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**Empowering Women in Climate, Environment and Disaster Risk Governance:  
from National Policy to Local Action**

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\*The views expressed in this paper are those of the authors and do not necessarily represent those of the United Nations.

# Empowering Women in Climate, Environment and Disaster Risk Governance: from National Policy to Local Action

Discussion draft prepared by Dr Mary Picard of Humanitarian Consulting (Australia) for consideration by UN Women Economic Empowerment Section and the Expert Group Meeting (EGM) on the priority theme of the sixty-sixth session of the Commission on the Status of Women (CSW66): “Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes.” September 2021.<sup>1</sup>

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## EXECUTIVE SUMMARY

This paper contributes to the deliberations of the Expert Group Meeting (EGM) on the priority theme of the sixty-sixth session of the Commission on the Status of Women (CSW66): “Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes.”

Its starting premise is that effective governance of climate change, environmental and disaster risk is not achievable unless it integrates Sustainable Development Goal 5 on gender equality and empowerment for all women and girls (GEWE), underpinned by the Convention on the Elimination of all Forms of Discrimination Against Women. Gender inequalities in access to socio-economic resources and marginalization of women in national and local governance are socially-constructed drivers of risk, and efforts to ensure more gender-equitable outcomes through risk governance need to begin with the structural nature of the challenge.

In Part 1 the paper outlines recurring differences in disaster and climate change impacts on women and men, the lessons to take from these concerning the effects of structural gender inequalities on risk, and how GEWE could change this picture. Part 2 then considers the gender dimensions of six key international agreements on climate, environment and disaster risk reduction and the extent to which they contribute to a coherent international policy agenda for risk governance that integrate SDG 5 and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

Turning to the national level, Part 3 moves to the challenges in achieving integrated gender-responsive approaches to climate change, environmental and disaster risk reduction (DRR) in laws, policies, and programmes at national and local level. It highlights the three GEWE challenges of (1) under-representation of women in leadership and decision-making roles, (2) institutional barriers to integration of gender equality laws, policies, and institutions into DRR, climate change, environmental management, and development planning, and (3) the frequent absence of gender equality commitments and gender-responsive implementation in national laws, policies, and programs on climate change, disasters and environmental management.

Part 4 is then a practical exploration of the use and potential for gender responsive good practices and innovation in climate and disaster resilience, covering the selected themes of (1) Women’s participation in local government, (2) Women’s participation and voice in Environmental Impact Assessment and (3) Gender-responsive eco-system-based agriculture and adaptation.

The Conclusions and recommendations in Part 5 focus on how Member States with support from United Nations agencies can use laws and policies to institutionalize gender equality and empowerment for all women and girls into national and local level climate, disaster, and environmental risk governance. These focus on integrating gender equality principles and objectives into the policy frameworks, establishing mechanisms to ensure participation of a critical mass of women, women’s ministries, and women’s organizations in these institutions, measuring impacts of gender programming, and defining the “new” policy coherence as including GEWE along with integrated approaches to climate, disaster and environmental management and sustainable development.

## INTRODUCTION

This Background Paper argues that effective governance of climate change, environmental and disaster risk is not achievable unless it integrates Sustainable Development Goal 5 on gender equality and empowerment for all women and girls, underpinned by the Convention on the Elimination of all Forms of Discrimination Against Women. Currently, efforts to ensure more gender-equitable outcomes, or indeed to close the gender gap between women and men through risk governance, rarely address the structural nature of the challenge. The SDG5 lens on climate change, disaster and environmental risk allows us to see that gender inequalities in access to socio-economic resources and marginalization of women in national and local governance are socially constructed drivers of risk. It changes the narrative on how to address gender unequal outcomes, from the old story of helping the vulnerable, to the new one of addressing gender inequality as an underlying driver of risk and empowering women through increased presence, voice, agency, and resources in the policy-making process and implementing institutions.

The paper contributes to the deliberations of the Expert Group Meeting (EGM) on the priority theme of the sixty-sixth session of the Commission on the Status of Women (CSW66): “Achieving gender equality and the empowerment of all women and girls in the context of climate change, environmental and disaster risk reduction policies and programmes.” The paper will also contribute to the priority theme report, which UN Women prepares on behalf of the Secretary-General, and which will be discussed during the ministerial segment of CSW.

### THE GOAL OF GENDER EQUALITY AND EMPOWERMENT FOR ALL WOMEN AND GIRLS

The goal of gender equality and empowerment for all women and girls (GEWE) requires some brief exploration if it is to be applied in a practical way in the context of climate, environmental and disaster risk governance, both international and national. To this end, the paper draws on a conceptual framework for defining women’s empowerment developed by van Eerdewijk and Wong, which builds on the earlier work of Kabeer (van Eerdewijk and Wong 2017, 13–14; Kabeer 1999). This framework is especially applicable to the emphasis in this paper on women’s participation and empowerment in governance systems for managing disaster and climate risk, because it includes attention to institutional structures.

