2007: 6).

Adaptation Strategies

In November 2008, field observations by the author in villages in Khuti District, Jharkhand, India, indicated a serious impact of climate change on adivasi livelihoods, specifically related to lac production. Women are largely responsible for the production and sale of lac, a natural polymer (resin) produced by a tiny insect, *Kerria Lacca* (kerr) that is cultured on shoots of several species of trees—mainly palas, ber, peepal and kusum. While people's livelihoods in this area are highly dependent on the local Khutkatti forest that are traditionally community managed, as well as paddy cultivation, and livestock. Homestead

production of lac is an essential component of their economy, second only cultivation of paddy according to the Indian Lac Research Institute.

For the past several decades, Lac has been cultivated as a subsidiary source of income by the forest dwelling people in the states of Jharkhand, Chhattisgarh, Orissa, West Bengal, Andhra Pradesh and North Eastern states. India is the highest producer of lac, contributing about 55 percent of the total world requirement, which is now largely used for polishing fruits (to keep them fresh and protect from rotting) and handicrafts.

For the past 3-4 years, however, the lac-host trees (with the exception of kusum in some villages) have been affected by “unseasonal, short and heavy rains, followed by extreme cold weather and week-long fog and frost, around mid-March, when the insect [Kerr] is ready to produce lac.” As a result of the extreme cold (4-10°C), lack of sunlight and frost, the Kerr insects tend to die. This occurred in recent years since 2006, reducing the production of lac to 25 percent of what was harvested in 2004-5. Consequently, the local lac industry Tajna River Industries Private Ltd. has begun importing lac from Thailand (Kelkar, 2008a).

In a meeting with Mahila Mandal—a village women's organization—and the Village Head in Gangyori village of Khuti District, the President of Mahila Mandal said, “You ask me how we are affected by the loss in lac production. We can no longer buy some essential things like vegetables, dal, clothes and so on.... We are trying to meet these shortages in our day-to-day sustenance by cutting and selling wood from the forests. We try to cut only dry and old trees. We also work as farm labour. Our daily wages are Rs.25 to 30, and men get Rs.60 -70.” The village-head added that a number of lac growing trees have been cut down and sold in the market as the trees have become unproductive.

In response, in October, 2008 with the assistance of a local NGO—Professional Assistance for Development Action (PRADAN) with outreach to a large number of adivasi women in the



state—Mahila Mandal members introduced new seed sticks of lac, bought from Chhattisgarh and Andhra Pradesh. In view of the erratic rain and fog in the forthcoming March, however, they are skeptical about the result of these efforts in 2009.

Over time, the community has adapted to these challenges by shifting their livelihoods away from one dependent on (privately-owned) trees for lac production, and towards commercial logging and agriculture. During a 2008 visit to Mookaiwai in Jaintia Hills in Meghalaya, India, it was observed that although subsistence farming is upheld as the social norm, there is in practice a substantial increase of commercial activities, including commercial logging in the communal forest, the use of which is governed by Wahehchnong—an all male community body for decision-making. Furthermore, women and men are both increasingly engaged in commercial production and sale of vegetables.

This transition, however, is not always easy. Sadaka, a farmer, part-time school teacher and mother of a 6-year-old boy, reported on her “new difficulty” over the last 3 to 4 years—the

unseasonal and frequent heavy rains which have adversely affected the production of vegetables such as cauliflower, green peas and beans. “We do not know what to plant and when to plant, as we cannot make out anymore when the rains would end and summer would come,” (Kelkar, Fieldnotes: 2008a).

Unlike in Jharkhand and Meghalaya, however, field visits in 2008 also found circumstances of beneficial climatic shifts, presumably due to global warming—this time in Cordilleras, Philippines. In recent years, the climate has reportedly become warmer in winter months, affecting the mix of crops farmers can grow; Farmers are producing less strawberry and more vegetables (beans, potato, cauliflower, tomato) that can be grown in warmer weather. Even at the higher locations of Baguio, Philippines, the warmer climate is enabling farmers to grow new varieties of vegetables, something they could not do previously. This reinforces that adaptation—to both disadvantageous and advantageous new circumstances—will be critical for communities to remain productive livelihood amid a shifting climate.

Increased Climate Resiliency from Rural Employment Programme

India's flagship rural employment programme has shown some “unusual spinoffs, chief among them reducing the impact of climate change” (Rita Sharma, Secretary, Ministry of Rural Development, Government of India, in Indo-Asian News, February 8, 2009).

One of the distinguishing features of the National Rural Employment Guarantee Act (NREGA) launched in 2006, is the creation of environmentally sound productive assets, under the decentralized administration of gram panchayats or local councils (for details see Kelkar, 2009). NREGA seeks the creation of “durable and sustainable assets” and production methodologies such as water conservation, harvesting and irrigation works; flood control and protection works; drought proofing, including afforestation; renovation of traditional water bodies; land development; and rural connectivity. During the last three years (2006-2008) NREGA has created 4.7 million projects, over 50 per cent of them related to water conservation. For instance, in Sidhi district of Madhya Pradesh, 8000 wells were dug since the launch of NREGA in 2006—and increased the resiliency of the community to drought.

Despite three consecutive droughts in the past three years, water from these wells has made irrigation of fields possible. Likewise, in Karauli district, facing consecutive droughts for four years, the construction and de-silting of 2000 pokhars (village ponds) has reduced distress migration during summer by bringing farmers back to land, particularly in the adivasi belt of central and north India (PRIYA, 2008; Shah, 2009).

