



# Diving into the gap: Gender dimensions of Climate Risk Management

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Training of beneficiaries on alternative income-generating activities in Bangladesh

## Abstract

In the era of climate change, having access to resources is key to building climate resilience.

However, in many countries significant socio-economic inequalities between men and women still limit or prevent women's access to education, property, financial assets, technology, political decision-making and other valuable resources. These gender-discriminatory norms hamper women's adaptive capacity and put women and girls at a high risk of suffering loss and damage from climate change.

Based on current scientific evidence, this study gives insight into the specific areas in which women and girls suffer significantly higher losses and damages than men. Furthermore, it explores how social norms create and exacerbate these vulnerabilities to climate change.

Additionally, this study gives an overview on the status quo of the international frameworks related to the climate change/gender nexus and reveals a strong need to continue translating political commitment into concrete action.

In order to contribute to operationalising international climate and gender action goals, this study provides an overview of the GIZ Climate Risk Management (CRM) framework. This tool aims at supporting decision makers and project planners in designing and implementing gender-responsive CRM measures. By providing project examples and recommendations for many different levels of action, it offers practical guidance to create win-win options that enhance gender equality and climate resilience.

In line with the current political momentum for gender and climate justice, this study provides a scientifically-based narrative for the promotion of gender-responsive climate solutions as well as for international women empowerment and leadership.



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Binta Abdul Kadir, School Principal of the Federal Government College in Kwali, Nigeria

# Executive Summary



It is no longer a secret that many countries and people in the world are already suffering severely from the impacts of climate change. Developing countries, small island states and coastal regions are particularly concerned.

Increasingly extreme weather conditions affect the livelihoods of many people – and bear existential threats especially for disadvantaged and marginalised population groups.

In many countries significant socio-economic inequalities between men and women still limit or prevent women's access to education, property, financial assets, technology, political decision-making and other resources. These gender-discriminatory norms limit women's adaptive capacity and prevent them from developing stronger climate resilience. Especially women in developing countries are at increasingly high risk of suffering loss and damage from climate change.

Against this background, this desk study seeks to provide an instructive overview on the importance and necessity of integrating gender considerations into comprehensive Climate Risk Management in order to avert, minimise and address loss and damage. It presents scientific evidence for the gender-specific impacts of climate change on women in different developing countries. Furthermore, it gives insights on past and potential future losses and damages specifically for women, while explaining how social standards create, enhance and determine both vulnerability and resilience in the context of climate change. Based on the analysed information, it shows that:

- Extreme Weather Events (EWEs) cause **higher mortality rates** for women and girls.
- Women's and girls' **health** are projected to be disproportionately affected by the impacts of climate change.
- Women and girls have restricted access to certain adaptation strategies (e.g. migration).
- In the aftermath of an EWE, women and girls face a higher risk of experiencing **gender-based violence, human trafficking and sexual exploitation**.
- Women and girls face higher loads of **care work**, resulting in various long-term effects on their **education and income generation**.

### ➔ In the era of climate change, having access to resources is key to building climate resilience.

The study shows that women face losses and damages due to climate impacts only rarely in the context of the formal economy, but rather in form of “non-economic loss and damage”.

Stepping forward from gender-differential vulnerabilities, this study provides an overview on the development of the topic of gender equality in international climate negotiations and frameworks. Since the first UNFCCC in-session workshop on gender and climate change at COP19 (2013), the topic is becoming increasingly prominent within the scope of the UNFCCC and the NAP processes as well as the NDC partnership. With the successful review and adoption of the Lima Work Programme on Gender and the Gender Action Plan at COP25 (2019), the latest events show that parties continue to commit to gender mainstreaming as a significant component of international climate dialogue, policy and action.

In this context, the GIZ Global Programme on *Risk Assessment and Management for Adaptation to Climate Change (Loss and Damage)* presents its approach on comprehensive Climate Risk Management, which combines gender and climate action to effectively deal with loss and damage from climate change. Due to still existing structural gender inequalities and social biases, women's contribution to adaptation and climate action has not yet reached its full potential. Gender-responsive CRM can, therefore, create win-win options that enhance both climate action and social equality. Additionally, gender-responsive adaptation, mitigation and financing measures have the potential to challenge existing paradigms and create cultural shifts for gender norms. They therefore hold tremendous opportunities for being inherently transformative.

Furthermore, this study provides instructions on how to include gender dimensions into each step of the continuous CRM learning cycle. This way, it can be used as a tool to recognise, validate and integrate women's resources into decision-making, planning, implementation and monitoring processes – which benefit the entire society.

Moreover, the study gives the following examples for gender-responsive methods, practises and projects to inspire combined gender and climate action:

- A selection of gender-responsive Climate Risk Assessment tools
- Gender-responsive Climate Risk Insurance schemes
- Integrated practice example: Empowering Women Leaders for Urban Resilience in Portoviejo (Ecuador)

Drawing on knowledge gaps and limitations for enhanced climate policy and action, this study presents recommendations for awareness raising, role model development and women empowerment to take the topic to the next level of public and political visibility. Further recommendations on how to set the focus on gender-responsive CRAs and research aim at broadening the knowledge basis as well as the scientific evidence for this very topic. Lastly, instructions for the design, selection, implementation and monitoring of CRM measures seek to support the integration of gender lenses into all phases of the CRM learning cycle. This holistic approach will ultimately help to successfully address and minimise climate risks and enhance social inclusion.



Women in public transport in Vietnam



Women farming rice in Nigeria

# 1. Introduction

In the 21st century, climate change possibly constitutes the most far-reaching challenge posed to the global community. A large body of literature and scientific evidence suggests that the vulnerability and adaptive capacity to respond to climate change differs across societies (see: Masika 2002, Anguelovski et al. 2014, Whyte 2014). Particularly affected by climate change are developing countries; and namely vulnerable and marginalised groups due to structural, economic or social disadvantages.

Evidence shows that women face higher risks and burdens from the impacts of climate change due to underlying inequality factors associated with their gender (UN Women 2015, UNFCCC 2019a). Furthermore, the United Nations Framework Convention on Climate Change (UNFCCC 2019b) states that men and women display divergent vulnerabilities, but also different priorities and capacities when it comes to tackling the impacts of climate change. This disparity between genders in their predispositions and coping mechanisms derives from socially constructed gender norms, practices and biases that determine roles, relationships, perceptions and expectations. However, the international literature on gender agrees that women are commonly more subjected to restricted societal norms, expectations and privileges than men (Tanner & Horn-Phathanothai 2014).



Changing rainfall patterns directly affect the water resources of local communities in Vietnam

***Women’s “adaptive capacity is limited by the substantial socio-cultural conditioned constraints [...]. As a result, women are considerably more vulnerable to the impacts of climate change, disasters and environmental degradation, and the survival of their families is jeopardised.”***  
(BMZ 2014)

Gender, understood as “the roles, behaviours, activities, attributes and opportunities that any society considers appropriate for girls and boys, and women and men” (WHO 2019) is not solely about the biological sex of a person, but rather about the social constructs of what it means to be a man or a woman in a given society (Bradshaw & Fordham 2015). This definition of gender not only addresses the binary categories of men and women, but recognises other gender dimensions, including the LGBTQ community, sexual minorities or masculinities (cf. Gaillard et al. 2017, Enarson et al. 2018). Even though all kinds of gender minorities are fully acknowledged, this study focuses only on the differentiated roles of men and women.

In the past, women’s vulnerability to climate change has been associated with a victimised role. Consequently, this connotation has effectively ignored the intersectional dimension of gender. Currently, more nuanced contributions are evolving that recognise the complex interactions of gender with other intersectional variables, such as ethnicity, religion, class and age (Carr & Thompson 2014, Enarson et al. 2018). These aspects also have to be taken into account when mainstreaming gender into development practice. However, gendered vulnerability to climate-related hazards is not a given circumstance, but rather a result of social conditions and cultural norms. Therefore, women’s contribution to adaptation and climate protection has not yet reached its full potential and can be addressed by enhancing skills for resilience and increasing capacities to cope with crisis situations (Tanner & Horn-Phathanothai 2014, Ahmad 2018, Raju 2019).

In addition to reproductive unpaid labour such as domestic work and childcare, women in developing countries are frequently involved in “natural resource-dependent activities, such as agriculture” (Tanner & Horn-Phathanothai 2014). Thus, they are reliant on climatic conditions and, hence, directly affected by climate change (Adger et al. 2007). Other factors of inequality may exacerbate the vulnerabilities of women in rural and developing economies: they often obtain only limited access to knowledge, education,

***“Women still bear up to 80 percent of responsibility for unpaid house-work and care work, but only between ten and 20 landowners out of 100 are female.”*** (BMZ 2014)

financial and/or natural resources and property rights, such as those related to land use and tenure (*ibid.*).

However, it is important not to presume a victimised and passive role of women, nor to propagate one homogenised image of women in developing countries. When mainstreaming gender components into the development practise it is crucial to take intersectional and cultural variables specific to the context, region and/or country into account.

Similarly, the UNFCCC (2019a) highlights the importance of considering and including gender-responsive measures while preventing and responding to the effects of climate change. The Intergovernmental Panel on Climate Change report on Global Warming of 1.5C (IPCC 2018) concluded that poorly designed or implemented adaptation and mitigation measures can potentially increase or trigger gender inequality (IPCC 2019). It is therefore of major importance to strengthen resilience to climate change by reducing social inequalities and by systematically ensuring the participation of women in adaptation and mitigation processes (Nelleman *et al.* 2011). Likewise, the 2019 report of the United Nations High Commissioner for Human Rights (OHCHR) stresses that the full and equal participation and leadership of women (and men) in decision-making, planning and implementation of climate change actions is essential to protect women’s rights and ensure effective climate action (OHCHR 2019). This need for gender-responsive, inclusive and participatory development policies, plans and actions has become a central topic within the international discourse on the nexus of climate change and development cooperation.

***“Women are disproportionately affected by climate change impacts such as droughts, floods and other extreme weather events. They also have a critical role in combatting climate change but need to be better represented at all levels in the decision-making. Empowering women will be a significant factor in meeting the climate challenge.”*** Christina Figueres, former UNFCCC executive secretary (Miles 2018)



GIZ Climate Risk Management training in Senegal

Gender-responsive Climate Risk Management (CRM) constitutes a holistic approach for dealing with climate change impacts. It holds opportunities for raising climate resilience and enabling progress for the sustainable development of a country or region. In this sense, the GIZ Global Programme on *Risk Assessment and Management for Adaptation to Climate Change (Loss and Damage)*, commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ), is pleased to present an overview of the most recent information on gender-specific impacts of climate change-related extreme weather and slow-onset events, as well as information on the status of gender dimensions in international frameworks related to climate change. This publication explains the importance of integrating gender-responsive approaches into Climate Risk Assessment (CRA) and Management and identifies gaps and needs for mainstreaming gender considerations into CRAs and CRM.