In summary, the van Eerdewijk and Wong framework characterizes women and girls’ empowerment as both a process and an outcome that “is the expansion of choice and strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures” (van Eerdewijk and Wong 2017, 13). They describe its three elements as (1) agency, (2) institutional structures and (3) resources. The key point they reiterate, however, is that it is about transforming power relations, moving from disempowerment to empowerment. It means not simply allowing some women into institutions, or mainstreaming gender into policies, but seeking to place women on an equal footing with men. This remains a challenging proposition while legislatures, governments and - from the author’s wide experience in the field - relevant disaster and climate change risk management institutions, remain predominantly male and based on traditional roles of masculinity and femininity.

**Agency** is described by van Eerdewijk and Wong as being at the heart of empowerment because it is about women’s and girls’ capacity to take action and express themselves to pursue the goals they define and, importantly, to both influence and make decisions without the threat of violence or the need to seek permission. In the context of disaster and climate risk governance, agency might be expressed through women organizing into their own groups or other civil society organizations to act collectively, or by taking on decision-making or leadership roles in local or national governmental, civil society, and academic institutions concerned with risk knowledge and analysis, laws, policies, and their implementation.

**Institutional structures** are described by van Eerdewijk and Wong as both the formal and informal arrangements, rules and practices that societies use to control resources and take action, including within families, communities, markets, and the state. They include the formal laws and policies as well as the norms that underpin them, and the way they are applied and implemented in their social context. In the context of disaster and climate risk governance, this paper focuses on the formal institutions, laws and policies, at both national and community level, and how gender equality can be institutionalized within them to increase women's agency and voice, including on resource allocation and understandings of risk through gender analysis.

Thirdly, the empowerment framework focuses on **resources** as both "tangible and intangible capital and sources of power" that women and girls can possess or use individually or collectively as part of exercising their agency. Such resources include women and girls' own awareness, health, safety and security as well as their assets in the form of productive assets, finances, knowledge and skills, time and social capital (van Eerdewijk and Wong 2017, 14). Within disaster and climate risk governance, some of the awareness barriers for both women and men relate to traditional gender roles about protection and vulnerability, but there is also a need to recognize different needs based on gender roles and biology, as well as threats to women's mental and bodily integrity in the form of gender-based violence that increases in emergency contexts. Women's reduced access to finances, land and property assets in general also impacts their resilience to both sudden-onset disasters and longer-term climate change, so these types of assets are part of what needs to be considered. At the same time, in contexts where women have not been recognized as leaders and agents of change, they may also need to build their own capacity in the knowledge and skills to take on these roles, and this is an important mechanism for empowerment.

This GEWE framework can also be applied to measure empowerment, especially the impact of programming that is intended to empower women and girls. Work has been done on such measurement in humanitarian settings, where the programming is more time-limited and separately identifiable than longer term development programming. A 2015 global meta-study of tools used to measure GEWE indicators in humanitarian settings found that measurement had focused mainly on violence and security issues and suggested that organizations providing humanitarian aid should give priority to developing objective measurement of GEWE (Institute of Development Studies 2015). Significant progress has since been made on tools to do this in humanitarian settings, and it is hoped that these methodologies, and others, can eventually be extended to wider GEWE programming and assessment in disaster and climate risk governance, by governments as well as by development partners (Goulart et al. 2021).

This is a developing area of research that can potentially influence the types of indicators used, and the monitoring and evaluation that is undertaken to measure impacts on GEWE, to report on them and revise policy approaches as needed. The use of rigorous measurement of the GEWE impacts of programming could be an important underpinning for effectiveness and accountability for laws, policies and programmes that aim to achieve gender responsive disaster and climate risk governance.

## OUTLINE OF THE PAPER

The following section, Part 1 of this paper, gives an overview of recurring differences in disaster and climate change impacts on women and men, the lessons to take from these concerning the effects of structural gender inequalities on risk, and how GEWE could change this picture.

Part 2 considers the gender dimensions of six key international agreements on climate, environment and disaster risk reduction and the extent to which they contribute to a coherent international policy agenda for risk governance that integrate SDG 5 and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

Part 3 moves to the national level, and the challenges in achieving integrated gender-responsive approaches to climate change, environmental and disaster risk reduction (DRR) in laws, policies, and programmes at national and local level. It highlights the three GEWE challenges of (1) under-representation of women in leadership and decision-making roles, (2) institutional barriers to integration of gender equality laws, policies and institutions into DRR, climate change, environmental management, and development planning, and (3) the frequent absence of gender equality commitments and gender-responsive implementation in national laws, policies and programs.