More recently, in a discussion on NREGA's multiplier synergy in the current economic down turn in India, it is observed that “demand in the economy is being sustained by rural buying, which has received a boost from NREGA incomes” put into the hands of the poorest of the poor on a massive, unprecedented scale. (Shah, 2009) But these productivity

enhancing measures did not make enough efforts at including adivasi and rural women in planning, management and social audits of employment generation through creation of productive assets.

Autonomous Adaptation

Despite limited support for adivasi and indigenous women to plan and implement adaptation strategies, it is encouraging that in a number of cases adivasi and indigenous women in poor rural areas have autonomously adopted adaptation strategies.

In Jaintia Hills, for example, women vegetable farmers have taken up a new variety of cabbage and cash crops such as turmeric and broom grass, which can withstand unseasonal and heavy rains. Likewise in Ribhoi district of Meghalaya, two women swidden farmers confirmed their traditional major cash crops of beans and karela (bitter gourd) were repeatedly destroyed by irregular and heavy rains experienced over the past 4-5 years. Hence, they have switched to cultivation of new cash crops—ginger and strawberry—which they grow alongside sweet potato, yams, beetroots, carrots, and Chinese turnips in the swidden field, though in smaller amounts. When queried about any difficulties in marketing these new crops, Mirseda Umdor, the older of the two farmers said: “We have no problems in the marketing of vegetables. We are able to sell all kinds of agricultural produce, either in the local market or in Shillong”. To that end, they've also added traditional herbs and fruits grown in their field or backyards to what they sell at market, while providing for household consumption as well.

In addition to ingenuity, these efforts evidence that indigenous women's extensive experience in agriculture as well as knowledge of nutritional and medicinal properties of local plants, roots and trees—including edible plants not normally used—may be of central importance in communities coping with environmental stress and food shortages expected due to global warming.

Worth noting, these autonomous adaptation efforts



mirror similar observations of autonomous adaptation by the International Union for Conservation of Nature (IUCN), who found that in Sikkim, India, for example women farmers have cultivated a new variety of cardamom, which is better suited to the increased frost and fog. And in the Terai area of Nepal, women have also modified seed choice and switched to cultivating crops that can be harvested before the region's floods or plant taller, water-resistant rice varieties have mobilized to better prepare for floods. They've also built community shelters, take their assets and livestock to higher places, and those who have enough resources, increase the plinth level of their houses/homesteads to protect their belongings (IUCN, cited in Bugtong; 2008:11)

These last examples, of simply affording to build shelters or reinforce vulnerable homes evidence the practical link between wealth and capacity for adaptation. While not directly an adaptation strategy, economic resiliency is a cornerstone of effective autonomous adaptation. Therefore, initiatives that directly support women's livelihoods are essential.

Vocations independent of climate

In Bastar, Chhattisgarh, Gond and other areas, adivasi women have developed their skills in traditionally male vocations such as in terracotta, bell metal and wood sculpture. These alternative skills could increase their economic resiliency as the climate shifts, since they decrease women's dependency on agriculture or collection of NTFPs, which global warming is expected to impact negatively or stress in many areas.

In India, self-help groups (SHGs) have been a highly effectual strategy to support women's livelihood and social empowerment. SHGs give market access to women for their non-timber forest products (NTFPs), which include, inter alia, gum karaya (used as medicine and food), maredugaddulu (used in preparing sherbets), narmamidi bark (used in making incense sticks, soapnut (used in soaps and shampoos), pongamia seed (used in hair oils and as a bio-substitute for diesel) and adda leaves (used for making plates). The greatest impact, however, has been the SHGs elimination of middlepersons, minimization of



overhead expenses, and focus on keeping profits within the community. Women's work is moved up the value chain, where they are not only the collectors of forest produce and makers of different products, but also sellers and negotiators for collective purchase of these products in the market (Kelkar and Nathan, 2005; Revelli, 2006).

UNIFEM provided support to this programme from 2005-2008 in partnership with the Kovel Foundation, an NGO based in Visakhapatnam, and the Society for Elimination of Rural Poverty (SERP), an NGO implementing "Velugu," Andhra Pradesh's poverty alleviation programme. It originally focused on Chenchus, a tribal community concentrated mainly in the north-eastern parts of Andhra Pradesh (Mahaboobnagar, Kurnool, and Guntur districts). Since then, however, self-help groups have replicated to more than 700, as of late 2008, in conjunction with 80 nearby Dalit Education Centres, and have over 10,000 members (OM International, 2008).

Social Visibility of Chenchu NTFP Collectors

“Prior to Sangam self-help groups (SHGs) we were socially considered ignorant beings; we did not know how to carry ourselves and to know where a bus was going. Men are listening to us now. Our social prestige has

improved because of our work—such as sustainable extraction of gum karaya, its grading, marketing and managing the procurement centres. People from the neighbouring villages admire us for our ability to do these things, also for our increased income and capacity to deal with the bank and GCC (Girijan Cooperative Corporation). Men no longer order us to do things and where to go and where not to go. Now after Sangam, we have acquired social visibility and social respect.”

In a similar vein, adivasi women in Simhachalam, Visakhapatnam district, who have successfully acquired skills in sustainable extraction of NTFPs, its marketing and management said, “Earlier we were called 'mokadura' or drunk ... now we are called 'nokadura', capable of speaking and acting” (Kelkar and Nathan, 2005: 19).