Although this study focuses predominantly on women, it is important to highlight that gender equality is never only about women. The examples covered in this study have shown that sociocultural and behaviour expectations also determine men’s roles in society and have their own detrimental implications. However, reaching comprehensive gender equality is also not about addressing two sides of the same coin. Equal treatment of every individual requires representative consideration of all (gender) identities within the context of the larger community (Gaillard *et al.* 2017).



Small-scale mining and diamond mining in Sierra Leone

## 2. Gender-differential impacts of climate change

Climate change is altering the face of risk management, not only through increased extreme weather-related risks and slow-onset events, but also through an increase in societal vulnerabilities including stresses on water availability, agriculture and ecosystems. Existing gender inequalities and social norms are major factors which play into patterns of climate change vulnerability within rural communities in developing countries and are likely to make patterns of inequality more conspicuous.

## 2.1 Gender-differential impacts of extreme weather events (EWE) and slow-onset events (SOE)

Extreme weather and slow-onset events are natural phenomena. They are primarily a result of natural climate variability and would occur even without the existence of global warming. However, some types of weather extremes have increased in frequency and magnitude due to human-induced climate change. Meteorological hazards

such as droughts or tropical typhoons show different patterns of intensity, duration, timing and spatial extent, which is attributable to anthropogenic climate change (*IPCC 2012*). Irrespective of ongoing climate policy and adaptation efforts, vulnerable and marginalised population groups continue to live with a high degree of residual risk – potentially leading to losses and damages for their livelihoods.

Given that women in developing countries are rarely represented in the formal economy and have limited ownership over property and asset rights, they mainly suffer from non-economic loss and damage associated with the impacts of climate change.

The following chapter explores gender-differential impacts of these extreme weather and slow-onset events, as well as gender-specific capacities and resilience, based on recent international reports and documents. On the one hand, it aims to point out vulnerabilities and capacities that are determined by social norms, gendered power relations, and livelihood patterns that vary across cultures. On the other hand, it takes intersectional factors such as age, ethnicity, disability and socio-economic status into account.

**Loss and damage:** The actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems. (UNFCCC SBI 2012)

**Non-economic losses and damages (NELD)** are additional to the loss of property, assets, infrastructure, agricultural production and/or revenue that can result from the adverse effects of climate change. It covers loss and damage that are not easily quantifiable in economic terms, such as loss of life, degraded health, losses induced by human mobility, as well as loss or degradation of territory, cultural heritage, indigenous knowledge, societal/cultural identity biodiversity, and ecosystem services. (UNFCCC 2019)



Protection of coastal forests in Bangladesh



Perspectives from women and girls in Nigeria

### 2.1.1 Mortality

The most overt evidence of women being more vulnerable to hazards is the higher number of casualties. A variety of scientific evidence shows the following:

In a sample of up to 141 countries, with data available on the Emergency Disasters Data Base (EM-DAT) over the period 1981 to 2002, Neumayer et al. (2007) found that, on average, both geophysical and climate-related hazards and their subsequent impacts result in a higher mortality rate for women than men (Neumayer et al. 2007). To exemplify, 90 percent of the victims of the 1991 cyclone in Bangladesh were women. Additionally, during Cyclone Nargis in Myanmar in May 2008, among the 130,000 people reported dead or missing, 61 percent were female (WHO 2014).

➔ **Women and children face higher mortality and morbidity rates than men in situations of extreme weather events.**

*“Explanations for these differences are not a biological predisposition such as physical strength but rather a consequence of socially constructed roles and norms that determine the behaviour and actions of women in many developing countries.”*

(Goh 2012)

Firstly, women often have limited access to weather forecasts and warning information, which are indispensable for a timely evacuation. Disaster warnings are often distributed through media such as radio or television, which are less frequently used by women in these contexts (cf. Ahmad & Fajber 2009). Secondly, sociocultural differences determining clothing and relevant skills such as swimming also affect the gender dimensions of disaster mortality rates (Cannon 2000, Neumayer et al. 2007). In some developing countries, women are not encouraged to learn how to swim for reasons of appropriateness, cultural dress code regulations or modesty. This decreases their likelihood of survival in disaster events (Aguilar 2004, Goh 2012).



➔ **For reasons of appropriateness, cultural dress code or modesty, women do not acquire certain survival skills (e.g. swimming) in many countries. This decreases their likelihood of survival during storms, floods, etc.**

In rural Bangladesh, Ikeda (1995) demonstrated that norms and social practises, including women wearing traditional clothing and remaining inside family houses, impede not only their movement, but also access to information about threatening EWEs. Women's access to emergency shelters may be limited due to socioeconomic status or caste (Goh 2012), impeded due to safety concerns (Plan 2011) or restricted because of lacking decision-making power to leave the home without their husbands' permission (Sikandar & Khan 2019). Furthermore, women tend to prioritise the health and safety of their children, family members, community and assets over their own safety (Patt et al. 2009). As a result, many women die in disaster situations because they stay at home to look after their children and wait for relatives to accompany them to emergency shelters (WHO 2014).

***“There is a scientific consensus that higher rates of mortality and morbidity among women during and after disasters are the result of unequal access to food and nutrition, water and sanitation, information and technology.”***

(Bern 1993, IFRI 2017)

Proportionally, women's lack of access to early warning systems and education, and their exclusion during preparedness activities hampers their ability to respond to disasters (Bradshaw & Fordham 2015). The Pan-American Health Organisation (PAHO 2002) states that most relief efforts are designed for the entire population and often rely on existing structures of resource distribution. This is problematic when pre-existing patriarchal structures of society marginalise women's access to relief resources (PAHO 2002).

Reliable data on fatalities that is disaggregated by gender is still not generally available, yet, Neumayer et al.'s study (2007) reveals a positive correlation between the socioeconomic status of women relative to men and a higher disaster-related mortality rate, especially during major incidents (Neumayer et al., 2007).

Some evidence suggests that social norms can also negatively affect immediate male mortality from EWEs. For instance, a higher percentage of men was directly exposed to hurricane “Mitch” in 1998. This can be attributed to males' societal roles of work and leisure activities predominantly taking place outdoors, as well as the societal expectation of men's risk affinity (Bradshaw 2004).

## 2.1.2 Health

According to a study of the World Health Organization (WHO), climate change and subsequent SOEs such as drought or sea level rise are projected to have detrimental effects on social and environmental factors of health, namely clean water and air, food security, secured shelter and sanitation. Between 2030 and 2050, the impacts of climate change are expected to cause more than 250,000 deaths annually due to malnutrition, malaria, diarrhoea and heat stress (WHO 2018).

EWEs, such as floods or tropical cyclones, cause women to face specific sex-related health risks, especially during pregnancy or when giving birth before, during or after the event. (Bradshaw & Fordham 2015). Pregnancy influences the physical mobility of women which may decrease their chance of survival (WHO 2014). On top of that, women's susceptibility to different types of diseases is increased during pregnancy and after birth / during breastfeeding. For example, pregnant or breastfeeding women are particularly prone to nutritional deficiencies and dehydration (Bradshaw & Fordham 2015). Additionally, they have a significantly higher risk of malaria infection as mosquitos are strongly



Medical service for girls in Tanzania

attracted to pregnant women (WHO 2014). Some studies also reveal that disaster trauma during pregnancy may lead to adverse birth outcomes such as low birth weight (Maslow et al. 2016).

However, most gender-differential health is caused by social and cultural determinants and gender-related access to resources. In most developing countries, women have the responsibility to cultivate, cook, collect drinking water, and take care of family members. These tasks are intrinsically related to several health risks: In times of water scarcity, for example during a drought, women have to walk increasingly longer distances to collect water from the nearest wells. In East Africa, women often walk for over ten kilometres in search of water (FAO 2015). Carrying heavy containers of water on the hip or the head causes exhaustion and damage to the spine and the lower back. Reduced availability of water also increases the risk of water-borne diseases such as diarrhoea, scabies or trachoma as water sources are contaminated and hygienic practices are reduced to save water for drinking and cooking (Neelormi et al. 2009, WHO 2014). This additional time burden is further accompanied by opportunity costs such as a lack of time for education, income generation and domestic duties (Bradshaw & Fordham 2015). Furthermore, women's health needs, such as maternal care or menstrual hygiene, are often overlooked during disaster response (Enarson et al. 2018). Studies have shown that this leads to isolation and an additional time burden when women and girls have to commute long distances to meet these needs (Richter 2011, Krishnan & Twigg 2016). Taking care of the sick while at the same time often not receiving sufficient health care might further

increase the risk of infection among females. Cultural restrictions and safety reasons, such as travelling alone to a clinic or being examined by male doctors, are common causes for unequal access to health-care services (WHO 2014).

The above mentioned socioeconomic and cultural limitations of receiving health care demonstrate the connection between women's position in society and their physical health. At the same time, physical health is strongly related to emotional health (Bradshaw & Fordham 2015). A study by Kumar et al. (2007) revealed that individuals without education and income are more often affected by severe psychiatric disorders after traumatic events (Kumar et al. 2007). Therefore, the emotional and psychological stress of climate-related events appears to be higher for women than for men, as their access to these resources is lower.

Furthermore, EWEs cause additional domestic work. Given that women hold multiple roles within the household, the extra work causes increased pressure and stress to cope with the aftermath of the event and fulfil these roles (Babugura 2010, Boetto & McKinnon 2013). Unfortunately, the assessments of the emotional health implications of climate-related events often focus on immediate traumatic stress (Joseph & Jaswal 2014). However, the greatest threats to the psychosocial well-being of women are often only revealed in the long-term, for example when they continuously struggle to fulfil their role as primary caregivers (Goh 2012). Nonetheless, the loss of livelihood or food security can also cause tremendous stress among men, given the socially ascribed expectation to provide for the family (WHO 2014).



Women coming to a health center in Tanzania

→ In the context of climate change, existing gender-specific limitations for accessing adequate health care and support have strong implications for women's and girls' physical and psychological/emotional well-being.