Part 4 is then a practical exploration of the use and potential for gender responsive good practices and innovation in climate and disaster resilience, covering the selected themes of (1) Women's participation in local government, (2) Women's participation and voice in Environmental Impact Assessment and (3) Gender-responsive eco-system-based agriculture and adaptation

The Conclusions and recommendations in Part 5 focus on how Member States with support from United Nations agencies can use laws and policies to institutionalize gender equality and empowerment for all women and girls into national and local level climate, disaster, and environmental risk governance. These focus on integrating gender equality principles and objectives into the policy frameworks, establishing mechanisms to ensure participation of a critical mass of women, women's ministries, and women's organizations in these institutions, measuring impacts of gender programming, and defining the "new" policy coherence as including GEWE along with integrated approaches to climate, disaster and environmental management and sustainable development.

## 1. STRUCTURAL INEQUALITY AS A DRIVER OF GENDERED RISKS AND HOW WOMEN'S VOICES AND AGENCY CAN REDUCE IT

The laws, policies, institutions, and programmes established to manage risk from disasters, climate change and environmental degradation need to include mandates, capacity, and resources to undertake gender assessments. If not, they are likely to miss key drivers of risk that arise from structural inequality, as well as specific gendered disaster and climate impacts that occur due to pre-existing gender inequalities, or direct and indirect discrimination in relief and recovery support. Gender situation assessment is also important to reveal how indirect disaster, environmental or climate change impacts may affect women and men differently. All of these impacts are further influenced by factors such as poverty, health, ethnicity, minority gender identity, and location in rural or urban environments. These intersecting risks will also normally be identified in gender analysis. While the available statistical data has many gaps, it is revealing to analyze commonly observed trends and issues through the lens of structural inequality.

### 1.1 SUDDEN-ONSET DISASTERS

Despite the lack of comparative global statistics, evidence from post-disaster needs assessments (PDNAs), evaluations of response efforts and country case studies indicate common gender differences in disaster impacts. These include survival rates, access to relief and recovery assistance, sex discrimination, gender-based violence, as well as economic impacts and speed of recovery that affect women disproportionately.

**Death and injury:** Concerning death rates in disasters, a longstanding but significant meta-analysis of reports on disasters in 141 countries found that where there were significantly higher death rates for women, they corresponded with higher levels of gender inequality in women's access to economic and social rights (Neumayer and Plumper 2007). A more recent study of 85 less developed countries found that improving women's economic standing both directly and indirectly reduced the human cost of disasters (Austin and McKinney 2016).

Many factors affect people's survival in sudden-onset hazards such as cyclones, floods and earthquakes, including the quality of buildings and infrastructure, the extent of household preparedness, and the effectiveness and reach of early warning systems. In communities with highly segmented gender roles in work and family life, and where women do not have the same access to communications technology as men, they can be excluded from early warnings. Sometimes they may not receive the same training on evacuation drills or lack the means to evacuate with the children and elderly in their care. For example, an assessment in Tajikistan revealed that the most vulnerable households during floods were those headed by women, single elderly people and very large families (UNDP and UN Women 2018, 27–28). In an earlier coastal Bangladesh study, male heads of household were typically responsible for evacuation decisions, and in many cases women's independent movement was restricted, so the absence of a male head of household delayed evacuations (Alam and Collins 2010).

There are many actions that can be taken to reduce these differential impacts on women, but at the forefront of them should be equality of participation and leadership in developing early warning systems, and in disaster preparedness. For example, in the village of Navalipithia, Sri Lanka, women stay at home during the day or work nearby, so they tend to detect the early signs of landslides; since realizing this, women and men have formed local groups to monitor these signs during the rainy season (UNDP and UN Women 2018, 62). But such engagement with women as empowered actors also needs to occur in government institutions and at national level if the awareness and capacity to address gender issues in DRR is to grow.

Some studies have also shown higher death rates of women in the immediate impacts of disasters, but these tend to be a complex mix of gendered work and family roles impacting where people were at the time the hazard struck and are difficult to generalize in terms of gender equality. For example, the death rate of 55% women in the 2015 Nepal earthquake was partly due to more women being indoors in fragile buildings, and partly because many of the men were migrant workers in other countries (Nepal 2015a, 227). Even higher comparative death rates for women were reported during the 2004 Indian Ocean Tsunami in Aceh, Indonesia and Cuddleshore, India, but again the main issues related to gendered work roles and people's location at the time the tsunami struck (Oxfam International 2005). By contrast, a recent study in Italy showed higher disaster death rates for men than women in working-age groups, attributed to their greater exposure to floods and landslides and different risk-taking behaviors according to gender roles (Salvati et al. 2018).

The Neumayer and Plumper meta-study also pointed to the early recovery stage from sudden-onset hazards as crucially important for women and girls' survival, as in highly unequal societies rescue choices tended to favor men and boys, and there was gender inequality in access to food, water, and shelter (Neumayer and Plumper 2007).

The main conclusions that can be drawn on disaster fatalities are that there are recurring differences in immediate disaster impacts on men and women that are specific to the context and hazard, often related to gendered work roles, and that these need to be considered when planning early warning and preparedness systems. The more empowered women are in these processes the more likely the systems are to take account of these gender differences in advance, and to increase the safety of everyone, including children, older people and people living with disabilities.

