



Women on the Move in a Changing Climate

A discussion paper on gender, climate & mobility



Table of Contents

1.0 Introduction	2
2.0 Gender dimensions of human mobility in a changing climate	3
2.1 Gender-based patterns and trends across three climate-mobility pathways	3
2.2 Gender-specific challenges for people on the move in a changing climate	4
2.3 Gender-specific opportunities for people on the move in a changing climate	6
3.0 Voices of Women Leaders	8
4.0 Gender equality, climate change, and mobility in UNFCCC and other international policy processes	11
5.0 Conclusions and perspectives on the way forward	14

Disclaimers

The views expressed in this publication are those of the author(s) and do not necessarily represent the views of UN Women, the United Nations or any of its affiliated organizations.

Produced by

Sierra Club & UN Women

Acknowledgments

The paper was prepared by Erica Bower (Independent Consultant) and Jessica Olson (Campaign Representative/Sierra Club), with inputs from Verona Collantes (Intergovernmental Specialist/UN Women), Hanna Paulose (Consultant/UN Women), Michael Stewart-Evans (Policy Analyst/UN Women). Drafts were reviewed by Sylvia Hordosch (Policy Adviser/UN Women). Colombia case study prepared by Brianna Castro (Harvard University). Literature review prepared by Ludovica Martella (Researcher/UN Women).

Cover Photo: *Women gather to discuss empowerment and Typhoon Haiyan recovery in Isabel, Philippines. Photo: Erica Bower*

Back Cover: *A market vendor sells produce at Victoria Market in Port Victoria, Seychelles. Photo: UN Women/Ryan Brown*

Editing: Tom Valtin | Design: Peter Walbridge & Libby Lee-Egan

December 2018

Women on the Move in a Changing Climate: A discussion paper on gender, climate and mobility



Key Concepts

Gender

Gender refers to masculine and feminine identities, attributes, constraints, and opportunities associated with being a man or a woman. These attributes, opportunities, and relationships are socially constructed and are learned through socialization processes. They are context/time-specific and changeable. Gender determines what is expected, allowed, and valued in a woman or a man in a given context. In most societies there are differences and inequalities between women and men in responsibilities assigned, activities undertaken, access to and control over resources, as well as decision-making opportunities. Gender is part of the broader socio-cultural context. Other important criteria for socio-cultural analysis include class, race, poverty level, ethnic group, disability, and age.¹

Intersectionality is a conceptual framework for understanding the many dimensions of social identity — such as age, race, ability, socioeconomic status, ethnicity, mobility history — as they are layered with gender to amplify injustices and vulnerabilities felt by individuals with multiple marginalized identities.²

Climate Impacts

Extreme events, or rapid onset events, refer to the risks and impacts of meteorological or hydrological hazards such as tropical cyclones; typhoons; hurricanes; tornadoes; blizzards; coastal floods; and mudflows.³

Slow onset events refer to the risks and impacts of the following events: increasing temperatures; desertification; loss of biodiversity; land and forest degradation; glacial retreat and related impacts; ocean acidification; sea level rise; and salinization.⁴

Disasters are linked to extreme or slow onset events and are serious disruption of the functioning of a community or a society involving widespread human, material, economic, or environmental losses and impacts, which exceed the ability of the affected community or society to cope using its own resources.⁵

Human Mobility

While there are no universally agreed-upon terms, this discussion paper adopts the framing used in the UNFCCC process derived from the Cancun Adaptation Framework Paragraph 14(f), where “Human Mobility” is an umbrella term that encompasses displacement, migration, and planned relocation.⁶

Displacement is used to describe the (predominantly) *forced* movement of persons away from their homes or places of residence. This dimension of human mobility is most often framed as a humanitarian concern, where displaced persons have immediate needs, including assistance and protection of rights.⁷

Migration is used to describe the (predominantly) *voluntary* movements of individuals away from their homes or places of residence, at times as an adaptation strategy. Migration can be a means to diversify household sources of income, as migrants may support families back home with remittances. Others move in order to avoid a situation of deteriorating environmental conditions that could result in future displacement.

Planned relocation is the process through which communities are moved away from their homes, settled in a new location, and provided with the conditions for rebuilding their lives, often with support of their government. This process can be in anticipation of or in reaction to climate impacts. Depending on circumstances, planned relocation can be a form of displacement, or it can be a way to manage risks and prevent displacement related to future hazards.⁸

Trapped populations are those who stay behind or are unable to move due to lack of financial and social resources.⁹ Significant physical and financial capital are required to move, and obstacles such as lack of financial means, cultural stigmas, or lack of supporting social networks can prevent people from utilizing migration as an adaptation or risk reduction strategy. These groups and individuals may be the most vulnerable over time, as climate impacts and other stressors increase.

1.0 Introduction

The sudden and slow onset impacts of climate change — in combination with other socioeconomic, political and environmental factors¹⁰ — are among the prominent drivers of human movement. Climate-related mobility can take many forms. Some 18 million people were forcibly displaced within their country’s borders by sudden-onset weather-related hazards in 2017 alone.¹¹ Many others migrated in search of more stable livelihoods, which under some circumstances can be a strategy to adapt the impacts of climate change. As a last resort, entire communities may seek to relocate or be required to do so.

Gender influences who moves (or stays), how decisions are made, an individual’s circumstances in transit, and the outcomes of movement. At the same time, mobility influences gender dynamics by entrenching traditional gender roles and existing inequalities, or by challenging and changing them. Although women are often portrayed as among the most “disproportionately affected,” most literature fails to highlight women’s leadership roles in the face of climate-related movements.

This incomplete picture hampers a holistic understanding about how gender influences these dynamics with implications on policies and programs. Contrary to stereotypes depicting women and girls as vulnerable, women are already in formal and informal leadership roles in coordination of community movements, adaptation to climate impacts, and recovery from disasters, and they are well positioned to inform policies and practices. Understanding the needs, challenges, and roles of women and girls in climate-related mobility is essential in addressing the different impacts of mobility on women and men while increasing women’s voice, agency, and leadership in ensuring safe and sustainable mobility.

This discussion paper is an initial analysis of the main issues relating to climate change, human mobility, and gender. It examines the gender-based differences with regard to the needs, challenges, roles, decision-making

responsibilities and leadership in the context of climate-related mobility. The paper also amplifies the often-neglected voices and leadership of women on the move by offering stories of three women, from the Philippines, Colombia, and the United States, respectively.

While this paper acknowledges that gender is non-binary, and the empowerment of all people regardless of their gender identity is an essential part of a gender-responsive approach, this paper focuses primarily on the challenges, opportunities, and experiences of women.



PHOTO: UN PHOTO/MARCO DORMINO

This discussion paper is organized into four sections. Current evidence on gender-related dynamics, challenges, and opportunities of climate-related mobility are synthesized through a literature review in Section Two, while Section Three presents stories of women leaders in the face of climate-related mobility. Section Four presents a landscape of international policy areas related to the issues of climate, mobility, and gender equality. Finally, Section Five offers some reflection on better understanding the gender dimensions of climate-related mobility to enhance gender-responsive policy implementation where relevant.

2.0 Gender dimensions of human mobility in a changing climate

Gender shapes the experiences, causes, and consequences of human mobility in a changing climate. Socially constructed gender norms around division of labor, rights to assets, and access to decision-making influence movement patterns and trends: who moves and who stays. A gender perspective brings to the fore how women and men face different challenges and risks, and are confronted with different opportunities during mobility. Such gender-based distinctions are context-specific, and vary across cultures, livelihood patterns, and other socio-economic characteristics. This section explores gender-based patterns of climate-mobility pathways, the gender-specific challenges faced by people on the move, as well as opportunities for women's empowerment.