*“Climate change induced food insecurity can have lasting, intergenerational effects due to women’s nutritional needs during pregnancy, lactation and childbirth and their influence on the next generation’s health and resilience.”*

(Rylander et al. 2013)

Women in agriculture in Vietnam

### 2.1.3 Food insecurity and loss of income in agriculture sector

Increasing climate variability often leads to a decline in agricultural yields due to a lack of rain, too much rain in a short period of time or a shift of onset and end of season. Although adaptation to these changes is possible to some extent, inter alia by diversification of crops, they have a significant impact on people’s livelihoods. Men and women in developing countries often experience food insecurity, loss of traditional food sources and loss of assets including land, livestock, financial and social capital (Goh 2012). In order to cope with differing climate signals, additional human capital in form of time and labour is needed. Since female farmers, on average, already supply 43 percent of the labour force in all developing countries and up to more than 60 percent in Africa and South Asia (FAO 2017a), an even higher workload will put enormous pressure on them (Goh 2012). However, women’s ability to make decisions is limited since they rarely own and cultivate land independently. Usually, ownership and control of land, access to agricultural technologies and decision-making opportunities are left to the male head of the household (Nahian et al. 2013).

In Cambodia, for example, female farmers have less access to the mechanical equipment that can help reduce workloads and enhance productivity. Furthermore, households headed by male farmers were found to be seven times more likely to have a hand tractor than households headed by female farmers (FAO in UNESCAP 2017). Besides, a lack of financial inclusion prevents women from becoming eligible for loans and limits their capacity to provide food for their families and thus escaping hunger and poverty (Goh 2012).

With less food availability in a household, pre-existing unequal power distribution can, in turn, lead to unequal food distribution amongst family members. Due to food hierarchies in some cultures, men receive a larger share of food. This results in women and children taking in less calories, causing an increasing susceptibility to malnutrition.

For example, in Malawi, the reduction of meals per day as an adaptation strategy to food shortages is twice as likely to be mentioned by female-headed households as compared to male-headed households (Kakota et al. 2011). Similarly, women in Uganda prioritise feeding their children and men first, by reducing their own intake during food shortages, according to a study by Irish Aid (2018).

## 2.1.4 Human Mobility

The increasing frequency and intensification of EWEs and SOEs have and will continue to lead to significant human mobility, both within countries and across borders. In developing countries, climate-induced human mobility can be used as an adaptation strategy to cope with a changing environment. Due to different roles and responsibilities of men and women in these societies, men are often more mobile and more likely to migrate than women (Enarson *et al.* 2018). While men are usually able to find other income sources in new or temporary places of residence, women often lose access to their previous livelihood opportunities. According to the World Bank (2018), women and girls “often experience greater disadvantage from pervasive discrimination and structural inequalities in access to, and control of, resources and services.” This further aggravates their situation and threatens their economic security (Detraz & Windsor 2014). While people on the move are in many cases highly vulnerable, attention needs to be paid to those who are left behind (“trapped populations”) too (World Bank 2018).

Many women, being part of the most vulnerable, often stay in the affected area to take care of their children and households and will only move if forced to look for other income sources to provide for their family (Goh 2012).

Gender norms shape the ways in which men and women engage in agricultural and natural resource tasks. Hence, changes in these aspects of the environment have gendered impacts, including on human mobility (World Bank 2018). It is vital to differentiate between the following three types of climate-induced human mobility and the respective implications on gender dimensions.

**EXAMPLE: In Senegal, rising sea levels have resulted in the loss of fisheries, which has led to women becoming head of households while men migrate further inland to find work (World Bank 2018). On the contrary, environmental impacts have caused some traditionally female jobs to become increasingly difficult to carry out, resulting in higher levels of migration of women in rural Nepal. Yet more often gender norms influence who is more likely to migrate when climate pressures intensify.**

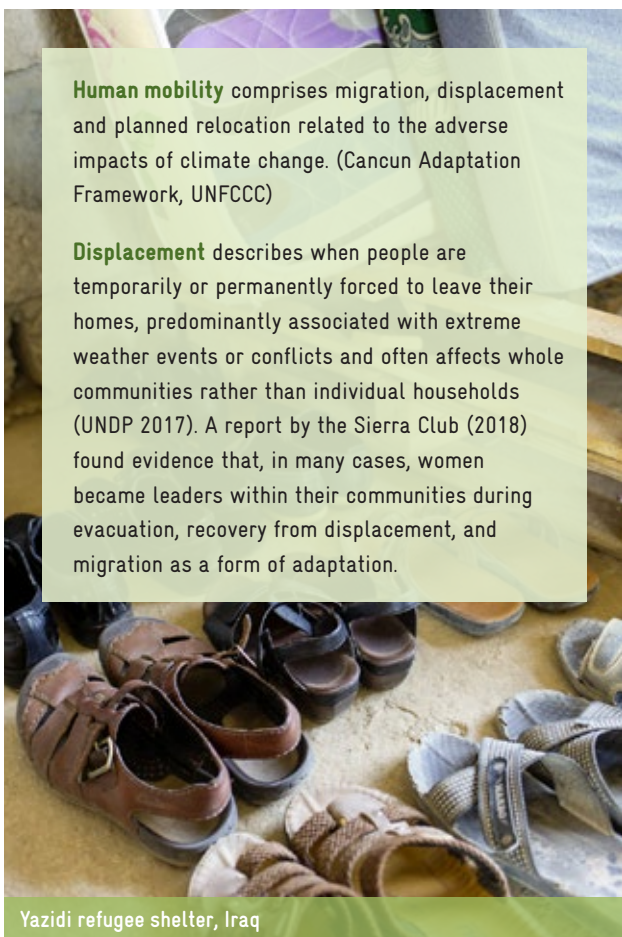
**Human mobility** comprises migration, displacement and planned relocation related to the adverse impacts of climate change. (Cancun Adaptation Framework, UNFCCC)

**Displacement** describes when people are temporarily or permanently forced to leave their homes, predominantly associated with extreme weather events or conflicts and often affects whole communities rather than individual households (UNDP 2017). A report by the Sierra Club (2018) found evidence that, in many cases, women became leaders within their communities during evacuation, recovery from displacement, and migration as a form of adaptation.

**Migration** occurs when people have the necessary resources and capabilities, such as financial resources and health, to choose between different options (Nansen Initiative 2015). Migration is, therefore, usually associated with an element of choice for the affected communities (UNDP 2017). Climate change is expected to predominantly cause internal migration.

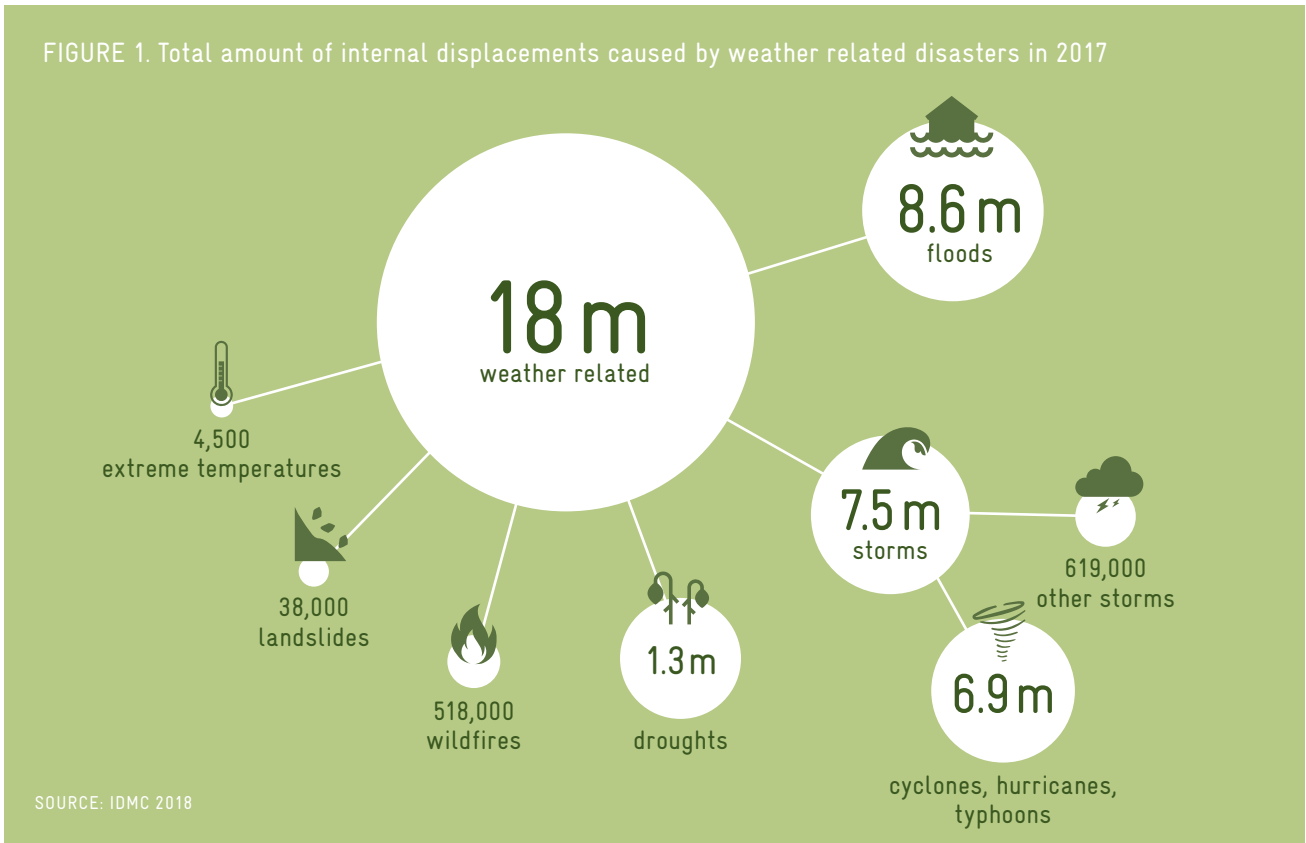
According to the Internal Displacement Monitoring Center (IDMC 2018), weather related events caused 18.8 million people to migrate within their own countries in 2017.

**Planned relocation** is a process organised by governments. Ideally, it is undertaken transparently with the informed consent of the community concerned, and with adequate provisions for re-establishing lives and livelihoods (UNDP 2017). While research on gender and planned relocation is limited, it is evident that gendered dimensions of climate-induced human mobility require special attention in order to safeguard against unwanted negative side effects of CRM approaches. From a policy perspective, the Task Force on Displacement under the WIM ExCom acknowledges that integrated approaches should take into account international human rights standards and principles such as non-discrimination, participation, inclusion and gender equality (TFD 2018).