**COVID-19:** The COVID-19 pandemic is now widely described as a global disaster, and one with significant gender dimensions. The direct health impacts of COVID-19 have been more severe for men who contract the disease (Peckham et al. 2020), but for women, some of the more significant health impacts have been indirect.

During the spread of COVID-19 during 2020, sexual and reproductive health services and supplies were disrupted in many countries (Krubiner et al. 2021) particularly affecting women and girls in rural and remote areas where health facilities and services are not readily available (FAO 2020). UNFPA found that during 2020, there were reports of continued denials of sexual and reproductive



health and rights, including barriers facing women and girls' access to sexual and reproductive health services in the context of overstretched health clinics and hospitals (United Nations Joint Study 2021). Similar reports came from a study by the Feminist Humanitarian Network, a group of women's rights organizations working in eight countries in Africa, the Middle East, and South Asia (FHN 2021).

Such health access impacts of the pandemic on women may simply be an effect of overwhelmed health systems, but they could also indicate policy priorities that directly or indirectly discriminated against women. This is a wider concern in country responses, because it is also emerging that women and women's organizations have largely been marginalized in national COVID-19 response planning, at least during 2020. For example, a review of 225 COVID-19 Task forces across 137 countries found that only 4.4% of them had gender parity (UNDP and UN Women 2021), while a study of 30 countries in June 2020 found that on average women made up only 24% of such committees; with minimal attention given to GBV or sexual and reproductive health services (CARE 2020b); and with women's rights and women-led organizations and leaders not being included in decision making on the response, or receiving their fair share of funds (CARE 2020b), (FHN 2021). Clearly the COVID-19 pandemic response in 2020 did not empower women or used gender analysis to any degree, so it would not be surprising to find that indirect gendered impacts on women have not been considered.

**Sex discrimination in response:** Differentiated disaster impacts that arise by direct or indirect sex discrimination in response and recovery operations are not uncommon. For example, in some reported cases following the 2015 earthquakes in Nepal, women faced indirect discrimination by being required to provide title documents as proof of land or housing ownership when their spouse was missing or deceased and they wished to obtain reconstruction assistance, because this was a context where women's names are not usually on marital property titles; and in the same area, some women heads of households experienced direct discrimination when local government officials insisted that distribution of relief supplies would be through male heads of household only, causing significant delays in the women's ability to access lifesaving supplies for themselves and their dependents (IFRC and Shrestha 2017, 35–38).

Such discriminatory barriers reduce women's access to food and resources in an immediate sense, but they are also likely to have longer-term impacts on their health and their children's health, and delay a return to their previous level of prosperity and/or cause longer-term impoverishment due to the loss of assets such as houses and land. These impacts arise from pre-existing structural inequality.

**Gender-based violence:** GBV is another significant form of gender discrimination that increases in disasters and also in climate related displacement (GGCA 2016, 30–31; IFRC and Ferris 2015). Qualitative household level research in Indonesia, Lao PDR and the Philippines has also confirmed that the risks of GBV are exacerbated during disaster situations, relating to factors that apply in disaster contexts in many other countries (IFRC 2018).

Other recent qualitative analysis has shed light on the mechanisms linking GBV to cyclones through the eyes of victims/survivors in a coastal region in Bangladesh, described as "slow violence and layered disasters" (Rezwana and Pain 2020). Intimate partner violence has also escalated since the COVID-19 pandemic began, especially during lockdowns, which has been described as the "shadow pandemic" of domestic violence (United Nations Joint Study 2021).

Several main characteristics of GBV in disasters were identified by IFRC:

- a. Domestic violence was present in affected communities before the disaster, but it increased following disasters, both sudden-onset and prolonged disasters such as drought;
- b. Impoverishment due to disaster increased the risk of GBV, including through economic coping strategies such as child/early marriage, transactional sex, and trafficking; and

- c. Rape and sexual assault was higher in emergency shelters and disaster-affected communities, necessitating an increase in the capacity of specialist support and justice services to meet the needs of victims/survivors (IFRC and Ferris 2015, 20–27).

Emergency or transitional shelter and informal settlements have also been highlighted over many years as high-risk situations for GBV. These situations have received considerable attention over the last decade through the United Nations IASC mechanisms, especially standard setting through the Global Shelter Cluster and the Global Protection Cluster Area of Responsibility on GBV (Global Shelter Cluster 2021; Gender Based Violence AoR, Global Protection Cluster 2019).

Further research by IFRC on effective legislative frameworks on gender equality and GBV in disasters concluded that systems for prevention, access to support and justice for GBV victims/survivors tend to be under-resourced in normal times and are not adapted to provide services in emergencies. To change this, forward planning is needed that involves women in communities and women’s service organizations, as well as resource allocations to the ongoing services and surge capacity in disaster response (IFRC and Picard 2017, 49–51).