PHOTO: UN PHOTO/LOGAN ABASSI

2.1 Gender-based patterns and trends across three climate-mobility pathways

There are multiple pathways of climate-related mobility through which gender-based differences manifest.¹² In accordance with the framing in Cancun Adaptation Framework, Paragraph 14f, this section focuses on:

- 1. Forced displacement** related to increased severity and frequency of extreme weather events;
- 2. Migration as a strategy for adaptation**, where households diversify their use of assets (e.g., financial, human, and social capital) to cope with slow-onset impacts on livelihoods (e.g., agricultural production), in contrast to “trapped” members of households who stay behind; and
- 3. Planned relocation** of entire communities, with support from government or non-governmental organizations, in anticipation of or in reaction to extreme or slow-onset events.

While many gender-based challenges and opportunities are common to all three mobility pathways, the patterns and trends of women and men in these pathways differ. There are many reasons for this, including different units of people on the move (individual, household, community), different levels of engagement by the international

community or government, and hence differing levels of rigor in the documentation of gender differences in monitoring and data collection.

As climate change influences the frequency and severity of storms, floods, wildfires, and other “extreme weather events,” people are forcibly **displaced** from their homes. In general, there is more evidence of gender-based consequences of disaster displacement (explored in 3.2) than there is evidence about the sex-disaggregation of who is displaced and for how long. This points to larger challenges about disaggregated and time-series data in disaster displacement situations. However, some evidence from specific events suggests that there are gender-based differences in who is displaced in these contexts. After Typhoon Haiyan in the Philippines, for instance, women and children were disproportionately represented in the evacuation centers.¹³ After Cyclone Sidr in Bangladesh, women sought refuge in neighbors' homes and evacuation centers for protracted periods, while men stayed in their damaged or structurally weakened homes to protect assets from potential looters.¹⁴ Other research suggests that there are differences in disaster mortality rates for men and women.

Men are more likely to die because of different perceptions of risk and risk-taking behavior,¹⁵ whereas women are more likely than men to heed disaster warnings and face displacement over death.¹⁶ Evidence from a devastating 2011 flood in Lagos revealed how gender interacts with class to shape vulnerability and the capacity to rebuild after displacement: women in low-income neighborhoods recorded higher impacts and slower recovery compared to other groups of women and men.¹⁷

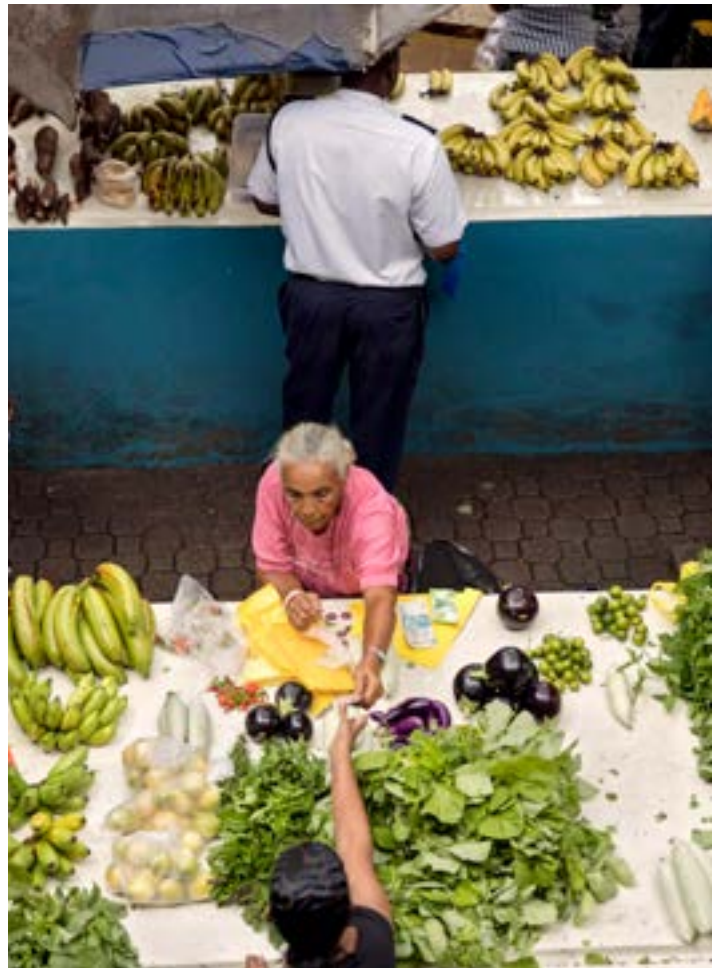
As households adapt to the impacts of climate change on availability of natural resources, on agricultural productivity, or on their livestock, gender norms can shape dynamics of **migration**.¹⁸ As a result of gender-based divisions of labor, men or women often migrate in search of an alternative livelihood not threatened by localized climate-change impacts, allowing them to diversify their sources of income through the sending of remittances. In these contexts, migration can increase adaptive capacity and reduce vulnerability of the household overall, which may empower individual men and women within the family.¹⁹ Some evidence suggests gender-differentiated outcomes. For instance, in drought-afflicted rural Ecuador, land-rich men are more likely to migrate internationally because they can afford to do so, while women from land-rich households are unable to benefit from the natural capital ownership and hence opt for domestic destinations or do not migrate at all. Meanwhile, men and women from land-poor households are capital-constrained and unable to finance international destinations.²⁰ Evidence from storm-afflicted Bangladesh shows that poor men tend to migrate to search for work, while a majority of women remain behind, bound by the responsibility of looking after children.²¹ In Mozambique and Mali, migration was identified as a clearly male-dominated coping strategy in drought-prone regions.²² Gender-differentiated impacts are compounded by other social identities to influence migration as an adaptation strategy. It was found that after a drought in Mali, women from low-income communities were less restricted and better able to engage in new livelihood activities than women from higher-income groups, and thus were more able to adapt after the social structure of their community was altered by the out-migration of adult men.²³

In the face of slow-onset events such as coastal erosion and sea level rise that make land uninhabitable, some communities seek government support to move through **planned relocation** — another climate-mobility pathway with gender-based dynamics. This process is a last

resort for most communities, as it is highly complex, costly, and most people are hesitant to leave their ancestral lands. While communities relocate collectively, women and men may experience such relocations differently. For instance, after the relocation of Vunidogoloa community in Fiji, men did not need to change their agricultural livelihoods, but women who were previously engaged in fishing had no alternate livelihood options upon relocating inland.²⁴ Evidence from development-related resettlement further suggests that the disruption of community structures inflicts relatively greater negative impacts for women.²⁵

With these broader gender-based patterns and trends of displacement, migration as adaptation, and planned relocation in mind, the sections that follow summarize key challenges and opportunities people confront in the face of climate-related mobility.

See Damiana's experience on page 10.