Yazidi refugee shelter, Iraq

FIGURE 1. Total amount of internal displacements caused by weather related disasters in 2017



EXAMPLE: In 2019, Fiji launched the Planned Relocation Guidelines during COP25, which will assist and guide relocation efforts at the local level as a last resort. To reduce the vulnerability of people, the Guidelines have been developed in a participatory manner through a collaboration between government and civil society, including representatives from gender groups and various communities (Fiji Ministry of Economy 2018).



Young women at Yazidi refugee shelter, Iraq

### 2.1.5 Gender-based violence (GBV) and violence against women and girls (VAWG)

Following a disaster, women and children face a higher risk of gender-based violence (GBV), human trafficking and sexual exploitation. Although domestic violence remains the highest risk, increasing assaults by strangers are reported after disasters, particularly when women and girls are separated from their family, friends and other protective networks (*Bradshaw & Fordham 2015*). For example, the International Federation of Red Cross and Red Crescent Societies (IFRC) observed a rise in risks including sexual harassment, child sexual abuse and domestic violence after EWEs in Indonesia (Bima floods in 2016), Laos (Oudomxay floods in 2016) and the Philippines (Typhoon Haiyan in 2013) (*IFRC 2018*). This phenomenon has also been experienced in Vanuatu (Pacific), where following two cyclones in 2011, a 300 percent increase in new cases of violence were reported (*CARE, 2015*). IFRC reports that GBV tends to occur more often when people are displaced by disasters and sexual violence appears to increase because people are poorer and more vulnerable to exploitations (*IFRC, 2015*).

➔ Following extreme weather events, women and girls face a higher risk of experiencing gender-based violence, sexual exploitation and human trafficking.

**Gender-based violence (GBV)** refers to any act that is perpetrated against a person's will and is based on gender norms and unequal power relationships. It encompasses threats of violence and coercion. It can be physical, emotional, psychological, or sexual in nature and can take the form of denial of resources or access to services. It inflicts harm on women, girls, men and boys (UNHCR 2019).

**Violence against Women and Girls (VAWG):** Any act of gender-based violence that results in, or is likely to result in, physical, sexual, or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life (UN GA 1994).



Prevention of violence against girls and HIV sensitization in Tanzania



Teacher: offering education to girls and boys in Nigeria

When resources deplete, women may also be coerced into providing sex in exchange for basic goods and protection, or may enter into early marriages, which imply long-term effects on their autonomy. These threats can be further increased by a lack of privacy in emergency shelters, limited access to health services or when they become unaccompanied or orphaned, because male family members migrate in search for new income sources (Goh 2012). A recent report on GBV conducted in Chad (2018), where the population has faced multiple climate events including droughts, food shortages, extreme rainfall and recurring floods as well as political-military instability, revealed that GBV makes women less resilient. Survivors of GBV in areas affected by climate change experience a limited access to health services, meaning that survivors are less likely to be able to financially support their families. They also faced rejection by the families and communities which made them less able to gain financial support (Le Masson et al. 2018).

*“Vulnerable people have the fewest opportunities to adapt locally or to move away from risk and, when moving, often do so as a last resort. Others, even more vulnerable, will be unable to move, trapped in increasingly unviable areas.”*

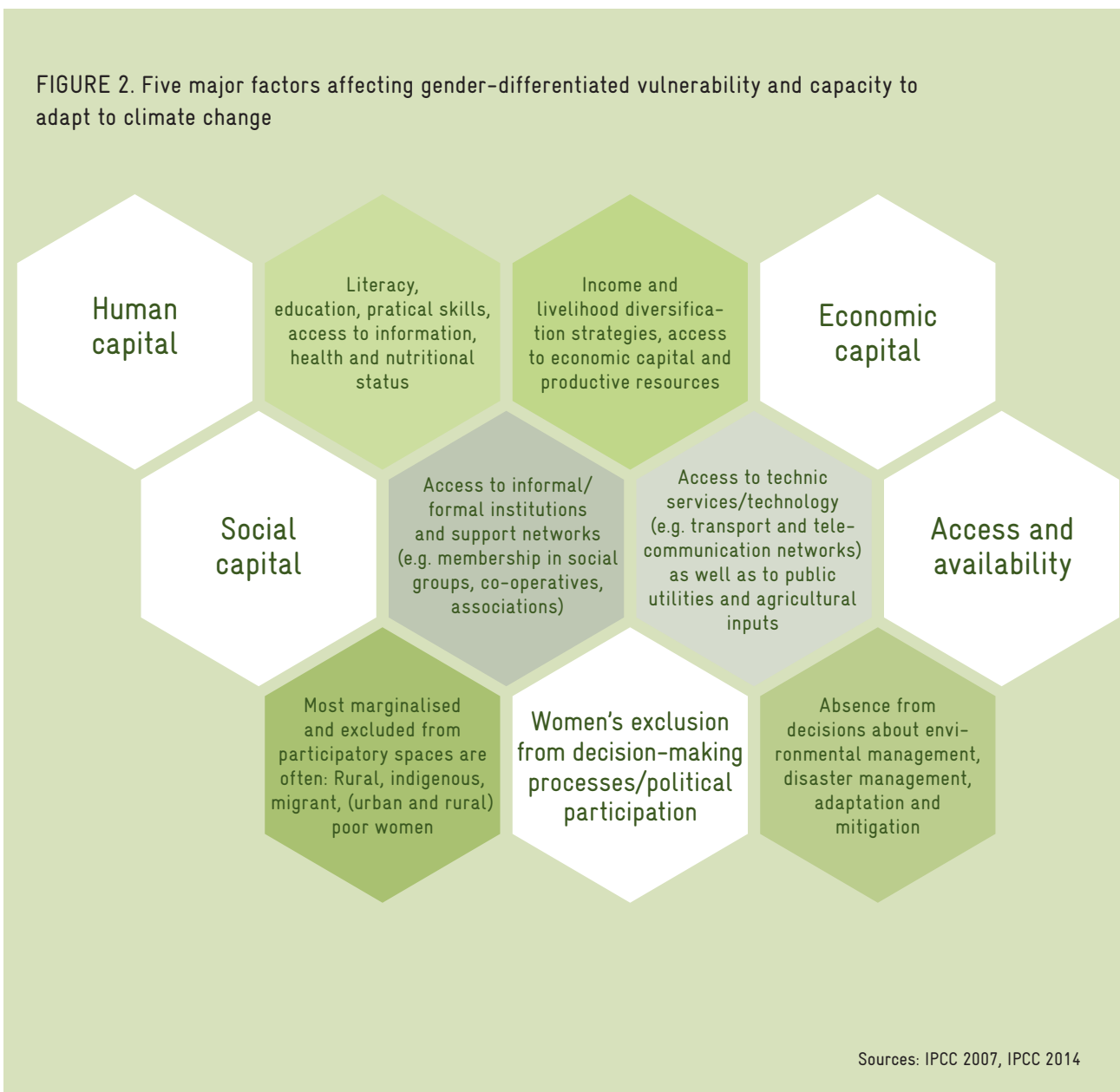
(World Bank 2018)



## 2.2 Gender differential vulnerability to climate change and Loss and Damage

Figure 2 visualises which main socioeconomic factors determine the gender-differential vulnerability and capacity to adapt to climate change. These include five major factors, that are categorised under the pillars: “human capital”, “economic capital”, “social capital”, “access and availability” as well as “women’s exclusion from decision-making processes”.

FIGURE 2. Five major factors affecting gender-differentiated vulnerability and capacity to adapt to climate change





## 2.3 Gender-differential adaptation strategies

Women that are active in the field of adaptation to climate change are important agents of change. According to UNDP (2013a), women tend to share important information about community well-being, which, inter alia, directly strengthens overall resilience building. Consequently, they are more likely and capable to adapt to environmental changes and to choose more sustainable long-term solutions.

In Bangladesh, the International Centre for Climate Change and Development observed a gradual shift in the perceived role of women in disaster management, from victims to active agents in restoring their households and communities during and after disasters (UNFCCC 2019). Developments of this kind reinforce more gender stereotypes, create cultural shifts and offer opportunities for individual and communal development.

However, women are often excluded or under-represented in planning and implementation processes, particularly in decision-making and leadership roles. As a result, gender-based disparities are maintained or even reinforced while

→ **Women are leaders in community-based natural hazard responses, risk reduction and contribute greatly to the recovery process by addressing the immediate needs of their families and strengthening community resilience.**

women's capacities, knowledge and skills are wasted. This may lead to gender-insensitive or inappropriate planning, thus impeding successful long-term development (Ariyabandu 2006, Seager 2014). As underlined in the 2019 report of the OHCHR, the empowerment, equal participation and leadership of women (and men) in planning, implementation and decision-making of climate change policies is essential for the protection of women's rights as well as the assurance of effective action against climate change. A positive outcome is more likely if the whole concerned community is involved in the decision-making process. This is crucial since women's concerns often are not solely focused on own experiences but also on the judgement of their immediate family and community. The inclusion of the entire community may, in turn, lead to more holistic and effective solutions for climate change policies (Gaillard et al. 2017, OHCHR 2019). Depending on their distinct gender and social roles, as well



Processing cashew nuts in Benin



GIZ offers women's groups in Western Kenya training in financial management, processing and marketing

as responsibilities and experience, women are likely to have different mitigation and adaptation expertise and strategies, compared to men (FAO 2010). For example, in Pakistan and Nepal, women secure food and seeds for livelihoods in preparation for floods while men are responsible for raising dams to prevent floods from reaching farms (quoted in Goodrich et al. 2017). In Ghana, where smallholders are confronted with high fluctuations of the local climate, women in households borrow money from credit groups or village savings to cope, while men sell their livestock to adapt to the impacts of climate change (Assan et al. 2018).

It is important to overcome preconceptions, prejudices and unconscious biases in order to integrate women's capacities and make them tangible and visible for others (Gaillard et al. 2017, Sikandar & Khan 2019). If disregarded, the international community is not only losing the knowledge and skills of a large portion of society, but it will also fail to address the needs of a particularly affected group. This negligence increases the vulnerability gap between women and men (Sikandar & Khan 2019). A higher level of participation and representation of all marginalised groups in development practice can increase the benefits for the whole population (Gaillard et al. 2017, Denton 2002). Therefore,

in order to support women in becoming agents of change, they need more access to and control over assets, more support regarding their physical and psychological health and well-being. Additionally, they need to be represented in more leadership roles, both on a community and a policy level (Goh 2012, Seager 2014).