Most of the research on climate-related gender-based violence has been done on sudden-onset climatic disasters in developing countries. However, there are likely to be similar risks in situations where people are on the move due to climate change, either in planned relocations or spontaneous migration due to phenomena such as land degradation, drought, increased annual flooding or sea level rise. Where relocations are planned, there are opportunities to ensure that structural gender inequality reflected in the patterns of discrimination, violence and exclusion discussed above are not replicated in these risk governance mechanisms (CARE 2020a). For example, Fiji has pioneered a gender-responsive national approach to climate change relocation, drawing on its experience of past planned relocations that did not take account of gender issues (Fiji 2018), as well as on current international good practice guidance on internal and international climate displacement and migration (McAdam and Ferris 2015; PDD 2016).

**Gendered economic impacts:** Gender differences in economic impacts of disasters is an area that has not been well researched and much of what is known comes from qualitative and narrative reports, such as PDNAs, that are not always followed by analysis of longer-term gendered economic impacts. Differences in access to income and assets prior to a shock have a substantial effect on people’s resilience in response and recovery. Gendered socio-economic impacts relate to factors such as the gender pay gap, women’s unpaid care roles, formality and informality in employment and livelihoods, labor market segmentation and the fact that women on average have less access to housing, land, and property rights. Low-income women and those who are marginalized due to marital status, physical ability, age, social stigma or caste are especially disadvantaged during slow-impact disasters such as drought (King-Okumu 2019).

In the agriculture sector, the most significant sector in developing economies, women in micro and small enterprises constitute a large proportion of the midstream agriculture value chains. For example, according to a 2017 World Bank estimate, women represent around 40 percent of the agricultural labor force in Sub-Saharan Africa, and more than half in some countries, yet due to “due to a variety of social and economic obstacles, women farmers produce yields of 20 to 30 percent less than men.” (Nelson 2020). Although women dominate in the processing, distribution, and marketing of food crops, they often remain invisible to policy makers (FAO 2021). The methods of economic accounting in small business, food and agriculture, on which disaster damage and loss assessments are based, do not always capture the livelihoods and losses of women who are extensively engaged in unpaid family labor, including food gardens and agriculture, and in the informal sector, including micro-enterprises that are agriculture based.

Post-Disaster Needs Assessments (PDNAs) regularly highlight gender differences in economic impacts. For example, during the Malawi floods of 2019 women were unable to operate their small businesses; the floods negatively impacted livelihoods overall in the affected districts, but also

exacerbated income inequality between women and men (Government of Malawi 2019, 15, 30). In Fiji, where rural women's livelihoods comprise mainly food processing, handicrafts and weaving, Tropical Cyclone Winston in 2016 caused the most damage to the housing and shelter sector; but for women whose livelihoods were home-based, such as mat and basket weaving, the destruction of their homes and raw materials had an additional economic impact that was only understood through consultation with them in the PDNA process (Fiji 2016). The PDNA noted that these are precarious livelihoods without the protection of insurance or access to finance, and that such losses increase women's economic dependence (Fiji 2016, 99). In Fiji's formal productive sector, primarily agriculture, women's overall economic losses were lower due to their lower rates of employment and lower wages, but the impact was greater because "women are poorer, earn less income, are more dependent on subsistence economies, and, therefore, have fewer options to cope with the disaster impact than their male counterparts." (Fiji 2016, 102). In 2019 women who were commercial flower producers expressed concerns that their enterprises were not counted as part of agricultural production, damage and loss assessments (ADB, Layton, and Picard 2021- preparatory work).

The COVID-19 pandemic is a global disaster that has affected economic sectors differently, and in areas where the labor force is highly segmented between jobs done by women and men, that has also resulted in different impacts along gender lines including in highly industrialized economies. The combination of the pandemic itself and public health responses in restricting movement or lockdowns, has had great impacts on women's employment in the care and education sectors, health, retail, tourism, and other service industries.

The loss of access to health and essential services and childcare, as well as home schooling during COVID-19 lockdowns, reduced women's capacity to participate in paid employment and increased the burden of women's unpaid care roles (Power 2020). Given that women already perform 76 per cent of the total hours of unpaid care work (ILO 2018), such an increased unpaid workload has also been a significant barrier to women's continued participation in the workforce, both formal and informal. Additionally, intersectionality with gender and race saw the highest rates of increased unemployment in the United States in 2020 among Hispanic or Latina women (WEF 2021, 50). Although some characteristics of the pandemic are unique, these issues also arise in other disasters, where women's unpaid care roles increase, and the disaster impacts on workforce participation and traditional women's livelihoods are often not recognized.

All these factors and other gender-specific barriers in each context contribute to women and girls having comparatively longer rates of recovery. Disaster risk management systems need to take account of the different work roles and means of livelihoods of women and men in each context, as well as ensuring recovery and livelihoods support does not reinforce gender stereotypes or discriminate against women and girls. Women's economic resilience can be improved by consulting with them about what they need and taking measures such as supporting women led MSME business development and profitability, focusing on restoration and extension of women's livelihoods, counting their disaster losses for the purposes of recovery assistance, providing access to insurance and recovery financing, and promoting women's leadership in recovery planning.