In addition to practical economic advantages of the SHGs, there are components that support social and political empowerment of women as well as they support women as individual and active members of a community, not only in relation to the head of the household. Women involved in SHGs have become known for their knowledge of NTFP processing and marketing, with many receiving training in business

management and negotiation skills. Some have been also trained to share these skills with women and men from other areas. Since SHGs can also provide small loans for women to purchase physical assets such as goats and hens, they help to diversify women's livelihood and have enhanced their social standing in communities. In South India (Andhra Pradesh), Chenchu women reported an increase in their confidence and social visibility, a result of the collective work (Kelkar and Nathan, 2007: 18).

Nonetheless, the self-help groups are limited in their geographic scope and capacity. A recent study of gendered livelihoods of adivasi women in South India noted that while the increasing presence of SHGs has had a positive effect on women in terms of facilitating community participation and income generation leading to increased welfare, they have not—and perhaps cannot—provide enough support for the vast practical needs of adivasi women and men living in extreme poverty and facing severe discrimination (Arun, 2008: 13). Still, they are one of a multitude of strategies that could be supported to strengthen indigenous women's capacity and resiliency, which will be increasingly needed in the face of economic strains due to climate change.

Mitigation Measures

Adivasi and indigenous women may easily have the smallest carbon footprint on earth. Their sustainable livelihood practices such as swidden farming, pastoralism, hunting and gathering, trapping and the production of basic goods and services, often use environmentally friendly, renewable and/or recyclable resources. Adivasis of Jharkhand, Chhattisgarh, Andhra Pradesh and the North-eastern states of India, for example, as well as the Karen and other indigenous peoples of Thailand, China and Myanmar, continue to practice jhum or podu (rotational agriculture), with very limited or no use of petroleum fertilizers. As a result, they not only produce few greenhouse gases, but the conserved forests in their domain and sustainable use of agricultural



lands provide the additional benefit of a healthy ecosystem that helps preserve biodiversity and provides a sink for global greenhouse gas (GHG) emissions (UNFII, Tauli-Corpuz and Lynge, 2008).

Indigenous communities are increasingly interlinked, however, to mitigation initiatives by external actors including forestry projects for sequestering carbon, and the development of alternative energy such as biofuel and wind power. Only limited efforts, however, are often made to include them in consultations and implementation of these projects at any level—local, national, regional, or international. For example, adivasi communities in Harda district in Madhya Pradesh, India, were neither notified nor aware of a carbon forestry project intended to regenerate forests for carbon sequestration and storage. Women however—and in some cases children—were employed on a seasonal basis to plant the seeds in the forest, but were not informed of their role in a larger carbon storage project (Madhu Sarin, 2003 cited in Tebtebba 2008). More concerning to indigenous peoples, some mitigation projects such as securing forests or lands for carbon sinks and renewable energy projects have been established on indigenous peoples' lands through means of deception, and without securing the free, prior and informed consent, particularly of women, of the indigenous community, as in the case of initial years of wind farms by Suzlon in the state of Maharashtra, India.

In other cases, Adivasi women have actively engaged with mitigation projects—to both fight against and collaborate with them, dependent on the circumstances. For example, in response to some renewable energy projects in the state of Maharashtra in India, Adivasi women emerged as leaders to prevent use of their ancestral lands and forests for wind energy farms. In other cases, however, as with the wind energy corporation, Suzlon, adivasi women have collaborated to facilitate the company's corporate social responsibility (CSR) policies, with some appointed as officers on the company's CSR team. This collaboration is an attempt by Suzlon to

understand the ethical basis of land transactions between adivasis and corporate agents, and—in consultation with adivasi women and men—introduce remedial measures for any social, economic or ecological damage resulting from the renewable energy generation. For example, women have requested to maintain access to their grazing land and have electricity and drinking water provided by Suzlon to households located within an area of 2-3 km of wind energy infrastructures. Recommendations were made by adivasi women that these assets be in the name of the women via the SHG collectives, and that all the future transactions and consultations be done with women, since “men drank away all the money gotten from the sale of land to Suzlon. When women get money, it is used for household needs, but when men get money it is used in drinking”. Another recommendation from Mandabai—an Adivasi woman leader of the community in wind-farm village Supa, Maharashtra, India—suggests that Suzlon should provide bicycles to girls enrolled in middle or high school, as an enabling strategy for higher education of girls as part of Suzlon's CSR strategy (Kelkar, Field Notes, 2008c)

More universal recommendations—to benefit all member of indigenous communities equally—is for regulatory payments for the communities' provision of environmental services, including carbon sequestration via avoided deforestation, and the frequently under-valued externalities of watershed and biodiversity protection. This would require an accountability mechanism to ensure that funds are distributed to women and men equitably.

Summary of Adivasi/Indigenous Women's Priorities

IPCC observes that a society's capacity to adapt is influenced by its productive base, including natural and human capital assets, social networks and entitlements, institutions of governance, national income, health and technology(2007:14). Over several years of field visits to indigenous areas in Yunnan, China, and the states of Andhra

Pradesh, Arunachal Pradesh, Chhattisgarh, Jharkhand, Meghalaya and Nagaland in India, women have articulated the following as strategic priorities that can reduce their vulnerability to climate change.

- Ownership and control rights to land, credit, housing and livestock (such as cattle, poultry, fisheries);
- Crop diversification, including flood and drought resistant varieties;
- Extension knowledge in sustainable use of manure, pesticides and irrigation;
- South-south sharing of information on how women and men in other areas are managing their livelihoods and adapting to environmental stressors;
- Capacity-building and training in alternative livelihoods;
- Flood protection shelters to store their assets, seeds, fodder and food for livestock and poultry;
- Easier access to health care services, doctors, pharmacists and veterinarians;
- Access to affordable and collateral-free credit for production, consumption and health care needs;
- Access to markets and marketing knowledge to enhance trade of their agricultural produce and NTFPs with confidence, and not feel nor be cheated and exploited by outside traders;
- Equal participation of women in community affairs, management of community resources and 'the commons', and decision-making related to negotiating and developing

livelihoods and financing of adaptation strategies.