***“Women’s knowledge and skills have to be made tangible and visible for others in order to integrate their capacities, address the needs of a particularly affected group and overcome the vulnerability gap between men and women.”***

(Sikandar & Khan 2019)



Engaging women in Sri Lanka

### 3. International frameworks and intergovernmental processes

This chapter outlines intergovernmental processes and international frameworks that address gender, climate change and loss and damage, including their progress on gender mainstreaming. In this context, table 1 provides complementary insights from the most important international frameworks, policies and other intergovernmental processes since the Rio Conference on Environment and Development in 1992.

## International policy frameworks and intergovernmental processes related to gender and climate change/loss and damage

1992/  
2012

**RIO+20**  
United Nations  
Conference on  
Sustainable  
Development

### The Rio Conference on the Environment and Development/Rio+20

The Earth Summit '92 in Rio represents the first milestone for the integration of women as well as gender issues into the sustainable development agenda.

According to the Rio Declaration "Women have a vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development." (UN GA, 1992)

It promotes the principle of gender equality as well as the need to ensure the effective participation of women and indigenous peoples in all initiatives related to climate change. These acknowledgements were emphasised in the Final Declaration of the UN Conference on Sustainable Development (Rio+20 Summit 2012).

2013



**COP19/CMP9**  
**UNITED NATIONS**  
CLIMATE CHANGE CONFERENCE  
**WARSAW 2013**

### Warsaw International Mechanism on Loss and Damage

In 2013, COP19 in Poland established the Warsaw international Mechanism for Loss and Damage associated with Climate Change Impacts (WIM), to address loss and damage associated with impacts of climate change. This framework acknowledges the need to enhance knowledge and strengthen the dialogue on how loss and damage affects segments of the population that are vulnerable because of geography, gender, age, indigenous or minority status or disability. Additionally, it enhances action and support, e.g. on the collection and management of relevant data including gender-disaggregated data.

Furthermore, the first UNFCCC in-session workshop on gender and climate change was held at COP19 (2013).

2014



**NAP**  
**Global**  
**Network**

### The National Adaptation Plan (NAP) Global Network

The Network was established in 2014 at the 20th session of the Conference of the Parties (COP20) in Lima, Peru and supports developing countries to accelerate climate change adaptation efforts around the world.

Gender is one of its key themes. NAP Global Network supports gender-responsive approaches that "go beyond sensitivity to the differences between women and men and actively seek to promote gender equality. Applying this to the NAP process requires attention to gender throughout the iterative cycle of planning, implementation, and monitoring and evaluation" (NAP 2020).

2015



**PARIS2015**  
UN CLIMATE CHANGE CONFERENCE  
**COP21·CMP11**

### Paris Agreement within the United Nations Framework Convention on Climate Change (UNFCCC)

Under the Paris Agreement, the international community recognises gender equality and women's empowerment as a fundamental principle in the fight against climate change and calls for gender-responsive approaches to adaptation and capacity building (BMZ 2016).

The Paris Agreement states that in parties' efforts to tackle climate change, they should: "**respect, promote and consider their respective obligations to 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**" (UNFCCC 2019. 1/CP.21).



## Status of gender mainstreaming within international frameworks and intergovernmental processes

This overview shows that a lot of progress has been achieved in integrating gender considerations into international frameworks as well as intergovernmental processes. Moreover, the commitments made under UNFCCC processes remain to be continuously translated into concrete actions. It is clear that gender-mainstreaming practices have become more widely adopted, yet institutions, policies, projects and processes are often still designed as gender-neutral, while still affecting women and men in differing ways. As mentioned in the Background Paper on Gender Mainstreaming (*UN Women et al. 2015*), gender concerns, where incorporated, remain often vague, uncoordinated, are not prioritised and lack the capacity, resources and monitoring mechanisms to ensure successful and long-lasting implementation.

With regard to disaster risk reduction (DRR), the most recent review of the Sendai Framework found that despite all progress in policies, guidelines and capacity development for inclusive risk governance, challenges remain in both the understanding of gender equality and the operationalisation of gender-responsive policies (*UNISDR 2015*). Hence, there is still an urgent need for a strong political commitment to effectively integrate gender aspects into frameworks, policies and projects and to ensure their successful implementation.

For this reason, this study provides examples, entry points and recommendations to operationalise parties' commitment to gender mainstreaming as a significant component of international climate dialogue, policy and action.

➔ CRM represents a comprehensive approach that can make use of the current political momentum for climate and gender justice.



Tree planting and reforestation in Haiti



CRM Trainer from the Pacific in session

# 4. Gender-responsive Climate Risk Management (CRM)



Women working in rice fields in Vietnam

## 4.1

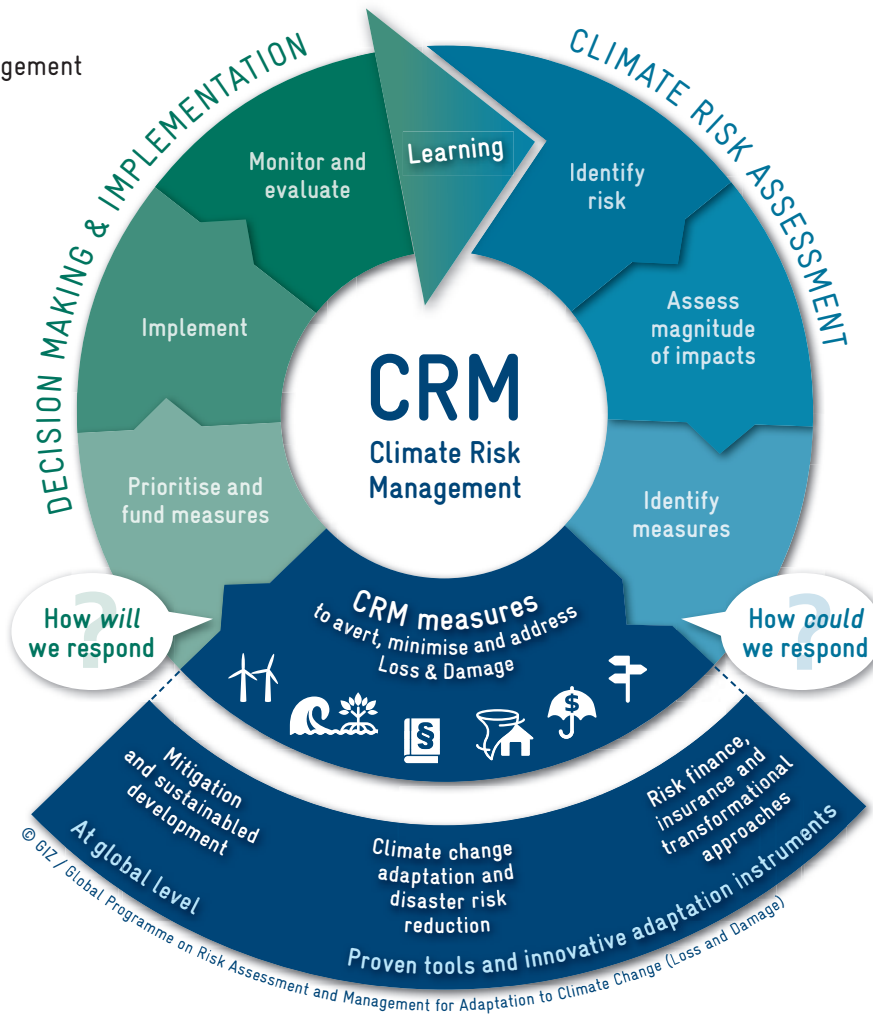
### What is CRM and why does it have to be gender-responsive?

In line with the current political momentum, GIZ advocates a comprehensive and risk-based approach to manage loss and damage. By analysing risks and identifying suitable solutions, this multi-level approach supports decision makers from the public and private sector in forward-looking planning.

Comprehensive CRM is an approach that aims to manage risks along the entire risk continuum, from short-term extreme weather events such as storms and floods to long-term gradual changes including sea level rise and desertification. Instead of applying individual and standalone measures, it involves a smart combination of proven and innovative instruments, such as climate change adaptation, mitigation, climate finance, social protection, human mobility as well as more transformative approaches. It aims at enlarging our understanding of adaptation as an integrated, participatory and iterative approach to manage climate-related risks.



FIGURE 3.  
Climate risk management



Gender roles represent deeply rooted and far-reaching norms within a specific society and determine general social structures, roles, relationships, perceptions, expectations and privileges for all members of the respective population. As stated before, most hazard relief efforts are aimed at the entire population and often rely on existing structures of resource distribution. This has the potential to become problematic when pre-existing structures reflect a patriarchal structure of society, as this can result in the marginalisation of women in their access to relief resources (PAHO 2002). Since gender norms are a precondition for both specific vulnerabilities and adaptive capacities to the impacts of climate change, it is essential to include a critical perspective on these social factors while planning or implementing CRM measures to secure a just allocation of support and resources.

➔ Gender-blind CRM can risk leading to an increase in women’s vulnerability to climate change and a widening of gender disparities.



Women processing rice in Nigeria



Fish catch in Kenya

## 4.2 Understanding non-economic loss and damage

CRM incorporates tools that avert, minimise and address not only economic, but also non-economic loss and damage. The topics presented in chapter 2 (mortality, health, food security, human mobility and gender-based violence) are areas where the impacts of climate change have a disproportionately strong effect on women's livelihoods. Consequently, the collected evidence shows that women experience higher losses and damages in these areas which can be categorised as non-economic loss and damage.

Furthermore, women's contributions to their families, communities and societies often are not part of the formal economy and do not reflect monetary value. This type of work, generally described as "care work", includes taking care of community members, natural assets or future generations (*Genanet 2013*). Care work is essential to the functioning and well-being of a society and the economy, yet it is generally unrecognised or undervalued (*ibid.*).

The societal value of unpaid care work is difficult to quantify in monetary terms. It is, therefore, of crucial importance to take the value of women's contribution to societies into account and assess potential losses to the individual. As stated by Von Ritter Figueres, a lot of analytical work on assessing non-economic losses from climate change remains to be done. Nevertheless, it already "seems clear that non-monetary Loss and Damage often affects women in developing countries more directly than men" (*2013*).

It is, therefore, of high importance to generate comprehensive knowledge and understanding of socio-economic resources and interlinkages that go beyond the formal economy.