## 1.2 CLIMATE CHANGE AND OTHER ENVIRONMENTAL DEGRADATION

Climate variability and climate-related disasters are predicted to push an additional 100 million people into extreme poverty by 2030 (Hallegatte et al. 2016). The scientific projections of an increase in average global temperatures, even if global emissions targets are met, mean that ecosystems and the way people interact with them will face permanent changes (IPCC 2021). Already, rural women and men face the challenge of having to adapt their production systems in the context of climate change and natural resource depletion, and UNFCCC highlights an increasing need to strengthen adaptation and develop resilience to climate shocks, especially for women and girls (UNFCCC n.d.). But, although there is ample evidence that women often lead in moving to more

equitable and sustainable solutions to climate change, they continue to experience structural barriers that are social, political, and economic, which restrict their ability to be included in climate change negotiations and policy planning (D4G 2019).

Sea level rise and spontaneous migration away from degraded environments is also now recognized as a likely driver of displacement, although the research base on migration as a response to longer-term climate change, as opposed to climatic disasters, is still very thin (Selby and Daoust 2021). But climate-related migration has been identified as contributing to increased risks for women in general (CARE 2020a) as well as from trafficking and slavery (Bharadwaj et al. 2021). Climate change also contributes to multi-dimensional crises including situations of conflict which in turn are drivers of migration and increased risk to women and girls, but it requires nuanced and context-specific analysis (Myrntinen 2017).

Rather than seeking to identify simple causal relationships between climate change and gender inequality for women and girls, it seems more useful to consider it as an additional factor that needs to be considered to achieve equitable sustainable development. The gendered aspects of climate change follow closely existing gender roles and gender inequalities in societies, including marginalization of women in many of the governance decision-making processes from national to local level (UNFCCC Secretariat 2018). In this respect, they are intertwined with the same challenges for gender equality and empowerment of women and girls as they face in normal governance and development processes, community and family decision-making, but with the added pressures of scarcity and change. That is, just as with a range of sudden-onset disasters, the gendered risks from global warming have less to do with climate change as a single phenomenon, and more to do with unequal starting points that affect resilience to impacts and recovery, and inequality and marginalization of women and girls in the policy processes to adapt to or mitigate climate change.

An extensive 2016 literature review and analysis by the Global Gender and Climate Alliance which focused on primary data on gender and climate change drew a number of conclusions. The first was that, even though there have been gains, women are still underrepresented in both climate policymaking and climate finance activities; and that these still do not adequately incorporate gender-related concerns or fill the urgent need for gender-disaggregated information on the impacts of climate policies (GGCA 2016, 31–32). At the time, GGCA pointed to a positive trend for organizations to adopt gender mainstreaming strategies into their programs and policies. Fortunately, this trend has continued, with major international climate and environment funds applying relatively stringent gender mainstreaming criteria as part of project and programme funding approvals, including the Green Climate Fund, the Global Environment Fund, the World Bank and its programme the Global Framework for Disaster Risk Reduction (United Nations Joint Study 2021, 41). The impact of such criteria in obtaining significant financial resources may be a significant positive incentive for governments and other actors, including United Nations agencies, to design gender-responsive climate change mitigation and adaptation policies and programmes.

Other key findings of the GGCA review of evidence all point to socially created risk arising from structural gender inequality, although it is not described in those terms. In summary, those of most relevance to the present topic are:

- a. Women’s lack of access to assets and power is a major source of vulnerability to climate change, especially in developing countries. In particular, women’s lack of control over the vital resources of land, forests and fisheries and lack of access to capital makes it “harder for women to influence how resources are used in response to climate shocks, and ultimately, for women to access the livelihood opportunities necessary for their survival.” (GGCA 2016, 31–32).
- b. “The caring roles that women inhabit adversely impact their capacity to adapt to climate change” This is largely due to the time constraints of caring roles, which increase during disasters, making it harder for women to earn an income and recover economically (GGCA 2016, 31–32).

- c. Climate change is challenging some established gender roles in developing countries, due to scarcity of water and long-term changes affecting agriculture. These situations have the potential to create tension and/or open new opportunities for gender equality, such as men helping women to cart water in times of scarcity (a traditionally female role), or women becoming more involved in natural resource management in response to scarcity (GGCA 2016, 32).

The GGCA review and other evidence of the gendered impacts of climate change highlight gender inequality as a driver of risk. The SDG5 ambition would be to reverse this risk driver by increasing GEWE.

Climate change adaptation (CCA) itself is also a complex set of processes, which occur under the formal climate change laws, policies, and institutions, but also in many other aspects of ongoing environmental management and development decision-making. In reality, it includes activities at many levels, from local community initiatives in fishing, agriculture (crops, livestock, fisheries, aquaculture, and forestry), to the construction of large-scale national infrastructure, as well as officially designated climate change projects. It may also include planned relocation of communities or spontaneous migration from degraded or inundated land. Overall, this means it is important to look at GEWE in processes such as environmental impact assessments (EIAs) and also local government, because these are where so many relevant decisions are being made at the local level.