These findings are similar to those of a 2007 study by Action Aid, where rural and indigenous women in South Asia clearly articulate what was required to help them secure and sustain their livelihoods more effectively (ActionAid/IDS, 2007: 4). These included: harvesting and conservation of water in rain-fed agricultural areas (for example, in Jharkhand and Chhattisgarh in India); flood protection shelter for the community to store their harvest and keep livestock during monsoon or unexpected rainfall periods (for example in Bangladesh and parts of Nepal); capacity-building through training and access to information on adaptation strategies, (for example in Nagaland in India); access to new technologies and markets for agricultural-based livelihoods (for example in Andhra Pradesh and North-eastern states India); availability of healthcare, education and financial services; and ownership and control rights to land and the produce throughout the region.

In sum, adivasi and indigenous societies in Asia are often very aware of practical support that would build their economic resiliency and assist them in adapting to ensuing effects of climate change on their livelihood. Women have assumed important roles in demanding that their human rights be respected when state or private sector introduces mitigation projects, and they are beginning to autonomously adapt and lead local movements towards gender responsive economic policies and rights-based initiatives.



6

Conclusion: Recommendations for Climate Agenda

There is increasing recognition that climate change disproportionately impacts the economically vulnerable, especially in areas at high-risk of natural hazards. Indigenous women are among the most vulnerable as they are among the most dependent on natural environment worldwide. Gender equality and women's empowerment is essential to enable them and all women to adequately adapt to the effects of climate change, as ascribed gender roles often equate to increased hardship. In the particular case of rural and adivasi women, strategies are needed to support their efforts to adapt to climate change. Without such strategies, progress in social and economic development will be limited. (See, for example, "SAARC Nations on Climate Change", in *The Himalayan Times*, Kathmandu, July 9, 2008). As a result, the following are recommended:

1. Deepen future research: More context specific research is needed regarding effective adaptation and mitigation strategies at the local and national level for indigenous communities, especially in the face of the current global food and energy crises. What are good practices or failures of adivasi and indigenous women efforts? What aspects of their own indigenous knowledge have been overlooked and could contribute to effective mitigation and/or adaptation? What barriers exist for women's access to alternative livelihoods in adivasi and indigenous areas? How may access to new technologies, higher level technical education, credit, marketing management, freedom of occupational choice and mobility specifically increase women's capacity to cope with natural disasters and environmental stress? What do adivasi women identify as priorities and strategic needs? Knowledge in these areas can spur innovation and increase the efficacy of policies and programmes. Conversely, the absence

of adequate research in these areas may lead to an absence of, ineffectual, and possible detrimental policies.

2. Strengthen participation of indigenous women and gender experts in climate change planning and decision-making processes.

According to the principle of free, prior and informed consent to access and use of resources in the domain of indigenous populations, adivasi/indigenous women alongside indigenous men should be adequately involved in consultation and decision-making processes in areas that effect their livelihoods. These include, inter alia: forest and agricultural policies and programmes; renewable energy projects such as biofuel production and hydro-electric dams; the establishment of carbon finance mechanisms and their beneficiary policies; biodiversity protection measures; and climate change mitigation and adaptation negotiations at the national and international level.

This participation could be facilitated through the following: (a) Training on projected climatic shifts and impact for specific geographical regions, to build knowledge among civil society, women NGOs and all stakeholders to strengthen their capacity to advocate for specific gender-responsive policies; (b) Consultations to share expertise between indigenous women leaders, academics, scientists, and traditional knowledge holders; (c) Workshops to facilitate South-South sharing of best practices from similarly at-risk communities; and (d) Gender experts in key Ministries and Governmental agencies to assist policy-makers and local institutions involved in disaster risk reduction (DRR) planning. In sum, forums for dialogue (at local, national and international level) should be supported where they exist—as in the current UNFCCC

negotiations, which allows access to civil society actors—and created where they do not. These efforts will help ensure that insights about differentiated impact of climate change as well as differentiated contributions to potential solutions can be shared and consolidated, and indigenous women's knowledge and experience of effective local mitigation and adaptation measures can contribute to more sustainable and responsive climate change policies.

3. Capacity-building for alternative livelihoods:

Access to alternative livelihoods will be essential for communities and individuals to both adapt to climate change and contribute to GHG mitigation. Although the suitability of any alternative livelihood is dependent on the individual and circumstances in which they live, some examples of alternative livelihoods that can both improve indigenous women's livelihoods in Asia and also be resource-wise, include: (a) moving up the value chain of natural resource use (i.e. sustainable growing or harvesting higher value non-timber

forest products such as medicinal plants, fruits, bamboo, and selective tree harvesting in rural and forested areas); (b) employment and self-employment in the information technology sector (in areas such as Northeast India, where literacy rates are higher, especially among the indigenous youth) (c) production of cotton and silk fabric using herbal dyes, and weaving of shawls and other marketable textiles (such as in Chhattisgarh, Rajasthan, and the Northeast in India; Yunnan in China; and indigenous areas in Laos, Thailand and Vietnam); (d) production of artistic work such as terra cotta, wood carving and bell metal sculpture in Bastar, Chhattisgarh; and (e) providing environmental services such as avoided deforestation, regeneration of trees, maintaining and increasing biodiversity, maintaining a clean water supply, and reducing of GHG emissions with adequate payment for these services via clean development mechanisms and other carbon-credit systems.