→ **CRA and CRM go beyond identifying vulnerabilities to climate change created by gender norms. By applying adequate measures to raise the overall resilience and systematically including key stakeholders in the planning and implementing process of CRM tools, it aims at empowering vulnerable groups to take active steps to avert, minimise and address current and future loss and damage and shift unequal power relations.**

### 4.3 Gender-responsive Climate Risk Assessment (CRA) as part of CRM

Gender-responsive CRA and CRM approaches address vulnerability and adaptation options to the impacts of climate change based on methodologies that take gender-differential priorities, barriers, opportunities and capacities of both women and men into account. These include the use of gender statistics, gender analyses, vulnerability assessments as well as gender-sensitive guidelines and tools for adaptation. However, gender-responsive CRA and CRM goes beyond identifying vulnerabilities to climate change created by gender norms and applying adequate measures to raise the overall resilience. By systematically including key stakeholders in the planning and implementing process of CRM tools, it aims at empowering vulnerable groups to take active steps to address, minimise and avert current and future loss and damage and shift unequal power relations. In this context, it is of utmost importance to work with marginalised groups, such as gender minorities, as part of the larger community in order to “make their vulnerability and capacities tangible and to have them recognised by others” (Gaillard *et al.* 2017).

CRA builds the foundation for selecting adequate CRM tools. By identifying the most prominent climate risks for a specific system of interest and assessing the magnitude of impacts on people, assets and ecosystems, CRA forms the scientific base for the selection of possible climate action options.

The assessment shows how climate change and extreme weather events interact with socio-economic factors and, thereby, determines the overall risk for the affected population. Considering that social, economic and environmental factors create deviations in the climate resilience of specific population groups or individuals, it is essential to conduct disaggregated CRAs that reveal gender-specific vulnerabilities and needs based on the given social variables.

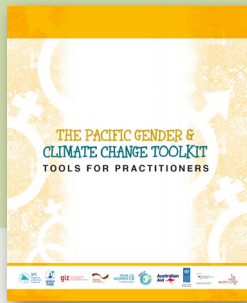
The collection and incorporation of sex-disaggregated data as a part of CRA offers the opportunity to identify gender-specific climate risks. Consequently, the generated evidence can contribute to translating gender-differential adaptation needs and capacities into climate policy and action. By means of using this knowledge, decision makers are enabled to prioritise, fund and implement suitable CRM measures that respond to social preconditions.

*“Revealing underlying vulnerabilities created by societal structures and systematically involving disadvantaged groups in the decision-making and implementation process helps to create empowered stakeholders and agents of change – and transform power dynamics that serve to reinforce gendered inequalities.”* (Hillenbrand, *et al.*, 2015).



Grain bank managed by elderly self-help group members in India

## Examples for gender-responsive toolkits and approaches incorporating Climate Risk Assessments



### Pacific Gender and Climate Change Toolkit: Tools for Practitioners

#### ORGANISATIONS:

- Secretariat of the Pacific Community (SPC)
- United Nations Development Programme (UNDP)
- UN Women
- Secretariat of the Pacific Regional Environment Programme (SPREP, PACC)
- Australian AID
- Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)

This toolkit is designed to support climate change practitioners in the Pacific islands region to integrate gender into their programmes and projects. It is aimed at climate change professionals working in national governments, non-governmental organisations, regional and international organisations who are involved in managing and implementing climate change programmes.

In module 3, generic problem and solution analysis checklists for programme, project and policy cycles are provided to support the integration of gender-responsive planning, implementation and decision-making processes.

<https://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2015/toolkit%20booklet%20pages.pdf?la=en&vs=4359>



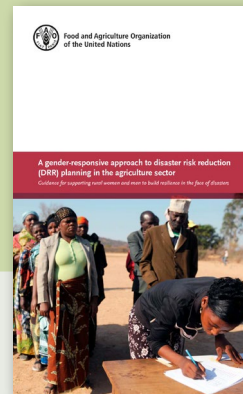
### Gender into Climate Policy. Toolkit for climate experts and decision makers

#### ORGANISATION:

Gender CC – Women for Climate Justice

The methods provided in this toolkit are meant to explain the significance of gender as an important consideration within the social dimensions of climate policy. It offers a variety of gender-analysis tools (gender-disaggregated data, gender impact assessment, gender budgeting, etc.) to determine differentiated impacts of policy measures on women and men.

[https://gendercc.net/fileadmin/inhalte/dokumente/5\\_Gender\\_Climate/toolkit-gender-cc-web.pdf](https://gendercc.net/fileadmin/inhalte/dokumente/5_Gender_Climate/toolkit-gender-cc-web.pdf)



### A gender-responsive approach to disaster risk reduction (DRR): planning in the agriculture sector

Guidance for supporting rural women and men to build resilience in the face of disasters

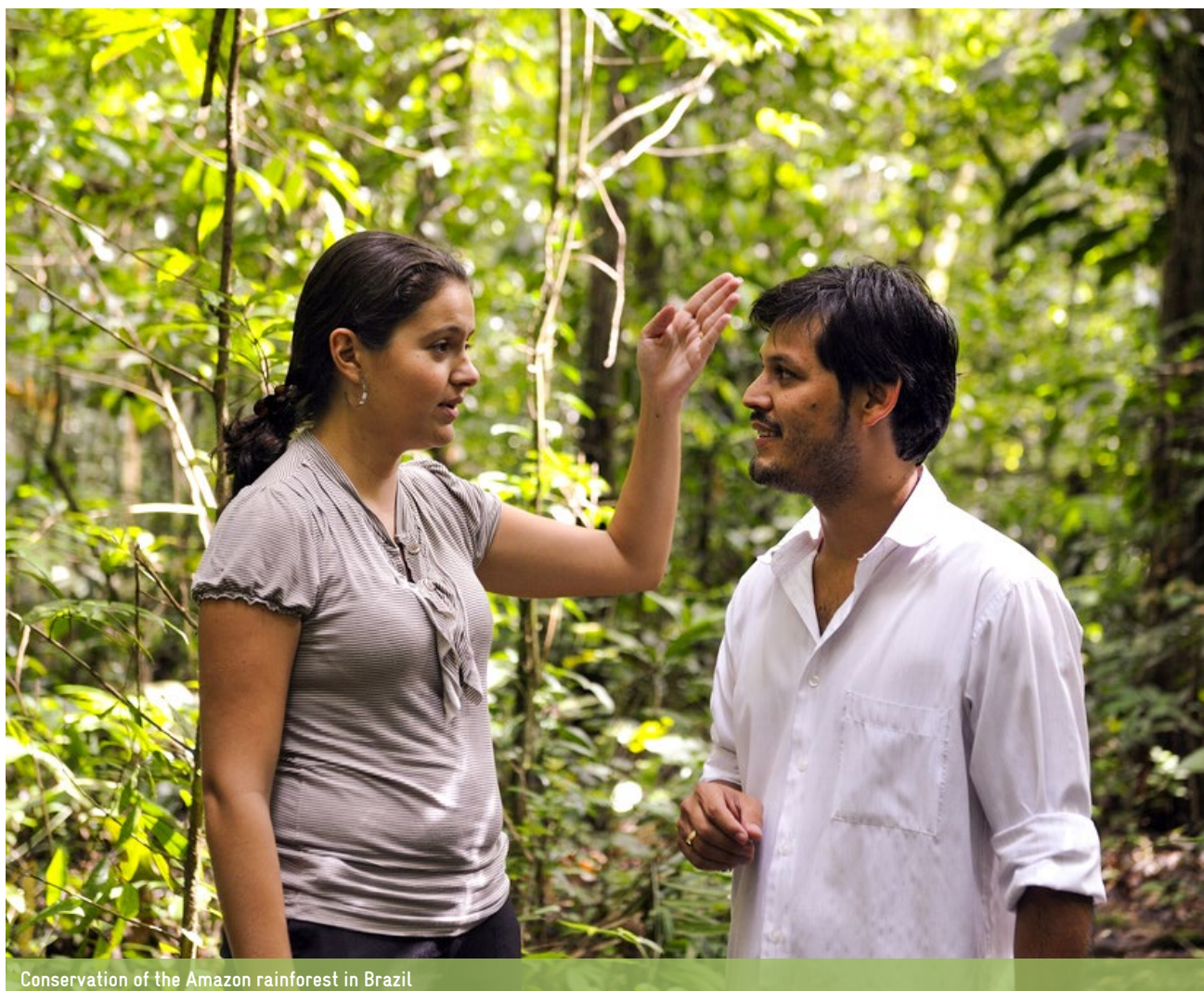
#### ORGANISATION:

Food and Agriculture Organisation of the United Nations (FAO)

This approach to DRR planning highlights the importance of including gender-based differences and issues in the design of DRR policy, strategy plans or programmes to identify how gender norms, roles and inequalities shape vulnerability and resilience of both men and women.

It provides insights into a case study of a gender-responsive flood impact assessment in Myanmar.

<http://www.fao.org/3/a-i6531e.pdf>



Conservation of the Amazon rainforest in Brazil

#### 4.4

### Closing the gap: selecting gender-responsive CRM measures

The selection of appropriate measures is context-specific and needs to be planned as a suitable combination of different tools that foster climate-resilient and sustainable development pathways. Due to the complex interaction of societal factors, it is not possible to identify appropriate CRM measures solely through cost-benefit analysis. As stated before, many important aspects cannot be quantified and/or monetised but might have a significant impact, especially on socially or economically disadvantaged groups. For this reason, it is crucial to ensure stakeholder participation that includes under-represented and marginalised populations within the planning, implementation and monitoring process of CRM measures. With regards to gender-disparities and social inequality, CRM measures with gender-responsive character have the ability to challenge

→ CRM measures with a gender-responsive character have the ability to challenge unequal gender norms and contribute to transformational changes.

gender norms, stereotypes, barriers and contribute to transformational changes within a determined community. They represent co-benefit approaches to create a more inclusive, forward-looking and climate-resilient society and to support the recognition and realisation of women's social, economic and political rights.

The following examples shall illustrate how gender and climate action can be combined:

## Gender-responsive Climate Risk Insurance (CRI) schemes

Gender-responsive CRI schemes can provide risk protection that addresses the differences in women and men's vulnerability to both climate risks, and disaster-induced wellbeing loss.

The case for integrating gender considerations into CRI starts with the assumption that women and men can be differently impacted by, and engaged in, diverse CRI models. Integrating gender considerations into CRI is not about an exclusive focus on women at the exclusion of men, however, taking a focus on gender can lead to a specific emphasis on women due to their greater levels of exclusion from the formal economy and financial system.