A MARKET VENDOR SELLS PRODUCE AT VICTORIA MARKET IN PORT VICTORIA, SEYCHELLES. PHOTO: UN WOMEN/Ryan Brown



AN ELDERLY WOMAN, INTERNALLY DISPLACED FROM HER HOME IN ABYEI BY HEAVY FIGHTING BETWEEN THE SUDAN ARMED FORCES AND THE SUDAN PEOPLES LIBERATION ARMY, GETS READY TO RECEIVE HER RATION OF EMERGENCY FOOD AID. PHOTO: UN PHOTO/TIM MCKULKA

2.2 Gender-specific challenges for people on the move in a changing climate

People may face risks to their **safety and security** while on the move in a changing climate. For instance, relief shelter for displaced persons after an extreme weather event is often set up to distribute assistance quickly and does not adequately consider a woman's right to privacy or need for safe and accessible bathrooms or sanitary products, such as during pregnancy, breast-feeding, or menstrual cycles. Women who were displaced by Hurricane Andrew (Caribbean and U.S.) in 1992 and the Red River Valley flood (U.S.) in 1997 indicated that temporary trailer camps provided by emergency relief workers were not designed for their needs, as there were no provisions for their safety or mental and reproductive health needs.²⁶

Displacement often creates conditions that are conducive to gender-based violence and other violations of human rights, such as sexual harassment or physical abuse. For example, after 2008 Cyclone Nargis in

Myanmar, women faced "increased incidents of sexual and domestic violence, forced prostitution, and sex and labour trafficking in cyclone-affected areas."²⁷ Challenges to safety and security persist outside of formal internal displacement camps; a 3.5-fold increase in the rate of gender-based violence was reported for women who were displaced following Hurricane Katrina (U.S.), mostly driven by violence inflicted by an intimate partner.²⁸ In planned relocation processes, sexual harassment of women by authorities has also been reported.³⁰

Another challenge experienced differently by women on the move in these contexts is **psychosocial** well-being and mental health. In displacement camps and camp-like settings, there are "well-documented gender differences [...] especially when women lose their social networks or their social capital, and women are often affected by adverse mental health outcomes."³⁰ For instance, a study

in an evacuation shelter on days 12 to 19 after Hurricane Katrina revealed that women were four times more likely than men to be diagnosed as having acute stress disorder.³¹ Some studies observed that women suffer from psychosocial impacts of disaster displacement to a greater degree than men.³² This may be a result of anxiety and post-traumatic stress, while at the same time fulfilling gender-based expectations around caregiving for children and older family members.³³



VILLAGERS DISPLACED BY FLOODS, WALK THROUGH FLOODWATERS IN THE VILLAGE OF BASEERA NEAR MUZAFFARGARH IN PUNJAB, PAKISTAN. PHOTO: UN WOMEN/ASAD ZAIDI

An additional challenge where people on the move have different experiences is **discrimination in access to relief and other social services**. For instance, following the 2010 floods in Pakistan, a protection assessment found that women — particularly single women and female heads of household — were more likely to lack appropriate documentation or national identity cards, which were required to access assistance from the government compensation scheme.³⁴ Further, transgender women who may not have identity cards that match their gender expression are in some circumstances denied relief or aid.³⁵

A major factor influencing the challenges faced by and opportunities available to women are gender-based discrepancies in **rights to own, inherit, or use land**, and other resources and assets. For example, in rural Tanzania, women do not hold formal land rights or formal ownership of livestock.³⁶ Existing land-rights frameworks often favor male ownership of property, posing a major challenge to women’s long-term recovery, adaptation, and planned relocation after disaster displacement. After an extreme weather event forces populations to flee, the right to own land influences the rate of recovery and whether a displaced person returns home or seeks a solution elsewhere. Following Hurricane Katrina, for instance, data from the U.S. Census and the American Community Survey showed a 60 per cent decrease in the number of female-headed households, especially African American mothers with children under age 18. The main reasons many of them could not return were lack of home-ownership titles, inability to afford housing and health care, and lack of employment opportunities.³⁷ Discrimination linked to access to land — or lack thereof — can also occur during planned relocation. For example, in Orissa, India, compensation criteria for homes destroyed by dam construction was reported where the age requirements for entitlement to land compensation were much higher for women than for men, meaning younger women were ineligible.³⁸ Access to institutional support for adaptation measures may also be limited for women as existing land-rights frameworks are often based on male ownership. However, in other contexts, such as in the matrilineal Chuukese society of the Carteret Islands, Papua New Guinea, women are the landowners before, during and after the planned relocation process.

Table 1. Gender-specific challenges for people on the move in a changing climate

Safety and security	Psychosocial needs	Access to relief and other social services	Rights to own, inherit, or use land
Heightened risk of sexual and gender-based violence, sexual harassment, sex and labour trafficking, and other violations of human rights while on the move	Mental health challenges, including anxiety, depression, and post-traumatic stress disorder while on the move	Single women heads of household may not be able to access relief and other services while displaced	Gender-based discrepancies in terms of access, ownership, inheritance, and use of property influence the ability to return and rebuild after displacement or during the relocation process



WOMEN FISHING BEHIND CRISTU REI, DILLI. PHOTO: UN PHOTO/MARTINE PERRET

2.3 Gender-specific opportunities for people on the move in a changing climate

Evidence indicates that women around the globe take on **leadership roles for their communities** at all stages of climate-related mobility. For example, in many relocation sites after Typhoon Haiyan struck the Philippines, the “camp managers” or leaders of bunkhouses are often women.³⁹ After Hurricane Mitch made landfall in Guatemala and Honduras in 1998 and many men migrated north, women took active roles “in what [were] traditionally considered male tasks,” such as mobilizing their communities.⁴⁰ For instance, in the matrilineal society of Carteret Islands, female leaders have played essential roles in ensuring that their communities have livelihoods in their new homes. For instance, Ursula Rakova of Tulele Peisa founded a cocoa cooperative of 640 small farmers, mostly women, in Bougainville, to create a reliable stream of income to sustain both the Islanders and their new neighbors.⁴¹ To ensure that planned relocation is inclusive and gender-responsive, information sharing, consultation and participation are essential.⁴² A good practice of inclusive participation can be found in Fiji’s Draft Planned Relocation policy, where “full and informed consent from all sectors of the community will be necessary, with special attention given to those with special needs, based on gender, age, state of health, and disability.”

Furthermore, shifting global and national labor markets mean that women have opportunities to be **leaders in their households**. For instance, increasing demand for domestic service — a sector where women are over-represented⁴³ — in some cases allows women to make a greater contribution to household income. In general, women remit a higher proportion of their incomes than men, although total remittances may be lower because women typically receive lower wages.⁴⁴ Female senders of remittances may experience positive outcomes by becoming a recognized economic

provider for their families.⁴⁵ For women in households where a male relative has migrated as part of an adaptation strategy, there may also be opportunities and positive outcomes for women who remain behind.

See Lorna’s experience on page 8.

See Chantel’s experience on page 9.

A recent Food and Agriculture Organization (FAO) report found that male out-migration often leads to an increased role of women in agriculture not just in terms of greater workloads, but also in terms of greater decision-making power.⁴⁶ For instance, some suggest that women who were not able to migrate might gain more empowerment from remittances compared to men, and may benefit from increased autonomy and decision-making power,⁴⁷ including in how these remittances should be spent. One study of rural drought-afflicted Guatemalan households found that when men migrate, female heads of households have greater responsibilities in decision-making about remittances and food allocation, and in fact have higher levels of food security and better diets than male-headed households.⁴⁸

The section that follows showcases three stories of strong women leading their communities and families in recovery from typhoon-related displacement, migration as adaptation to drought, and planned relocation in the face of sea level rise. While the leadership roles that women take on in communities and in households could be significant opportunities for empowerment, gender norms may mean that new responsibilities contribute primarily to increased burdens.

3.0 Voices of Women Leaders

Lorna Ortillo (63) - Sitio Sabang, Barangay Tinabangan, Marabut, Samar, Philippines

Evacuation and recovery from displacement after Typhoon Haiyan

“I realized that no one else was going to step up, and at my age I have the time to serve” says Lorna Ortillo, now President of the Marabut Women’s Federation. “I had to because my passion is to help women, their families, and my community.”

In her coastal village of Sabang in the Philippines’ Western Samar region, Typhoon Yolanda (Haiyan) made landfall on November 8, 2013. Howling winds, pelting rain, and an unprecedented storm surge led to devastating damage. All homes were engulfed by the sea.