Even in the absence of gender analysis, it is clear that CCA is not simply a set of technical solutions to manage environmental change, but a process of social governance. In this regard, the concept of maladaptation is also useful, as some decisions and practices in response to climate change can worsen its environmental effects in the longer term. Likewise, CCA can be maladapted to the needs of the communities involved, or to segments of those communities, if the impacts on different livelihoods and access to resources are not considered, including gendered differences. For example, a recent rapid evidence assessment for the UK Government on the relationship between climate change and migration or displacement, warned of the risks of maladaptation (Selby and Daoust 2021, 65).

In a study that mainstreams gender in the analysis, Selby and Daoust note that, regardless of whether projects are undertaken by national authorities or international donors, adaptation measures can sometimes create or worsen situations of vulnerability. In the context of climate - related migration that their study considers, they note that some projects can “trap” communities that do not have the means to move, or they may contribute to migration. But more broadly, their review of the evidence suggests that “climate adaptation measures such as dam-building, land acquisitions, relocations, and shifts out of agriculture can all, in certain circumstances, create or worsen vulnerabilities, in part because climate change is of such importance that the potential negative consequences of adaptation projects often do not receive the attention they deserve.” (Selby and Daoust 2021, 65).

The potential for maladaptation from the perspective of women’s agency and access to assets and resources reinforces the importance of community engagement in decisions on adaptation, local development, and environmental management. These include areas such as environmental impact assessments for approval of private or public infrastructure and development projects that may impact communities’ capacity to adapt to climate change (e.g. through pollution and land degradation, displacement, and reducing women’s access to natural resources and traditional food sources).

Looking at climate change impacts in this holistic sense also points to more positive integrated forms of adaptation, such as gender-responsive eco-system-based adaptation and climate-smart agriculture (FAO and CARE 2019). Within these local processes, the use of gender analysis and engagement with women as full stakeholders are central to achieving gender equal outcomes, as discussed in Part 4 below.

## 2. INTERNATIONAL RECOGNITION OF GENDER EQUALITY AND WOMEN'S EMPOWERMENT AS CENTRAL TO RISK-INFORMED SUSTAINABLE DEVELOPMENT

Six key international agreements on climate, environment and disaster risk reduction are central to establishing a coherent international policy agenda for risk-informed sustainable development that links with CEDAW and includes GEWE as an underlying goal. They are: (1) the 2030 Agenda for Sustainable Development, including special attention to SDG5; (2) the Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework); (3) the United Nations Framework Convention on Climate Change (UNFCCC) and (4) the Paris Agreement; (5) the Convention on Biological Diversity; and (6) the United Nations Convention to Combat Desertification. Each of these is reviewed briefly below in terms of their GEWE commitments. The section then looks at the roles of CEDAW and SDG5 in bringing these elements together and focuses on a framework for understanding the elements of GEWE in the context of national disaster and climate risk governance.

### 2.1 THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

Gender equality and the right not to be discriminated against on the basis of sex or gender, are human rights and also fundamental underpinnings of sustainable development which, by definition, needs to be risk-informed, inclusive and equitable. This proposition is well supported in the 2030 Agenda and the SDGs as a whole, as well as specifically in SDG5 which adds the empowerment element to gender equality.

SDG5 seeks to achieve gender equality and empowerment for women and girls, with targets and indicators for reporting that underpin wider development but are also relevant to risk governance. For example:

- a. Target 5.1 to end all forms of discrimination against all women and girls everywhere includes indicator 5.1.1 to monitor the existence of legal frameworks that aim “to promote, enforce and monitor equality and non-discrimination on the basis of sex.” This need not refer only to special-purpose laws on gender equality, but it can apply also to sectoral laws that establish risk governance priorities, frameworks and institutions, such as disaster, climate change and environmental laws, which also need to promote these values. As discussed in later sections of this paper, this may be done directly in the risk governance laws and/or by increasing their practical compliance and links with the gender equality laws. This can be done using the national framework approach presented in a recent Asian Development Bank report on good practice legislation to support women’s resilience to climate change and disaster risk, which in turn draws on CEDAW General Recommendation No. 37 on “gender-related dimensions of disaster risk reduction in the context of climate change”, both of which are discussed below (Layton and Picard 2021; CEDAW 2018).
- b. SDG5 targets 5.2 and 5.3 on the elimination of violence against women and girls and other harmful practices are also issues that both impact women’s underlying resilience to shocks and social change arising from disaster or environmental causes and are also harms that increase in disaster-affected and displaced communities, negatively impacting women’s health and wellbeing and their capacity to recover economically. This has come to the fore during the COVID-19 global pandemic lockdowns and economic crisis to the extent that it has been described by UN Women, UNFPA and other organizations and writers as a global “shadow pandemic” of gender-based violence (Sri et al. 2021; UN Women 2021; UNFPA 2020).
- c. The indicators on statistical collection for both targets 5.2 and 5.3 also become acutely important during disasters and climate displacement, when record keeping and reporting of