The case for gender-responsive CRI builds on the evidence of the commercial benefits of integrating women as corporate clients, leaders, employees, and investors into private sector business models. This is complemented by growing evidence of the benefits of women's financial service provider leadership, and economic participation as employees and entre-

preneurs. Moreover, there is a policy imperative to address the gender dimensions of CRI, as gender-responsive CRI lies at the convergence of multiple international policy priorities and global commitments framed by the Sustainable Development Goals.

The study, commissioned by the InsuResilience Global Partnership, explores the case for integrating gender, with a focus on women, into different CRI schemes and provider types at the macro-, meso- and micro-levels.

### FOR MORE INFORMATION:

InsuResilience (2019): Integrating Gender Considerations into Different Models of Climate Risk Insurance (CRI). Available at: <https://www.insuresilience.org/wp-content/uploads/2019/12/IntegratingGenderConsiderations.pdf>



Flooding in Vietnam Beach



View on Portoviejo, Ecuador

## Guardians of the Hills (Portoviejo, Ecuador): Empowering Women Leaders for Urban Resilience

### Background

Portoviejo, the capital of Ecuador's coastal province Manabí, suffers from heavy rainfalls during the rainy season, which cause landslides in surrounding hills and flooding of the urban centre. As climate change exacerbates the frequency and intensity of rainfalls, the risk of such natural hazards increases. One of the neighbourhoods located in Portoviejo's hills is San Pablo, with a population of around 12,000, of which 52 percent are women and 28 percent are children under the age of twelve. Apart from the increasing risk of landslides, San Pablo suffers from social and economic vulnerability and a high crime rate, which includes violence against women. Women head 62 percent of the households, the majority of which have no secure employment.

### Project Intervention

The project aims at increasing climate resilience of vulnerable neighbourhoods in Portoviejo, specifically in San Pablo, by empowering women in their role

as climate actors. Through participatory implementation of ecosystem-based adaptation measures, and technical assistance to strengthen organisational processes at a local level, this initiative is undertaking a social and territorial transformation to reduce the vulnerability factors related to landslide risk. This includes activities for gender violence prevention, the implementation of an integrated warning system, and the activation of public spaces to make these neighbourhoods more liveable and safe for the communities.

### Resilient and Safe Public Spaces

The adaptation measures will be designed and implemented by multidisciplinary groups from local universities in joint collaboration with the “guardians of the hills” – female leaders identified by their communities – and other community members. Workshops with the Association of Risk Management Professionals of Ecuador will provide capacity building for the planning, construction and maintenance of ecosystem-based solutions for public spaces

located in informal settlements and landslide prone areas. Orchards, terrace slopes, gardens or eco-paths, which stabilise the slopes and allow for increased rainwater infiltration, will thereby mitigate the risks of landslides. By ensuring a gender-oriented process, the “guardians” will be involved in the design, implementation and maintenance of the measures that create safe community areas and provide green connectivity, urban gardening and safe recreational spaces for children and women. On-site community events will motivate the residents to take care of and maintain the new facilities.

### Integrated Warning System

Experts from the Association of Risk Management Professionals of Ecuador will assist the “guardians” in introducing a community integrated warning system for landslides. The community alert system for San Pablo hills will be developed together with a digital application connected to local emergency institutions as well as the municipality and will involve the “guardians of the hills” as key contact persons for the community in case of alerts.

### Sharing the Experience

Workshops will provide trainings for women for the participatory production of communication material adapted to their local realities (community newspaper, stories, murals, podcasts) telling the story of the “guardians” and residents’ experiences in combating the impacts of climate change. A digital platform will disseminate these materials within San Pablo and to other communities. Furthermore, the results and experiences made with the adaptation measures will be shared with the municipality of Portoviejo and spread among partner cities involved in GIZ’s Intermediate Sustainable Cities Programme. Through partner institutions, such as the Association, the Ministry of Housing and Urban Development, and national government agencies in charge of disaster risk and reduction management, the measure will be up-scaled nationally.

### Expected Results



The integrated approach of the project works directly towards SDG 13 (Climate Action), SDG 15 (Life on Land) and SDG 11 (Sustainable Cities and Communities), since natural areas will be recovered and nature-based adaptation solutions for landslide-prone areas implemented. The participatory design of the measures ensures that climate risks are not only addressed from a gender-sensitive perspective, but that women are strengthened in their role as local actors for climate action and acknowledged as important decision makers for their communities, hence contributing to SDG 5 (Gender Equality).



The project aims to empower women as change agents for their communities, supporting them to change

the negative stigma of their neighbourhoods and to recognise the contributions of their communities for the city. With the help of the early-warning system, the community will be able to actively protect itself in case of landslides and to prepare preventive measures. It also strengthens female leaders to identify and guide procedures in cases of gender-based violence, thereby contributing to both SDG 5 (Gender Equity) and SDG 16 (Peace, Justice and Strong Institutions) through participatory, community-based services that promote social cohesion in their neighbourhoods.



Through the IT platform and information material, experiences and methodologies will be available for other communities and institutions interested in replicating. The women can count on enhanced communication skills and are trained to tell inspiring stories of change in their own way. This will also include the connection of various female leaders from vulnerable neighbourhoods with national gender organisations and movements. The gained knowledge will contribute to policy creation at the national level (recommendations, planning documents, etc.), focussed on participatory, community-based and gender-oriented planning approaches, infrastructure design processes and ecosystem-based adaptation measures in cities.





San Pablo



Meeting of the "Guardians of the Hill"

## Implementation Partners

Female change agents from the neighbourhoods in San Pablo are at the centre of the project. The Portoviejo Municipality supports the implementation with the aim of generating successful planning models and participatory management experiences with the community. The experts of the Association of Risk Management Professionals of Ecuador (Asociación de Profesionales de Gestión de Riesgos del Ecuador) provide technical support for the design of adaptation measures and the development of the integrated warning system as well as capacity building to the "guardians". Local Universities develop community-outreach projects and provide support in the design and implementation of the adaptation measures as well as in the production of digital communication and information products. The GIZ Intermediate Sustainable Cities Programme coordinates the overall implementation of the model measure together with its local partners.

## Funding

The project implementation takes place from July 2019 to February 2021. BMZ provides EUR 165,000 through the GIZ Sector Project CityRegions2030; additional EUR 26,000 are contributed by the BMZ-funded GIZ Intermediate Sustainable Cities Programme and EUR 21,000 by the Promoting Gender Equality and Women's Rights Programme.



### Projects:

- Integrated Implementation of the 2030 Agenda in Cities and City-regions (CityRegions2030)
- GIZ "Intermediate Sustainable Cities" Programme Concept design and action implementation
- GIZ Sector Project "Promoting Gender Equality and Women's Rights"



Women's organisations in Liberia

## 5. Limitations and needs for integrating gender considerations into CRA and CRM

## Awareness-raising on the gender-differentiated impacts of climate change

Climate change has far-reaching impacts for all areas of our societies, economies and ecosystems. Regarding the social dimensions of climate change, it is crucial to shed light onto underlying inequalities associated with gender and to strengthen the knowledge basis on gender-specific vulnerabilities and adaptive capacities to climate risks. Against this background, it is of high importance to continue raising awareness of gender disparities to climate resilience. In order to effectively avert, minimise and address gender-specific vulnerabilities to loss and damage, climate policy and action need to be designed to enhance both social equality and resilience to climate change.

## Availability of comprehensive gender statistics, analysis and assessments related to climate risks and loss and damage

The lack of scientific evidence regarding the gender-specific ways of how climate change affects different parts of the population entails a need to generate gender-disaggregated data to create an extensive and accessible knowledge base. As stated by UN Women (2018), current statistical data predominantly captures selected information but does not “adequately reflect the lives of men and women across the society” (*ibid.*). However, comprehensive data can help to obtain a detailed understanding of the social dimensions of climate impacts and risks at local, regional and national level. Moreover, it is a crucial element for supporting gender-responsive and evidence-based policy planning, implementation and monitoring. In order to close information and data gaps at local level, support is required for collecting data also in rural and remote areas.

## Integration of gender considerations into comprehensive Climate Risk Assessment and Management (CRA/CRM)

Based on the fact that gender roles represent deeply ingrained and far-reaching norms within society, it is crucial to consider these social structures as well as the respective vulnerabilities and capacities they imply as an important part of CRA.

Selecting gender-responsive measures to reduce climate risks bear opportunities for minimising vulnerabilities to the impacts of climate change, reducing social inequalities,



Empowering women entrepreneurship in Bangladesh

as well as seizing and developing already existing capacities at the same time. In order to manage current and future climate risk and enable a more sustainable development, measures that support societal transformation and social equality have to be selected and prioritised.

## Integration of gender considerations into CRM capacity building

In their effort to support international partners to enhance resilience to the impacts of climate change, development cooperation can support gender mainstreaming by promoting a co-benefit approach to gender equality and climate action through capacity building.

By including information on how social norms and biased gender roles can create and exacerbate vulnerabilities to climate risks and loss and damage, capacity-building measures can become an important tool to raise awareness and shed light on gender-differentiated impacts of climate change. Additionally, capacity-building measures, such as trainings, workshops and conferences, can serve as a platform to showcase role models or practice examples from the field of gender-responsive climate action (adaptation, mitigation, finance, etc.) to gain a broader audience for the topic. These events hold ideal conditions for promoting an empowered image of women in climate action (agents of change), showcasing the knowledge and experience of female experts in the field of climate action (e.g. speakers, podium discussions, etc.) and for drawing attention to male women empowerment advocates.

## Increase of stakeholder participation and empowerment of agents of change

As stated before, the growing recognition of the critical interlinkages between gender equality and climate change provides a strong incentive for strengthening the knowledge base not only on the differentiated impacts of climate change (*UN Women 2018*) but also on gender-responsive climate programs. Bringing together stakeholders with different expertise, needs and capacities to respond to the impacts of climate change (e.g. research, policy, the private sector, NGOs, local communities, women's organisations, gender equality advocates and indigenous groups) helps to build diversified networks and platforms for a broad knowledge and experience exchange.

Especially the positive contributions of women to climate change mitigation and adaptation efforts and growing female leadership in climate policy create a win-win scenario: both channel women's capacities into climate action and create positive shifts in gender balance. Empowering and exposing these agents of change bears the opportunity to make their voices heard and create greater awareness on the social implications of climate change and transformational climate action.

## Gender-responsive climate policy and action: A step towards a just transition

By subscribing to the SDGs, Parties have committed to take active steps towards an economically, environmentally and socially just society in their respective country. Gender-responsive climate change adaptation, mitigation and financing measures have the potential to challenge existing paradigms on gender norms. They, therefore, are inherently of transformative nature and represent opportunities for societal change towards a more sustainable and inclusive development. By explicitly focusing on the social preconditions and dimensions, as well as ensuring women's participation while planning and implementing climate policy and action, these tools have the capacity to become measures enabling a just transition towards a more resilient and equal society.