Yet unlike the death toll of thousands across the bay in Tacloban, in Sabang there was not a single fatality. All 1,100 residents survived, thanks to the natural safety provided by Tinabanan cave and powerful female leadership.

As soon as news reports and local government warnings were clear, Lorna and other officers of the local women’s group mobilized. They went door to door to every home in Sabang, urging people to leave their homes near the sea and get to the higher ground of the cave. Men, women, and children all scrambled over ten meters of boulders to the unassuming mouth of the cave in the limestone cliffs above Sabang.

The entire community hid in the cave, bringing only minimal food and belongings. “We were scared, tired, but safe,” Lorna recalls. Today the cave that saved her community is a tourist attraction.

When Yolanda passed and the sun came out, residents emerged from the cave to survey the destruction. Only two structures, both roofless, remained. For a few days Lorna went to stay in the safety of a relative’s home in Manila. But soon she felt compelled to return to Sabang. Like everyone else who lost their home, Lorna lived in a tent for the next six months. Even while displaced, she organized women from every barangay (the smallest political unit



LORNA ORTILLO AT A RE-CHARGE INITIATIVE TRAINING FOR ‘SOLAR SCHOLARS’ IN TACLOBAN. PHOTO: ERICA BOWER

in the Philippines) in Marabut and formed the Women’s Federation, which she now leads. Together they distributed relief supplies and supported the community’s recovery and rebuilding efforts.

In years since Yolanda, residents of Sabang built steps up to the cave to ensure a safe and easy access to the refuge in the event of another big storm. They hold evacuation drills regularly, and the women’s organization takes care of the cave, in the event that it is needed again as a refuge. “I hope the typhoons will not return,” she says. “Even though we undergo preparedness, we don’t want to experience the horrors of Yolanda again.”

Today Lorna’s work in preparedness continues. She is a “Solar Scholar,” trained to operate and manage TekPak units, a lighting and charging system powered by a solar pane. Unlike the generator used previously, the TekPak units are a safer way to light up the cave. Lorna is now a facilitator, training other women across Marabut. “Technology is not just the monopoly of men and the young,” she smiles. **“Women too — of any age — can be leaders”.**

Chantel Comardelle - Isle De Jean Charles, Louisiana, United States

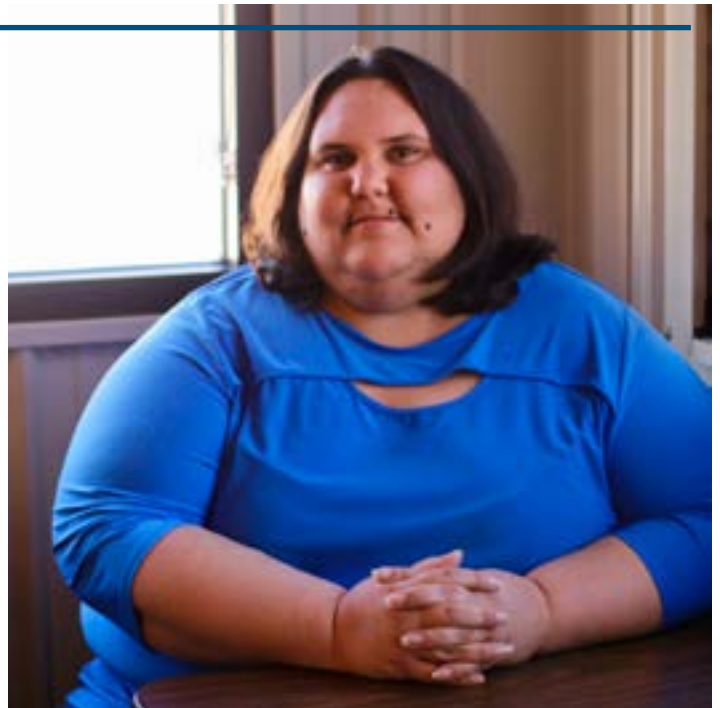
Planned relocation in the face of sea level rise

“What really sparked me to get into this fight was in 1999, my senior year of high school, when the Army Corps of Engineers excluded our island from protection of the levees,” says Chantel Comardelle, executive secretary and the only woman in an official position of leadership in the Biloxi-Chitimacha-Choctaw Tribe of Isle De Jean Charles, Louisiana. *“I asked for a copy of the feasibility study to see for myself, and I saw that they had put it down on paper: The cost-benefit of saving our community wasn’t worth it. By not trying to protect our culture, they basically said it wasn’t worth saving. When I read the details of their plan I knew there was no option but for our tribe to relocate.”*

Isle de Jean Charles is a small island in the Gulf of Mexico off the coast of Louisiana, connected to the mainland only by a road that becomes submerged during storms and high tides. The island is home to the Isle de Jean Charles Biloxi-Chitimacha-Choctaw tribe, although not for much longer. The water level has risen significantly in recent decades. Land that once was suitable for raising cattle is now completely underwater. Facing hurricanes, rising seas, and coastal erosion, the community has known for a generation that relocation is inevitable.

In 2016 the tribe won a Department of Housing and Urban Development (HUD) competition for a relocation grant of \$48 million, largely thanks to Chantel’s role in the drafting of the application with the state. Two years after the grant was awarded, the community hasn’t yet moved, but Chantel continues to agitate and advocate for her community. “There’s nothing she won’t do for our little tribe” says Chief Albert Naquin.

Beyond her formal role as a member of the steering committee for the relocation process, Chantel is the behind-the-scenes force who keeps the relocation process moving, even as she raises three young children, pursues a certificate in Museum Studies, and holds down a full-time job in procurement for the Parish of Louisiana. She advocates for her tribe’s rights at state and



national levels, strategizes how to preserve their culture through a museum, and updated media who have closely monitored goings-on in Isle de Jean Charles ever since the community entered the spotlight.

“I still hold onto the hope that this [relocation] will be good for our community,” she says. “I’m thinking about [community member] Rosie, who lost her husband this past year, who lives on the island with hardly nothing, and doesn’t have the capability to get up there and argue the way I can. What’s going to happen to her when the next big storm comes and ruins her home and destroys the road completely? **What do I tell my kids when the island is gone and there’s nothing left?** What’s going to happen if the ones who are gifted with the ability to be leaders don’t lead? I want to be able to say I gave my all to save my community.”



TOP: CHANTEL COMARDELLE IN A LOCAL RESTAURANT. BOTTOM: HOUSE ON STILTS IN ISLE DE JEAN CHARLES, REBUILT AFTER THE LAST STORM. PHOTOS: ERICA BOWER.

Damiana María Tovar Guzman (36) – Vereda Los Cedros, El Carmen de Bolivar, Bolívar, Colombia

*Example of adaptive migration during
protracted drought*

“I could not stand by while my five children became malnourished” says Damiana Tovar, a community leader of Los Cedros village in Bolivar, Colombia. “My husband has no way to find work in town. I didn’t want to, but I had to migrate and support my family through this drought.”

The 2013 to 2016 El Niño drought was unlike anything in recent memory for farming communities in northern Colombia. In 2016, all the region’s water reserves dried up and farm animals either died or were sold before they starved.

Typically, male heads of households migrate in order to support their families. But when harvests failed throughout northern Colombia and male farmers could not work for hire on other farms, it became painfully apparent that they lacked marketable skills to gain urban employment.

Their wives, on the other hand, were more employable. Like Damiana, they migrated to earn income through domestic service. **“My husband cannot work, but I can,”** she says. “I asked for his permission to migrate and this is how the family survived.”