Recommended support for capacity-building in



alternate livelihoods among indigenous women include: (1) Upgrading of traditional knowledge and skills and revitalizing it in areas where it has been lost; (2) Introduction of new knowledge and technologies to support women's access to expanded markets; and (3) Women's unmediated access to resources, including land, housing and credit (not only through the household or the head of the household system). The significance of this last point is readily evident as a means to empower women and increase their economic security as well as act as good stewards of the environment. As an example, in China's agriculture system it has been seen that through policies that ensure women's better access to technologies and credit, indigenous women have been more likely to increase efficiency in their use of renewable energy and therefore help mitigate climate change, and more secure access to forest resources has resulted in lower rates of deforestation, and thereby increased forest's carbon sequestration.

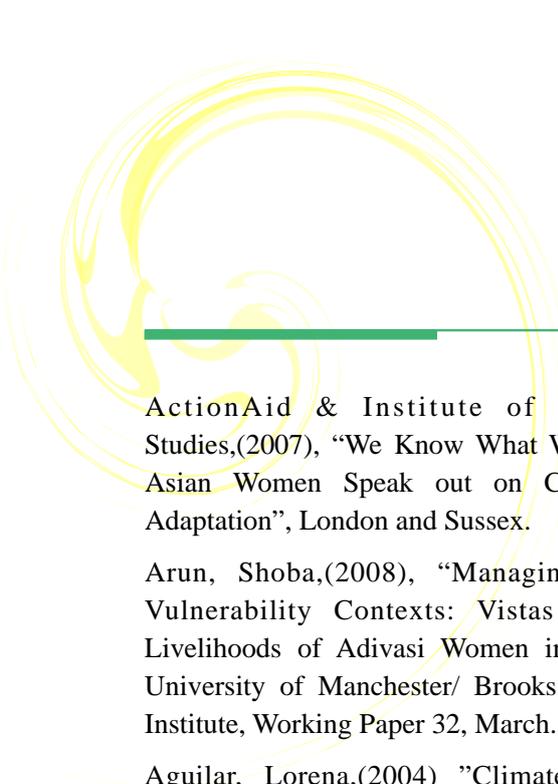
4. Implement policies that are responsive to the gender differentiated impact of climate change:

As the international community develops policies and mechanisms to mitigate and respond to climate change, gender mainstreaming will be especially critical in three areas—disaster risk reduction (DRR) planning and implementation at local, national and regional levels; countries'

Nation Adaptation Programmes of Actions (NAPAs); and in the numerous climate funds that are in the process of being established within the United Nations and World Bank to ensure that the projects funded benefit women and men equally. In its entirety, the climate regime will have long-lasting and wide-reaching impact, and therefore needs to mainstream gender at the start and core of its institutions.

While this effort requires significant gender expertise within institutions, and likely gender experts to assist policy-makers, it will reap very practical benefits. A clear example is provided by a 1998 early-warning project in La Masica, Honduras, which contributed to no reported deaths after Hurricane Mitch. Credit was given in large part to gender mainstreaming in hazard management and the early-warning system that was developed and included gender-sensitive training to community members. Possibly not inconsequentially, women once trained, also ran the previously neglected early-warning system (Aguilar, 2004). There is need for similar efforts across the board to increase gender sensitivity on the differential impact of global warming on women and men, and implement mechanisms that identify and spread good examples of local climate change adaptation strategies, especially for South-South learning and among indigenous and rural communities.





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Annex B – Case Studies on Women’s Land Rights and Climate Change Adaptation

Drafted by Landesa

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Case studies from around the world illustrate the importance of women’s land rights to gender-responsive climate policy, and in particular ability and incentive to invest in adaptation tactics.

Cross-Cutting Adaptation Methods

- A 2014 study in the Bongo district of Ghana examining the potential impact of land tenure policies on climate change found that the country’s current policies continue to adversely impact the livelihoods of agriculture-dependent households, especially women. The study recommended that the government change land tenure policies and provide women with opportunities to own and formalize land registration titles, which would contribute to their use of the land in a way that implements climate adaptation practices. In order to implement such practices, attaining secure land rights was essential. (Antwi-Agyei et al., 2015, 210).
- Without secure land rights, women may lack incentive to maintain the land in a sustainable way or to make improvements upon it. For example, in Tanzania, widows are sometimes deprived of land held as community property. Women have responded to this practice by not improving the value of the land or cultivating it in a sustainable way for fear of losing it. There are additional cases found in sub-Saharan Africa where women have lost control over land after they introduced irrigation and other improvements. Adopting laws that provide secure land rights to women in the event of death of a husband or father will guarantee that land will not be taken and will provide incentives to cultivate in a sustainable way. (Prosterman et al. 2009, 203).
- When participatory processes are instituted, women are able to provide valuable contributions to the planning and management of land and other natural resources. A GTZ project in the Oromia Region in Ethiopia, actively involved men and women in participatory land use planning and rural appraisal activities. Women in the project not only increased their participation in land use planning, but became more involved in public and family decision-making, leading to greater acceptance and respect for their role as farmers. (For more information on implementation see [GIZ 2012, 180-183.](#))

Adaptation in the Context of Food Security and Productivity

- In Burkina Faso, women face greater obstacles in adapting their farming and livelihood practices in the context of climate change. Women do not own the parcels they farm and thus do not adopt certain adaptation practices that would require investments in the land. Consequently, agricultural yields are lower and more susceptible to adverse climate change impacts. ([Saulière 2011, 4-5](#)).
- In western Kenya, southern Malawi, and Eastern Zambia, women have been making decisions to adopt agroforestry technologies. However, where women lack land, adoption is less prevalent. ([Gladwin et al. 2000, 249](#)).