Coastal communities in Vietnam



Woman cycling through the fields in a rural area of Burkina Faso

## 6. Conclusion and recommendations

The impacts of climate change are altering the face of risk management. More frequent and intensified EWEs as well as SOEs contribute significantly to an increase in societal vulnerabilities, such as water availability, food security and health. Existing gender inequalities and social norms are major factors which determine vulnerability to climate change, especially in developing countries. Evidence shows that due to underlying structural, economic or social inequality factors associated with their gender, women and girls face higher risks and burdens from the impacts of climate change. Consequently, they are more likely to suffer losses and damages.

Women's and girls' losses and damages due to climate change impacts are often not part of the formal economy and do not directly reflect monetary value. In this case, they can be categorised as "non-economic loss and damage".

Deriving from socially constructed gender norms and practices, men and women display divergent vulnerabilities, but also different priorities and capacities when it comes to tackling the impacts of climate change. As a result of social inequalities, that cause gendered access to resources and political influence, women's contribution to adaptation and climate protection has not yet reached its full potential.

A variety of scientific evidence shows that:

- EWEs lead to **higher mortality and morbidity rates** among women and children due to socially constructed roles and norms that determine their behaviour and actions.
- The impacts of climate change are projected to have **detrimental effects on women's and girls' health**, as the result of unequal access to health care, food and nutrition, water and sanitation, information and technology.
- Women and girls have **restricted access to certain adaptation strategies** (e.g. migration) due to different roles and responsibilities.
- In the aftermath of an EWE, women and girls face a **higher risk of gender-based violence, human trafficking and sexual exploitation**.
- Women and girls face **higher loads of care work**, resulting in various long-term effects on women's education and income generation.



Women empowerment in the health care system



Small-scale mining and diamond mining in Sierra Leone

Against this backdrop, gender-responsive CRM can create win-win options that enhance both climate action and social equality. By including gender dimensions in each step of the continuous CRM learning cycle, it has the potential to recognise, validate and integrate women's resources into decision-making, planning, implementation and monitoring processes, which benefits the entire society. By explicitly focusing on the social preconditions and dimensions while planning and implementing climate policy and action, these tools have the capacity to become transformative measures, enabling a just transition towards a more resilient and equal society.

The following recommendations support the development of a more nuanced picture of the gender dimensions of climate change impacts and present entry points to ensure successful gender-responsive CRM.

## Recommendations

### AWARENESS RAISING:

- Raise awareness and make use of gender-just and non-discriminatory language.
- Shed light onto underlying inequalities associated with gender roles.
- Strengthen the knowledge basis on gender-specific vulnerabilities and adaptive capacities to climate risks.
- Communicate the critical interlinkages between gender equality and climate change vulnerability.
- Sensitise communities regarding the societal and economic benefits of women empowerment.

### ROLE MODELS AND EMPOWERMENT:

- Promote an empowered image of women in climate action (agents of change).
- Showcase the knowledge and experience of female experts in the field of climate action (e.g. speakers, podium discussions, best practice examples, etc.).
- Guarantee top level support for gender mainstreaming into climate policy and action.
- Empower and actively include women in (political) decision-making processes.
- Showcase and involve male women empowerment advocates.





### CRA AND RESEARCH:

- Generate gender-disaggregated data at all levels and in every sector while conducting CRAs. Take regional and local differences into account.
- Conduct gender analyses of climate change policies, programmes and initiatives to identify gaps and take action to ensure equal benefits for both men and women.
- Pay special attention to the gender dimensions of economic vs. non-economic loss and damage while assessing the impacts of climate change.

### CAPACITY BUILDING:

- Include information on the gendered dimensions of climate change impacts.
- Enhance women's access to and participation in trainings and activities.

Sensitise both men and women for the importance of taking a gender-responsive approach to CRM.

### CRM MEASURES AND TOOLS:

Design, select and implement CRM measures that:

- Respond to the results of the gender-responsive CRA.
- Involve and build on the expertise of different stakeholders (e.g. research, policy, the private sector, NGOs, local communities, women's organisations, gender equality advocates and indigenous groups) to include knowledge and needs of all relevant actors.
- Ensure gender balance and women participation in design and implementation teams.
- Seize and develop women's existing knowledge and adaptive capacities.
- Enhance women's access to resources and assets that strengthen their climate resilience (e.g. education, technology, climate finance).
- Develop measurable gender-related targets for monitoring and evaluation.
- Ensure that policies and measures reach their goals and do not increase gender disparities.
- Promote female leadership.



Student at the public school in Kwali / Abuja / Nigeria

## 7. Key concepts

The following key concepts are essential for the content of this study:

- **Adaptive capacity:** “The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences’ (e.g. knowledge to introduce new farming methods)” (*IPCC 2014*).
- **Climate change** refers to “a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods” (*UNFCCC 2011*).
- **Climate Risk Assessment (CRA)** builds the foundation for successful CRM. It identifies potential climate risks, assesses the magnitude of impacts on people, assets and ecosystems, and delivers the required knowledge base that helps to find possible options for sustainable climate action. The assessment shows how climate change and extreme weather events interact with socio-economic factors and determines the overall risk for the affected population (*GIZ 2019*).
- **Comprehensive Climate Risk Management (CRM)** is an approach that aims to manage risk along the entire risk continuum, from short-term extreme weather events (EWE) such as storms and floods to long-term gradual changes (SOE) such as sea level rise and desertification. Instead of applying individual and standalone measures, it involves a combination of proven and innovative instruments that enlarges our understanding of adaptation as integrated, participatory and iterative approach to manage climate-related risk (*GIZ 2019*).
- **Gender** as, “the roles, behaviours, activities, attributes and opportunities that any society considers appropriate for girls and boys, and women and men” (*WHO 2019*) is not solely about the biological sex of a person, but rather about the social constructs of what it means to be a man or a woman in a given society (*Bradshaw & Fordham 2015*). This definition of gender not only addresses the binary categories of men and women, but recognises other gender dimensions, including the LGBTQ community, sexual minorities or masculinities (*cf. Gaillard et al. 2017, Enarson et al. 2018*).
- **Gender-based violence (GBV)** refers to any act that is perpetrated against a person’s will and is based on gender norms and unequal power relationships. It encompasses threats of violence and coercion. It can be physical, emotional, psychological, or sexual in nature, and can take the form of a denial of resources or access to services. It inflicts harm on women, girls, men and boys (*UNHCR 2019*).



Women refining parboiled rice in Jega LGA/Nigeria



Artisinal fisheries in Vietnam

- **Gender-sensitive approaches** take account of gender-specific inequalities and gender discrimination and of the diverse interests, needs and potentials of different genders within a specific context. It recognises and identifies existing gender-specific differences, problems and inequalities – thereby taking into account intersectional variables such as ethnicity, and mainstreams these into strategies and measures. The objective is to ensure that no unintended negative impact results from these strategies and measures and that individuals are able to participate in and benefit from (development cooperation) measures irrespective of their gender.
- **Gender mainstreaming** is a strategy that integrates women’s and men’s different concerns and interests into the planning, implementation, monitoring and evaluation stages of all policies, programmes, projects and laws at all levels and in all economic, political and societal spheres. It thus ensures that political programmes or services are analysed and evaluated regarding their impacts on gender equality and that appropriate action is taken to achieve gender equality so that women and men benefit equally. The ultimate goal of gender mainstreaming is to achieve gender equality.
- **Coping capacity:** “The ability of people, institutions, organisations, and systems, using available skills, values, beliefs, resources, and opportunities, to address, manage, and overcome adverse conditions in the short to medium term’ (e.g. early warning systems in place)” (*IPCC 2014*).
- **Exposure** describes “the presence of people, livelihoods, species or ecosystems, environmental functions, services and resources, infrastructure or economic, social, or cultural assets in places and settings that could be adversely affected” (*IPCC 2014*).
- **Extreme weather event** is defined as “an event that is rare at a particular place and time of year. Definitions of rare vary, but an extreme weather event would normally be as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations. By definition, the characteristics of what is called extreme weather may vary from place to place in an absolute sense. When a pattern of extreme weather persists for some time, such as a season, it may be classed as an extreme climate event, especially if it yields an average or total that is itself extreme (e.g., drought or heavy rainfall over a season)” (*IPCC 2014*).

- **Hazard** can be described as “the potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems, and environmental resources. In the [IPCC] report, the term hazard usually refers to climate-related physical events or trends or their physical impacts” (*IPCC 2014*).
- **Risk** is defined as “the potential for consequences [= impacts] where something of value is at stake and where the outcome is uncertain (...). Risk results from the interaction of vulnerability, exposure, and hazard (...)” (*IPCC 2014a*).
- **Loss and damage:** The actual and/or potential manifestation of impacts associated with climate change in developing countries that negatively affect human and natural systems (*UNFCCC SBI 2012*).
- **Loss and Damage:** Research has taken Loss and Damage (capitalized letters) to refer to political debate under the UNFCCC following the establishment of the Warsaw Mechanism on Loss and Damage in 2013, which is to “address loss and damage associated with impacts of climate change, including extreme events and slow onset events, in developing countries that are particularly vulnerable to the adverse effects of climate change.” (see *Mechler et al., in press*) (*IPCC, 2018*).
- **Sensitivity** is determined by those factors that directly affect the consequences of a hazard. Sensitivity may include physical attributes of a system (e.g. building material of houses, type of soil on agriculture fields), social, economic and cultural attributes (e.g. age structure, income structure). Capacity in the context of climate risk assessments refers to the ability of societies and communities to prepare for and respond to current and future climate impacts.
- **Slow onset events (SOE):** “Slow onset events include increasing temperature, desertification, loss of biodiversity, land and forest degradation, glacial retreat, sea level rise, ocean acidification, and salinisation. Activities under this strategic workstream aim at improving the understanding of slow onset events, as well as enhancing the capacity of address them, particularly at regional and national levels” (*UNFCCC a*).
- **Violence against Women and Girls (VAWG):** Any act of gender-based violence that results in, or is likely to result in, physical, sexual, or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life (*UN GA 1994*).
- **Vulnerability:** “The conditions determined by physical, social, economic and environmental factors or processes which increase the susceptibility of an individual, a community, assets or systems to the impacts of hazards” (*UNDRR*).



Women in agriculture in Nigeria: rice production

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