Damiana had missed the previous community meeting to discuss strategies for acquiring a tanker truck of drinking water; she was busy handwashing clothes in her domestic service job in a private home in El Carmen de Bolivar, the principal urban center in the drought-stricken region.

“Some community members are upset that I left to work and support my family,” she says, weary from balancing the duties of family and community through three years of drought, “but what else could I do? Now I can represent us in more meetings at the mayor’s office in town.”

A leader in her family and her community, Damiana recruited her neighbors to participate in region-wide protests demanding food and water aid. They traveled to the municipal center and then the state capital to demonstrate at the governor’s office. When that failed, they joined farmers from across the region to close the local highway in protest.



DAMIANA GUZMAN IN HER COMMUNITY. PHOTO: BRIANNA CASTRO

Women across the region adaptively migrated during drought to work in domestic service in urban areas. Many couples separated due to the marital strain caused by their decision to migrate.

Damiana sent money to her husband so that he could purchase and plant seeds, then moved back home once the rains resumed and their land yielded a crop that she could harvest and sell. Though once again earning a livelihood by farming, she worries that the family remains unprepared for future crises. “The truth is we had absolutely nothing left after the drought.”

Damiana’s adaptive migration kept her family from abandoning their lands permanently, which became the fate of many of her neighbors, and she remains a community leader. “During the drought, I suffered,” she says, “but I learned so much.”

Among other things, her experience during the drought motivated her to enroll in a Saturday school program along with her two eldest children. She hopes to bring her eighth-grade education up to a high-school level and earn a degree. “Sometimes I even know more than the kids do!” she says with a smile.

- Profile by Brianna Castro

4.0 Gender equality, climate change, and mobility in UNFCCC and other international policy processes

Climate-related movement, if not well-managed, can create complex humanitarian challenges, lead to circumstances where women's human rights are violated, and undermine progress toward development and women's economic empowerment. If well-managed, voluntary migration and planned relocation can contribute to the goals of gender equality, sustainable development, climate adaptation, and disaster risk reduction. Therefore, a gender perspective needs to be mainstreamed across policies, accompanied by targeted gender-responsive national policies and plans for implementation.

This section examines the extent to which a gender perspective on climate and mobility is already integrated into the United Nations Framework Convention on Climate Change (UNFCCC) process, while Table 2 provides complementary insights from other intergovernmental processes that address climate and mobility issues.

The **2015 Paris Agreement**⁴⁹ includes mobility and gender dimensions, signaling progress from prior agreements. The preamble acknowledges the rights of migrants in the context of climate change action, and the text accompanying the agreement (Decision 1/CP.21) calls for recommendations developed by a Task Force on Displacement to be presented at COP24.⁵⁰ Gender is equally included in the agreement: Parties are called upon to “promote and consider their respective obligations on... gender equality [and] empowerment of women, while the articles explicitly note that adaptation action and capacity building should follow gender-responsive approaches.⁵¹ Given that Parties recognize how migration and planned relocation may be part of adaptation action,⁵² and that capacity building is essential for states to avert, minimize, and address displacement, these efforts must be gender-responsive.

The **Task Force on Displacement (TFD)** under the Executive Committee of the Warsaw International Mechanism on Loss and Damage (WIM ExCom) was given a mandate to develop recommendations on “integrated approaches to avert, minimize, and address displacement” related to the adverse effects of climate change. The report of the Task Force on Displacement, issued in September 2018, recognizes that these integrated approaches “need to take into account international human rights standards, including human rights principles such as non-discrimination, participation and inclusion, [and] gender [equality]”.⁵³

While acknowledgement of gender dimensions of human mobility appears in the Paris Agreement and Task Force on Displacement recommendations, more effort is needed to mainstream a gender perspective across climate policy and action. For instance, this may be strengthened in the ongoing work of the WIM ExCom, the Lima Work Programme on Gender and Gender Action Plan, and in national planning processes such as National Adaptation Plans (NAPs), Adaptation Communication, and Nationally Determined Contributions (NDCs).

As demonstrated in Table 2, addressing the gender dimensions of climate-related mobility is equally an important part of Parties' commitments to implement the Sendai Framework, Global Compact on Safe Orderly and Regular Migration, Global Compact on Refugees, the 2030 Agenda on Sustainable Development, resolutions put forth by the Human Rights Council, and the recommendations of the Nansen Initiative Protection Agenda. While progress made across these policy areas is significant, greater coherence, stronger partnerships, and bolder action are needed to ensure that on-the-ground approaches to protect and assist those moving from their homes in the face of climate change are inclusive and gender-responsive.

Table 2. International Policies

Policy Area and Key Instrument	Examples of how policy instrument integrates climate-related mobility	Examples of how policy instrument integrates gender perspectives of climate-related mobility
<p>Disaster Risk Reduction: The Sendai Framework for Disaster Risk Reduction (2015-2030)</p>	<p>The Sendai Framework includes:</p> <ul style="list-style-type: none"> • Measures to reduce risks of displacement; • Measures for preparedness if displacement is unavoidable, including drills for safe evacuation; • Measures of post-disaster recovery and rehabilitation to ensure that displaced persons can return or settle elsewhere and have access to adequate housing, basic services, and the restoration of livelihoods. 	<p>In accordance with the Sendai Framework, measures to reduce risks and recover from disaster displacement must:</p> <ul style="list-style-type: none"> • Stem from a “gender, age, disability, and cultural perspective,” • Promote women’s leadership, gender-equitable and universally accessible approaches.
<p>Desertification: The United Nations Convention to Combat Desertification (UNCCD), and the 2018-2030 Strategic Framework</p>	<p>The Convention recognizes that:</p> <ul style="list-style-type: none"> • “Desertification and drought affect sustainable development through their interrelationships with... migration, displacement of persons and demographic dynamics.” <p>The Strategic Framework notes that:</p> <ul style="list-style-type: none"> • Desertification/land degradation and drought (DLDD) are challenges that contribute to and aggravate human mobility. 	<p>In implementing the Strategic Framework, all actors should:</p> <ul style="list-style-type: none"> • Consider “gender-responsive policies and measures; • Strive to ensure the full and effective participation of both men and women in planning, decision-making, and implementation at all levels, • Enhance the empowerment of women, girls, and youth in the affected areas.”
<p>Migration Management: The Global Compact for Safe, Orderly, and Regular Migration (GCM) (to be adopted in December 2018)</p>	<p>The GCM recognizes:</p> <ul style="list-style-type: none"> • Sudden and slow onset climate events, disasters and environmental degradation as direct and indirect drivers of mobility; • The need for measures to mitigate climate change, reduce risks of disasters, and strengthen regular migration pathways including visas and planned relocation. • The need for policy coherence, including with the Nansen Initiative Protection Agenda and the Migrants in Countries in Crisis Initiative (MICIC). 	<p>The GCM:</p> <ul style="list-style-type: none"> • Comprehensively integrates gender-responsive approaches throughout as one of the guiding principles, recognizing women’s “independence, agency, and leadership in order to move away from addressing migrant women primarily through a lens of victimhood.” • Emphasizes the need for strengthened research to address knowledge gaps around climate-related mobility, including data disaggregated by sex, age, migration status, and other characteristics relevant in national contexts.
<p>Refugee Protection: The Global Compact on Refugees (GCR) (to be adopted in 2018)</p>	<p>The GCR recognizes:</p> <ul style="list-style-type: none"> • The role of climate change impacts, disasters, and environmental degradation as threat multipliers that interact with other drivers of refugee movements, and address them alongside other root causes; • The need for measures to assist those forcibly displaced by disasters, with consideration to applicable national laws and regional instruments, as well as practices such as temporary protection and humanitarian stay arrangements. 	<p>The GCR calls for:</p> <ul style="list-style-type: none"> • “Promoting meaningful participation and leadership of women and girls,” facilitating access to “gender-responsive social and health care services,” and “promoting women’s economic empowerment and supporting access by women and girls to education”. • “The collection, use, and sharing of quality registration data, disaggregated by age, gender, disability, and diversity”.