- In rural Niger, women are responsible for the bulk of daily food production, and they are able to identify more food plants than men. ([Guimbo et al. 2011, 240](#)). While they have rights to land under the law, those rights are weak due to customary practices. The Women and Land Initiative is helping women claim land rights by engaging local leaders and raising awareness of the benefits that accrue when women hold land and grow food. The project resulted in women securing access to land, through leasing, buying, or inheritance, doubled women's representation on local land committees, and advocating with other women on the advantages of securing their own land to increase their resilience to climate change and improve their households' food and nutrition security. ([Mamadou and Salaou 2013](#)).
- In Nepal, research shows that women who own land are more likely to determine household decisions and to have children who are less likely to suffer from being severely underweight. ([Allendorf 2007](#)). Securing these outcomes becomes even more important in the context of climate change as women will need to make decisions around how to adapt and will also need to feed their families amidst more difficult conditions.

Adaptation in the Context of Climate-Induced Natural Disasters and Displacement

- Following the 2006 earthquake in Indonesia, a study conducted by the FAO found that landowners were better able to recover from the devastation than those without land rights. Recommendations from a study conducted by the FAO in Yogyakarta and Central Java Provinces highlighted the need for secure land rights in order to decrease vulnerability and stalled livelihoods caused by limited natural resource and land ownership. ([Herianto et al. 2007, 31-32; 37-41](#)). Additionally, studies stressed that measures should be taken to eliminate discriminatory inheritance and property laws that may prevent equal transfer of property to survivors, particularly women. ([GTZ 2009, 44](#)).
- In Cambodia, the Regional Flood Management and Mitigation Centre of the Mekong River Commission developed an approach for flood probability-based land use planning. Satellite images, statistical data, and data on the ground are used to develop flood zoned maps that are then used to determine recommended land uses for different areas. Flooding and landslides are often caused by inappropriate land use and planning. Unsustainable land use results in land degradation, severe erosion, landslides, and unsafe settlements. Proper land use planning can reduce the vulnerability of people and infrastructure by identifying safe locations for settlements, which in turn provides for more secure land rights because fewer landholders will be forced to leave their land and potentially lose their rights to the land. Enacting policies that secure land rights for women would create incentives to cultivate and use land in a way that can better prepare and avoid natural disasters caused by unsustainable land management. ([GIZ 2012, 88](#)).

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Annex B – Links between Adaptation and Women’s Land Rights

Drafted by Landesa

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Securing women’s rights to land and natural resources should be a critical component of adaptation policies. Such rights can aid adaptation efforts while also addressing gender inequality. Secure land rights for women play a critical role in at least three areas of emerging concern: 1) agricultural productivity and food security, 2) natural resource use, and 3) climate-induced natural disasters.

1) Agricultural Productivity and Food Security

Women play a key role in agricultural production in the global South. About 70 percent of rural women in South Asia and more than 60 percent in Africa are employed in the agricultural sector ([FAO](#)). Yet climate change is set to negatively impact these regions, particularly Sub-Saharan Africa and Asia ([Brody et al. 2008, 4-5](#)). For example, in Congo, an estimated 73 percent of women will experience climate-related crop changes ([Vincent et al. 2010, 10](#), citing UNDP et al. 2009). Climate change can effect women’s agricultural land and production indirectly through soil degradation and directly as a result of extreme weather events ([Geiling 2015](#)). For instance, floods may cause soil erosion or landslides on agricultural land, inundate crops, or wash out fields ([Nellemann et al. 2011, 40](#)).

Women farmers will need to adapt, and securing women’s land rights advances this imperative. In some cases, women’s adoption of climate-smart agricultural practices may hinge on the strength of their land rights ([Monchuk and Boudreaux 2015, 4-5](#)).¹ Despite women’s key role in agriculture and the role land can play in facilitating adaptation in agricultural practices, a study by the World Bank Group, UN’s Food and Agriculture Organization (FAO), and the International Fund for Agricultural Development (IFAD) report that women have less access to land than men ([Asfaw et al. 2015, 1](#)). In India, Nepal, and Thailand, for example, less than 10 percent of women farmers own land ([Aguilar et al. 2011, 103](#), citing FAO 2008).

Additionally, women are critical stalwarts in the fight against food insecurity—a role they more effectively fulfill when their rights to land are secure. In Nepal, research shows that women who own land are more likely to determine household decisions and to have children who are less likely to suffer from being severely underweight ([Allendorf 2007](#)). The benefits of women’s land rights become increasingly important in the face of climate change’s negative impacts on food production and agriculture-derived incomes. Climate-change induced reductions in crop yields will increase food insecurity risks,

¹ Secure land rights are variables that factor into whether or not farmers adopt climate-smart agricultural techniques. For example, a study in western Ethiopia found that land tenure insecurity contributed to a failure to adopt soil and water-conservation techniques ([Tefera and Sterk 2010](#)). Yet some research shows that secure land rights alone may not be sufficient to incentivize farmers to adopt climate-smart agricultural techniques. For instance, a study in Ghana found the links between adoption of agrobiodiversity practices, secure land rights, and gender to be inconclusive. Nevertheless, it found a general link between secure land rights and agricultural investments ([Awanyo 2009, 137](#)).

impeding hundreds of millions from growing or buying enough food ([Quan and Dyer 2008, 6](#)). In the context of climate change, securing women's rights to land can give women more control over their ability to grow or purchase food.