Table 2. International Policies (continued)

Policy Area and Key Instrument	Examples of how policy instrument integrates climate-related mobility	Examples of how policy instrument integrates gender perspectives of climate-related mobility
<p>Sustainable Development: The 2030 Agenda for Sustainable Development (adopted in 2015)</p>	<p>The 2030 Agenda call for action to:</p> <ul style="list-style-type: none"> • Combat climate change and its impacts, including strengthening resilience and adaptive capacity (13.1), • Facilitate orderly, safe, regular, and responsible migration and mobility of people, including through the implementation of planned and well-managed migration policies (10.7). 	<p>The 2030 Agenda includes:</p> <ul style="list-style-type: none"> • Goal 5 to achieve gender equality and empower all women and girls, such as by ending all forms of discrimination (5.1), and ensuring equal opportunities for leadership (5.5) • Target 17.18 on “enhancing capacity-building support to developing countries to increase significantly the availability of high-quality, timely and reliable data” notes that such data should be disaggregated by a number of factors, including age, sex, and migratory status.
<p>Disaster Displacement: The Platform on Disaster Displacement, which seeks to implement the Nansen Initiative Protection Agenda (endorsed by 109 States in 2015)</p>	<p>The “Agenda for Protection of Cross-Border Displaced Persons in the context of Disasters and Climate Change” presents a “toolbox” of approaches to:</p> <ul style="list-style-type: none"> • Protect cross-border disaster-displaced persons, • Minimize risks in the country of origin, recognizing that orderly migration and planned relocation can be strategies to prevent future forced displacement. 	<p>The Protection Agenda calls for:</p> <ul style="list-style-type: none"> • Recognizing heightened risks faced by women during displacement, such as gender-based violence or trafficking, • Systematically engaging with women in planned relocation processes, • Improving the collection, consolidation, and analysis of gender- and age-disaggregated data on internal and cross-border displaced persons.
<p>Migrants in Crisis: The Migrants in Countries in Crisis (MICIC) Guidelines (finalized in 2016)</p>	<p>The MICIC Guidelines aim to:</p> <ul style="list-style-type: none"> • Address protection gaps for migrants who are present in a country experiencing a conflict or disasters, including in climate change contexts. 	<p>The MICIC guidelines dictate that:</p> <ul style="list-style-type: none"> • Humanitarian assistance should be provided to migrants “without discrimination, regardless of... gender” • Tailored assistance to migrants must take into account needs that may arise from gender... sexual orientation, gender identity, and expression”
<p>Human Rights: Human Rights entities, including the Human Rights Council and other charter-based or treaty-based bodies</p>	<p>Human rights norms and standards provide an important part of the legal framework for gender-responsive approaches to climate-related mobility. For example:</p> <ul style="list-style-type: none"> • Committee on the Elimination of Discrimination against Women (CEDAW) General Recommendation No. 37 on “Gender-related dimensions of disaster risk reduction in a changing climate” requires States to ensure the principles of gender equality and contains a specific section on freedom of movement and the need to protect the rights of migrants adversely affected by disaster and climate change. • Human Rights Council resolution 38/4 on human rights and climate change calls upon all states to “adopt a comprehensive, integrated, and gender-responsive approach to climate change adaptation and mitigation policies... particularly to support the resilience and adaptive capacities of women and girls both in rural and urban areas to respond to the adverse impacts of climate change.” • Human Rights Council resolution 35/20 further calls upon States to “integrate a gender perspective in pursuing mitigation and adaptation responses ... [for] the full and effective enjoyment of human rights, including those of migrants and persons displaced across international borders in the context of the adverse impacts of climate change.” 	

5.0 Conclusions and perspectives on a way forward

Gender plays an important role in shaping the trends, challenges, and opportunities of people on the move in a changing climate. Noting that these dynamics are context specific and should not be generalized, the paper asserts that while women may face heightened risks of vulnerability, they are also leaders in their homes and communities and are critical actors in shaping responses to climate-related mobility.

Gender-based differences were classified in patterns of three climate-mobility pathways. In displacement after storms or other extreme weather events, women and men may have different risk perceptions and remain displaced for different periods of time. For households where men migrate as an adaptation strategy, this may lead to increased workloads for women in agriculture, but also of potentially more decision-making power. In communities that relocate, men and women may face different challenges in terms of livelihoods and disruption of community networks.

Across all types of mobility, common gender-based challenges emerge. Women may face heightened risks to their safety and security, for instance, sexual and gender-based violence, harassment, sex and labor trafficking, or other rights violations while on the move. Women on the move may experience greater psychosocial stress, including anxiety, depression, and post-traumatic stress disorder. They may also face challenges in terms of access to relief and other social services, for instance, being denied these services because they lack the required identification. Gender-based differences in the ownership, inheritance, and use of property may influence the ability to return and rebuild after displacement, or relocate.

Evidence from the literature review and stories demonstrate that many women are leaders within their communities during evacuation, recovery from displacement, planned relocation, and migration as adaptation. Women also play important household leadership roles, both when they migrate and send remittances, or when they remain

behind and become empowered by making decisions on remittance spending or managing other household resources such as land or other property.

In view of the key findings presented in the paper, the following broad messages illustrate how gender perspectives may be integrated in policy and programs at all levels.

Addressing systemic gender inequalities is essential for a transformational climate response and for measures to avert, minimize, and address climate-related displacement, as well as to facilitate migration as adaptation, or planned relocation as a last resort.

- Gender inequalities restrict women's access to financial resources, land, education, health care, and other rights and opportunities, consequently limiting women's capacity for coping with and adapting to climate change impacts, including measures to avert, minimize, and address displacement. Women's unequal participation in decision-making processes and labor markets further compounds these inequalities and prevents them from fully contributing to climate-related planning, policy-making, and implementation.
- Gender mainstreaming is an important strategy to ensure that preparedness, response, and recovery mechanisms meet the specific needs and priorities of women, girls, men, and boys of all backgrounds and identities in the context of climate-related mobility.



WOMEN SHARE A MEAL AT THE ALBUERA EMPOWERED WOMEN'S ASSOCIATION'S SMOKED FISH CENTER IN A TYPHOON HAIYAN-AFFECTED COMMUNITY. PHOTO: ERICA BOWER

Ensuring women's equal access to, control over, and ownership of land and other resources is necessary for gender-responsive policies and practices on climate-related mobility.

- Removing obstacles to women's access to natural resources, financial services, and land ownership is critical for their ability to participate in all decision-making related to displacement, migration, or planned relocation.
- Women's full, equal, and meaningful participation in decision-making related to climate-related mobility can be enhanced by increasing their access to information, including through gender-responsive early warning systems and weather forecasting services.
- It is important to promote women's agency, underscoring their knowledge of sustainable natural resources management in response to disasters and other climate-related crises, and leadership in sustainable practices at the household, community, national, and global levels.

Women's full, equal, and meaningful participation is critical at all levels with regard to mobility in the context of climate change.

- Women's full, equal and meaningful participation and leadership is critical – at all levels and stages – of planning relocations, responding to displacement, and facilitating migration through safe and orderly pathways. This includes their participation in the design, implementation, follow-up, and evaluation of policies that affect their livelihoods, well-being, and resilience.
- Women's organizations must be able to work safely in order to effectively participate in the decision-making processes in the context of climate-related mobility at local, national, and global levels.
- At the global level, the full, equal, and meaningful participation of female delegates, women's organizations and grassroots groups, and gender equality experts must be ensured. Women from affected communities should be engaged to support policy makers and contribute to the discussions around women's needs, challenges, and opportunities in the context of climate-related mobility, including decision-making processes of the Task Force on Displacement and the work of the Executive Committee of the Warsaw International Mechanism on Loss and Damage.

Awareness-raising and capacity-building are indispensable measures to raise understanding on issues relating to gender equality, the empowerment of women, and the realization of their human rights the context of climate-mobility pathways at global, national, and local levels.

- Capacity-building of negotiators at the international level is necessary to ensure mainstreaming of gender-responsive policy approaches to climate-related mobility, and coherence across multiple policy arenas (including those referenced in Table 2).
- Awareness raising and capacity building for key technical and management staff in relevant national ministries can strengthen their ability to develop gender-responsive actions in recovery and response to disaster displacement, facilitation of migration as adaptation and planned relocation.
- At a local level, capacity-building and targeted skill-building may be beneficial to ensure that women have employable skills and can access and utilize safe and orderly labor migration pathways as an adaptation strategy.

In all forms of movement, it is essential to ensure the safety, security, and well-being of all people on the move, including in the context of climate change.

- Displacement camps must be planned and managed in a gender-responsive way, meet human rights and humanitarian standards, and be staffed by people trained in gender-sensitive approaches who can respond to the specific needs of women.
- It is critical to enforce measures to prevent and eliminate sexual and gender-based violence, harassment, physical abuse, and sex and labor trafficking of women on the move in a changing climate. This requires multi-sectoral and coordinated approaches to prosecute perpetrators of violence against women and girls, end impunity, and provide protection and equal access to comprehensive social, mental, and physical healthcare services, including for sexual and reproductive health, and legal services for all victims and survivors to support their full recovery and reintegration into society.
- Equitable and nondiscriminatory allocation of relief supplies and resources is needed in displacement after extreme weather events and should build on specific gender analysis to identify gender inequalities that lead to power differentials and different vulnerabilities and capacities.

Addressing knowledge and data gaps through gender-responsive data collection, monitoring, and research is an essential foundation for evidence-based policy and practice.

- Investment in gender statistics is critical for gender-responsive approaches to displacement, migration, and planned relocation. This requires investments in capacity-building at national and local levels to collect, analyze, and disseminate data disaggregated by sex, age, and other factors such as race, ethnicity, migratory status, disability, and gender identity in the context of climate-related mobility.
 - Similarly, it is important to compile and disseminate experiences, lessons learned, and promising practices related to implementation activities by Parties and other stakeholders.
- Finally, further research is needed to ensure a more robust understanding of the gender dimensions of climate-related mobility. Gaps identified in this discussion paper include the following:
 - Literature focused on women’s agency and empowerment, rather than exclusively on vulnerability;
 - Research that analyzes the challenges and opportunities of climate-related mobility for men and boys;
 - Research focused on the experiences of LGBTQI+ individuals on the move in climate change contexts; and
 - Research that utilizes an intersectional lens, as sex-disaggregation alone overlooks the social dynamics and inequalities of age, race, class, ethnicity, indigenous status, and other identities not captured by most current data.

References

- 1 UN Women. “OSAGI Gender Mainstreaming - Concepts and Definitions.” United Nations, United Nations, www.un.org/womenwatch/osagi/conceptsanddefinitions.htm
- 2 Crenshaw, Kimberle. “Race, gender, and sexual harassment.” S. Cal. L. Rev. 65 (1991): 1467.
- 3 UNISDR. “Terminology.” UNISDR News, 2018, www.unisdr.org/we/inform/terminology#letter-s
- 4 UNFCCC. “The Scope of Work Undertaken on Slow Onset Events (SOEs) as Reported by Partners in the SOEs Database.” UNFCCC, 2018, available at: unfccc.int/sites/default/files/resource/activity_b_so_e_assesment_feb_2018.pdf
- 5 UNISDR. “Terminology.” UNISDR News, 2018, www.unisdr.org/we/inform/terminology#letter-s
- 6 Terminology differs across policy spheres, and there is no universally agreed upon term for ‘international migration’. The Global Compact for Migration refers to ‘migration’ encompassing forced and voluntary movements, whereas the Platform on Disaster Displacement (PDD), the Advisory Group on Climate Change and Human Mobility, and the WIM Task Force on Displacement refer to ‘displacement’ as predominantly forced and migration as predominantly voluntary. In reality, the line that separates forced or voluntary movements is artificial, and human rights protection is essential for both migrants and displaced persons.

UNFCCC. *Cancun Adaptation Framework*, 2010 <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>
- 7 Nansen Initiative “Agenda for the Protection of Cross-Border Disaster Displaced Persons” 2015. Available at: https://docs.google.com/viewerng/viewer?url=http://disasterdisplacement.org/wp-content/uploads/2014/08/EN_Protection_Agenda_Volume_1_-_low_res.pdf&hl=en
- 8 UNHCR. 2014. Planned relocation, disasters and climate change: Consolidating good practices and preparing for the future. Report, Sanremo Italy 12-14 Mar 2014. <http://www.unhcr.org/54082cc69.pdf>
- 9 Foresight: Migration and Global Environmental Change (2011) Final Project Report. The Government Office for Science, London.
- 10 Foresight: Migration and Global Environmental Change (2011) Final Project Report. The Government Office for Science, London.
- 11 International Displacement Monitoring Centre (IDMC). 2018. Global Report on Internal Displacement. Available from: <http://www.internal-displacement.org/global-report/grid2018/>
- 12 Hunter, L.M. and David, E. 2011. “Climate Change and Migration: Considering Gender Dimensions.” Invited chapter in *Climate Change and Migration*. Etienne Piguet, Paul de Guchteneire and Antoine Pecoud (Editors). UNESCO Publishing and Cambridge University Press.

Gioli, Giovanna, and Andrea Milan. “Gender, migration and (global) environmental change.” *Routledge Handbook of Environmental Displacement and Migration*. Vol. 135. No. 150. ROUTLEDGE in association with GSE Research, 2018. 135-150.
- 13 DTM. *CCCM Philippines*, IOM, 2014, cccmphilippines.iom.int/dtm-main
- 14 Paul, B.K., 2010. Human injuries caused by Bangladesh’s cyclone Sidr: an empirical study. *Natural hazards*, 54(2), pp.483-495.
- 15 Bradshaw, S. 2004 “Socio-economic impacts of natural disasters: a gender analysis”. UN Economic Commission for Latin America and the Caribbean (ECLAC) Series Manuales 3 <http://www.eclac.org/publicaciones/xml/3/15433/lcl2128i.pdf>
- 16 West, D.M. and Orr, M., 2007. Race, gender, and communications in natural disasters. *Policy Studies Journal*, 35(4), pp.569-586.
- 17 Ajibade, I., McBean, G. and Bezner-Kerr, R., 2013. Urban flooding in Lagos, Nigeria: Patterns of vulnerability and resilience among women. *Global Environmental Change*, 23(6), pp.1714-1725.
- 18 Gioli, Giovanna, and Andrea Milan. “Gender, migration and (global) environmental change.” *Routledge Handbook of Environmental Displacement and Migration*. Vol. 135. No. 150. ROUTLEDGE in association with GSE Research, 2018. 135-150.
- 19 Foresight: Migration and Global Environmental Change (2011) Final Project Report. The Government Office for Science, London.