2) Natural Resource Use

Women who make up the bulk of the rural poor rely heavily on natural resources for their subsistence and livelihoods ([USAID 2006, 3](#)), yet they rarely hold rights to access and control of such resources ([Quan and Dyer 2008, 49](#)). Women often support their families and generate income by extracting firewood, raw materials, medicinal plants, and food from forests ([GTZ 2010, 7](#), citing [IUCN/UNDP/GGCA 2009](#)). Women collect and manage resources for the household, and their burdens increase as resources diminish ([Alam et al. 2015, 23](#)). In rural Guinea, for example, women spend over twice as much time per week collecting water and gathering wood than men, and in rural Malawi, they spend more than eight times the amount of time on these activities than men ([Women Watch n.d.](#)).

Ensuring women's secure access to and control over natural resources becomes even more critical in the context of climate change. For example, access to supplementary foods may be critical for subsisting through droughts and lean times exacerbated by changes in climate ([Ibid](#)). Despite their unique natural resource knowledge, women lack rights to land and forests ([Aguilar et al. 2011, 103](#)).

Securing women's access to and control over natural resources can protect their specialized knowledge of how to subsist in their particular environments. A study published by The International Union for Conservation of Nature (IUCN) found that women possess key knowledge about forest resources, which differs from that held by men ([Aguilar et al. 2011, 103](#)). A study, conducted in Itapoá, Brazil, found that women knew 41 plant species, 31 of which they cultivated or collected, whereas men knew 22 plant species and cultivated or collected only 15 ([Aguilar et al. 2011, 103](#), citing [Merétika et al. 2010, 391](#)). According to a study based in rural Niger, women recognized more plants species useful for consumption, construction, and medicinal purposes as compared to men ([Aguilar et al. 2011, 103](#), citing [Dan Guimbo et al. 2011](#)). If policies guaranteed women's rights to land and natural resources, they could harness and build upon women's knowledge to adapt to climate change impacts.

3) Climate-Induced Natural Disasters

Natural disasters implicate women and their rights to land in various ways. Natural disasters generally affect women more adversely than men ([Neumayer and Plümper 2007, 4](#)), in part because of inequitable social norms and skewed gender power relations ([Abebe 2012, 107](#)). More women than men perish in natural disasters: women accounted for 90 percent of the 140,000 people killed in the 1991 cyclone in Bangladesh, 61 percent of the deaths in Cyclone Nargis in Myanmar, and 55-70 percent of the Banda Aceh tsunami in Indonesia ([Trohanis 2011, 3](#)). Those who survive face severe hurdles to social and economic recovery. Yet according to the Independent Evaluation Group review of the World Bank's disaster risk management portfolio from 1984–2005, only

10 out of 71 post-disaster recovery projects were designed to consider women's needs and vulnerabilities as part of recovery efforts ([Trohanis 2011, 7](#)).

Natural disasters can be classified as slow-onset (drought, sea-level rise, heat waves) or rapid-onset (typhoons, floods, hurricanes), and each type has its own unique relation to women's land rights and requires different considerations when implementing adaptation measures. In the case of rapid-onset disasters, lack of formal land rights can mean exponential losses. Individuals with secure land tenure are less vulnerable to aftereffects because they have a secure claim to the land on which they make a living ([Herianto et al. 2007, 31](#)). Those without formal rights risk losing their home, business, natural resources, and subsistence to the government or developers in land grabs.

In many countries around the world, women hold land rights informally or lack documentation to their land, making it more difficult for them to secure land, shelter, livelihoods, and compensation in the aftermath of a disaster ([Caron et al. 2014](#)). Additionally, in many countries married women lack land ownership rights, and when a husband, brother, or father dies in a natural disaster, they have no claim to the land or to disaster relief efforts ([Soroptimist International of the Americas 2006, 5](#)). Adaptation strategies in the face of rapid-onset natural disasters come in two forms: (1) formalization of women's land rights, including joint-titling, and (2) implementation of land use planning policies designed to reduce the dangers and consequences of natural disasters, such as zoning in disaster-prone areas.

In addition to the need for formalized, clear, and enforceable land rights for women, adaptation strategies used in the face of slow-onset natural disasters present a need to utilize different strategies. Slow onset disasters like drought and sea-level rise tend to cause long term or permanent displacement. They also tend to lead to conflict due to reduction in available arable land. When less land is available for agricultural purposes, women are often stuck with the least productive land or end up with no land at all ([Forsythe et al. 2015, 20](#)). When women fear losing the land that they may already be cultivating, they may lack incentive to maintain it in a sustainable way or make improvements upon it ([Prosterman et al. 2009, 203](#)).

When women have formal land rights they have security in their investment and livelihood and that promotes the use of more sustainable adaptation measures to counteract drought. Including women in policy making and discussions and securing their land rights further creates incentives for them to cultivate land in a way that minimizes potential adverse impact. Additionally, when climate-induced resettlement or displacement occurs, it is often the case that only those with formal titles are granted restitution, a practice which generally excludes women. Resettlement presents an opportunity to retitle land and property in the name of both spouses, or in the name of the woman. As countries begin to adopt compensation schemes in the event of displacement as a result of climate change, women must be a part of the conversation, both to secure title to the new land and to receive compensation for property they may not have held title to prior to resettlement.