- 20 Gray, C.L., 2010. Gender, natural capital, and migration in the southern Ecuadorian Andes. *Environment and Planning A*, 42(3), pp.678-696
- 21 Rabbani, Md. Golam, et al. *UN Women*, UN Women Bangladesh, 2015, <http://www2.unwomen.org/-/media/field%20office%20eseasia/docs/publications/2016/01/climate%20change%20%20migration%20in%20bangladesh%20a%20gender%20perspective.pdf?la=en&vs=4849>
- 22 Silva, J.A., S. Eriksen, and Z.A. Ombe. 2010. Double exposure in Mozambique's Limpopo River Basin. *Geographical Journal* 176: 6-24; Djoudi, H., M. Brockhaus, and B. Locatelli. 2013. Once there was a lake: Vulnerability to environmental changes in northern Mali. *Regional Environmental Change* 13: 493-508
- 23 Djoudi, H., and M. Brockhaus. 2011. Is adaptation to climate change gender neutral? Lessons from communities dependent on livestock and forests in northern Mali. *International Forestry Review* 13: 123-135.
- 24 Bertana, Amanda. "How a Community in Fiji Relocated to Adapt to Climate Change." *Scholars Strategy Network*, 2017, scholars.org/brief/how-community-fiji-relocated-adapt-climate-change
- 25 de Sherbinin, A., Castro, M., Gemenne, F., Cernea, M.M., Adamo, S., Fearnside, P.M., Krieger, G., Lahmani, S., Oliver-Smith, A., Pankhurst, A. and Scudder, T., 2011. Preparing for resettlement associated with climate change. *Science*, 334(6055), pp.456-457.
- 26 Enarson, E., 2002. Gender issues in natural disasters: talking points and research needs. *Crisis, Women and Other Gender Concerns*, pp.5-12.
- 27 UN High Commissioner for Refugees (UNHCR), *The world turned upside down: A review of protection risks and UNHCR's role in natural disasters*, March 2013, PDES/2013/03, available at: <http://www.refworld.org/docid/5142d4652.html>
- 28 Anastario, M., Shehab, N. and Lawry, L., 2009. Increased Gender-based Violence Among Women Internally Displaced in Mississippi 2 Years Post-Hurricane Katrina. *Disaster medicine and public health preparedness*, 3(01), pp.18-26.
- 29 Schade, J., 2013. Climate change and planned relocation: Risks and a proposal for safeguards. In *Disentangling Migration and Climate Change* (pp. 183-206). Springer Netherlands.
- 30 Adger, W.N., J.M. Pulhin, J. Barnett, G.D. Dabelko, G.K. Hovelsrud, M. Levy, U. Oswald Spring, and C.H. Vogel, 2014: Human security. In: *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 755-791.
- 31 Mills, M.A., Edmondson, D. and Park, C.L., 2007. Trauma and stress response among Hurricane Katrina evacuees. *American Journal of Public Health*, 97(Supplement_1), pp.S116-S123
- 32 Mitchell T, Tanner T and Lussier K 2007 *We Know What We Need: South Asian Women Speak Out on Climate Change Adaptation* (Brighton: ActionAid and Institute of Development Studies (IDS) at the University of Sussex)
- 33 Enarson, E., 2002. Gender issues in natural disasters: talking points and research needs. *Crisis, Women and Other Gender Concerns*, pp.5-12.
- 34 UN High Commissioner for Refugees (UNHCR), *The world turned upside down: A review of protection risks and UNHCR's role in natural disasters*, March 2013, PDES/2013/03, available at: <http://www.refworld.org/docid/5142d4652.html>
- 35 Thuringer, Cara. "Left Out and Behind: Fully Incorporating Gender Into the Climate Discourse." *New Security Beat*, 2016, www.newsecuritybeat.org/2016/08/left-behind-fully-incorporating-gender-climate-discourse/
- 36 Kristjanson, P., Waters-Bayer, A., Johnson, N., Tipilda, A., Njuki, J., Baltenweck, I., Grace, D. and MacMillan, S., 2014. Livestock and women's livelihoods. In *Gender in Agriculture* (pp. 209- 233). Springer Netherlands.
- 37 Henrici, Jane, et al. "GET TO THE BRICKS The Experiences of Black Women from New Orleans Public Housing after Hurricane Katrina." *Institute for Women Policy Research*, 2015, iwpr.org/wp-content/uploads/wpallimport/files/iwpr-export/publications/D506_GetToTheBricks.pdf
- 38 Agnihotri, Anita. "The Orissa Resettlement and Rehabilitation of Project-affected Persons Policy, 1994: An Analysis of its Robustness with Reference to Impoverishment Risk Model." *Involuntary Displacement in Dam Projects*. New Delhi: Prachi Prakashan (1996): 19-42.
- 39 Sherwood, A., Bradley, M., Rossi, L., Guiam, R. and Mellicker, B., 2015. *Resolving post-disaster displacement: Insights from the Philippines after Typhoon Haiyan (Yolanda)*. Brookings Institution.
- 40 Dankelman, I. E. M. "Gender, climate change and human security: Lessons from Bangladesh, Ghana and Senegal." (2008).
- 41 Women and Gender Constituency. 2016. Community led relocation effort by the Carteret islanders. http://womensgenderclimate.org/gic_solutions/community-led-relocation-effort-by-the-carteret-islanders-who-face-extinction-from-climate-change-impacts-and-extreme-weather-events/
- 42 UN High Commissioner for Refugees (UNHCR), *A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change*, 18 July 2017, available at: <http://www.refworld.org/docid/596f15774.html>
- 43 Fleury, Anjali. *Understanding Women and Migration: A Literature Review*. KNOMAD Working Paper 8, 2016, atina.org.rs/sites/default/files/KNOMAD%20Understaning%20Women%20and%20Migration.pdf
- 44 Fleury, Anjali. *Understanding Women and Migration: A Literature Review*. KNOMAD Working Paper 8, 2016, atina.org.rs/sites/default/files/KNOMAD%20Understaning%20Women%20and%20Migration.pdf
- 45 Lopez-Ekra, Sylvia, et al. "The impact of remittances on gender roles and opportunities for children in recipient families: Research from the International Organization for Migration." *Gender & Development* 19.1 (2011): 69-80.
- 46 Food and Agriculture Organization. 2018 *The State of Food and Agriculture Migration, Agriculture and Rural Development*. United Nations, 2018, www.fao.org/3/i9549en/i9549en.pdf
- 47 Matthe, Anne Kristin. "Gender and Migration in the Context of Climate Change." *Our World*, UNUniversity, 2016, ourworld.unu.edu/en/gender-and-migration-in-the-context-of-climate-change
- 48 Adams, R. H., & Cuecuecha, A.. 2010. Remittances, Household Expenditure and Investment in Guatemala. *World Development*, 38(11):1626-1641.
- 49 Adopted at the 21st Conference of the Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC).
- 50 TFD. *Task Force on Displacement Report*. UNFCCC, 2018, unfccc.int/sites/default/files/resource/2018_TFD_report_16_Sep_FINAL-unedited.pdf
- 51 UNFCCC. *Paris Agreement*. UNFCCC, 2015, unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english.pdf. Article 7 Paragraph 5 ; Article 11 paragraph 2
- 52 UNFCCC. *Cancun Adaptation Framework*, 2010 <https://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>
- 53 TFD. *Task Force on Displacement Report*. UNFCCC, 2018, unfccc.int/sites/default/files/resource/2018_TFD_report_16_Sep_FINAL-unedited.pdf



Sierra Club National
2101 Webster Street, Suite 1300
Oakland, CA 94612
(415) 977-5500

Sierra Club Legislative
50 F Street, NW, Eighth Floor
Washington, DC 20001
(202) 547-1141