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Women Gaining Ground: Securing Land Rights as a Critical Pillar of Climate Change Strategy

As the bulk of the world's poor and those who most rely on land and natural resources for their livelihood, women are hardest hit by climate change. Research shows that women in the regions of the world most affected by climate change, Africa and South Asia, bear the brunt of increased natural disasters, displacement, unpredictable rain fall, decreased food production, and increased hunger and poverty. Women farmers are particularly at risk. Their rights to access, use, control, and manage land are often diluted or denied. While women grow the bulk of the food in many countries, they **rarely control the land that they till**. Often women's rights to land depend on relationship to male family members. Laws and social norms often limit or ignore women's land and property rights and routinely exclude women from decision-making on land and natural resources.

Emerging evidence suggests that when women hold secure rights to land, efforts to tackle climate change are more successful, and responsibilities and benefits associated with climate change response programs are more equitably distributed. Conversely, without effective legal control over the land they farm or the proceeds of their labor, women often lack the incentive, security, opportunity, or authority to make decisions about ways to conserve the land and to ensure its long-term productivity. Women in this situation know that if they work to irrigate their field or plant border trees, there is a good chance that they will not be the ones to reap the benefits.

The stakes are high: while **securing women's land rights fosters critical gains**, from enhanced social status, to greater food security, better health and educational outcomes for families, neglecting to do so could have significant negative effects on the wellbeing of women, children and their greater communities. Women's security of tenure, especially for smallholder farmers, must inform ongoing climate change knowledge-generation, discussions, and interventions.

With secure land rights, women farmers could be more likely to:

Increase crop yields.

About **70% of rural women in South Asia and more than 60% in Africa are farmers**. By some predictions the yields of **rain-fed crops in certain African countries will be cut in half by 2020** due to climate change. Homes where women have land rights report **greater yields and increased food security**.

Conserve soil.

A **World Bank study** in Uganda found that when individuals had secure rights to land, they were more likely to use soil conservation techniques. In Ethiopia, **small farmers with land rights were 60% more likely to make investments that prevent soil erosion**.

Plant more trees.

A **study of 90 countries** found that, as land rights instability increased, natural forests decreased. Increased land tenure security, in contrast, is linked with decreased deforestation

rates, according to a **118-country study over five years**.

Improve large-scale mitigation efforts.

Large scale **climate-mitigation interventions are more effective when they fully recognize women as stakeholders and compensate women for "secondary" uses of forest lands**, like gathering fuelwood and non-timber products.

Recover from natural disasters.

While **natural disasters already affect women more adversely than men**, because of insecure, informal or undocumented land rights, **women are often less able to recover land and livelihoods post-disaster**. Following the 2004 tsunami, for example, the Sri Lankan government **offered funding only to male-headed households** in some areas, rendering affected widows and single women ineligible for support.

Call to Action

Climate change and associated human responses have affected, and will continue to affect, women's land rights in rural areas in ways that are only beginning to emerge. At the same time, securing women's land rights could enhance resiliency to climate change and strengthen communities' ability to respond well to shifting circumstances. Yet, to date, the relationship between climate change and women's land rights has been largely unexplored. We therefore call for a collaborative, gender-responsive, climate-informed research and advocacy agenda focused on the transformative potential of women's land rights as a critical piece in the climate change puzzle. Governments and policy makers also stand to gain from grounding climate change strategies in approaches based on decades of experience and expertise in the power of land rights to empower and lift women, men, and communities out of poverty. Such approaches call for:

1. Securing women's rights to land and natural resources, including within communities

Clearly defined, recognized, durable, and documented rights to land and natural resources are both an incentive to invest in conservation and sustainable land use, and a precondition for women (as well as men and communities) to access and benefit from market-based mechanisms, such as payments for environmental services, including reducing emissions from deforestation and forest degradation (REDD+). Secure land rights make women and their communities more resilient and capable of adapting to and recovering from climate change impacts. Equipped with secure, stable, documented rights to access, use, control, manage, inherit, and, if relevant, own and transfer land, women and families are better able to cope and recover following climate-related disasters, including through access to services and compensation tied to land ownership or use.

2. Ensuring women's meaningful participation in decision-making and dispute resolution related to access, use, control, and management of land and natural resources

While frequently worst impacted by climate change, women are often excluded from land and resource management, as well as from planning and implementation of strategies, mechanisms, and actions to address climate change. With more secure rights to land, women often gain not only status, but also a more powerful say in decision-making bodies. Excluding or diluting women's input often results in land and climate change-related policies that fail to account for gendered realities, interests, and knowledge. This could lead to missed opportunities for greater and more effective impact, such as the creation of national action plans that tackle climate-induced harms and gender inequality.

3. Identifying and supporting research and sex-disaggregated data collection related to climate change and women's land rights

Context specific, sex-disaggregated data on the differential constraints and impacts women and men face with regards to climate change and associated responses is critical for effective policy interventions. Such data is needed to inform measures to address insecure land tenure of women and disaster risk reduction, and to apply more broadly to the design and implementation of climate change response strategies. Despite growing literature on gender and climate change, there is a dearth of research on the links to secure land rights for women. Additional research is needed to examine gender-based differences in roles, responsibilities, interests, contributions, and constraints in adaptation and mitigation policies and the links to and impact on land rights, which fundamentally depends on better, sex-disaggregated data on land access, ownership, and tenure security. Such research should address both the impact of climate change on land rights for women, and ways security of tenure for women might ease adverse climate consequences.

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