violence and abuse is likely to break down, women may be under more pressure not to report, and access to justice is reduced due to mobility and/or diversion of police resources in emergencies. To capture this important evidence of disaster impacts, surge capacity and pre-planning are required, as recommended in reports on the subject by IFRC (IFRC and Picard 2017, 59–63) and a recent United Nations Joint Study that was co-led by UNDRR, UNFPA and UN Women, and approved for implementation by the UN DRR Senior Leadership Group in July 2021 (United Nations Joint Study 2021, Rec. 4).

- d. Target 5.4 on recognizing and valuing unpaid care and domestic work is also a matter for particular attention with regard to (i) disaster response and recovery, when women’s burden of unpaid work generally increases, which has also been the case during the COVID-19 pandemic as a disaster of unusual complexity, (Power 2020) and (b) recognition in damage and loss assessments for disaster recovery and compensation for planned relocations of women’s unpaid labor and contributions to family food and cash assets through food gardens, cash horticulture such as flower sales, family farm labor, non-timber forest resources, river and sea fishing and shoreline gathering such as shellfish and edible plants, and handcrafts such as basket and cloth weaving.

Indicators 5.5, 5.6, 5a, 5b and 5c can be addressed in a similar vein, directly applying SDG 5 to the spheres of disaster, climate change and environmental managements, rather than treating it as a separate pillar.

**Other SDGs:** Indicators of progress under the other SDGs, including SDG 13 on climate change, also include requirements for sex-disaggregated data across a range of areas relevant to both disaster and climate resilience, with the Inter-Agency and Expert Group on Gender Statistics identifying 80 indicators overall as gender-relevant (United Nations Statistics Division 2018). SDG monitoring is thus providing an increasing body of sex-disaggregated data that will support countries’ implementation of their obligations.

The international normative frameworks on climate, environment, and disaster risk reduction (DRR) provide much less guidance than the SDGs for effective implementation of gender equality as a key element of risk governance. For complex reasons relating to their technical subject matter focus, the lack of a gender lens and insufficient empowerment of women in the international treaty negotiations, these international instruments do not address structural gender inequality as a driver of risk, nor do they treat women’s meaningful participation as a human right. However, the ways in which the treaties and their associated implementation processes do mention women and gender is important in moving towards policy coherence that places gender equality and empowerment of women and girls as central pillars in risk governance at both international and national levels.

## 2.2 SENDAI FRAMEWORK FOR DISASTER RISK REDUCTION 2015-2030

The Sendai Framework for Disaster Risk Reduction 2015-2030 emphasizes the importance of gender inclusion and of disaggregated data (guiding principles paragraph 19(g) and 25(a)), but the indicators agreed by state parties for reporting through the Sendai Framework Monitor concerning deaths, injuries, direct and indirect economic losses from disasters so far require only numbers of persons, while sex-disaggregated data is optional (“Sendai Framework Indicators” n.d.).

The Sendai Framework guiding principles 19(g) states that “gender, age, disability and cultural perspective should be integrated in all policies and practices, and women and youth leadership should be promoted”; and Priority 4 paragraph 32 includes “Empowering women and persons with disabilities to publicly lead and promote gender equitable and universally accessible response, recovery, rehabilitation and reconstruction approaches is key.” These types of clauses “mainstreams” gender in the sense that women are mentioned as a group, among others in a list, but without a gender analysis of why half the population would need to be mentioned in this way. This approach has dominated implementation work and has been described as the “the missing half” of the Sendai



Framework (Zaidi and Fordham 2021). However, paragraph 36(a)(i) begins to address what needs to change to ensure women's interests are represented adequately and their leadership recognized, although it is couched in terms of social utility for the good of all (which it is) rather than women's human right (which it also is). 36(a)(i) is the one clause that singles out women and also emphasizes participation:

"Women and their participation are critical to effectively managing disaster risk and designing, resourcing and implementing gender-sensitive disaster risk reduction policies, plans and programmes; and adequate capacity building measures need to be taken to empower women for preparedness as well as to build their capacity to secure alternate means of livelihood in post-disaster situations." (UNISDR 2015a)

Such clauses provide a goal, but the mechanism is ultimately left to national and local governments, and in the absence of a gender analysis about the facts and the sources of existing exclusion of women from disaster risk governance, it is not made clear that GEWE within these institutions and systems is the means to achieve both the best disaster risk reduction possible and the realization of women's human rights.

Unlike the UNFCCC and Paris Agreement, the Sendai Framework is not a binding treaty, so it does not have formal constituencies and conferences of the parties, but it is entering the period of its mid-term review and that could provide an opportunity to review the approach to gender as a question with distinct parameters aside from questions of vulnerability. A recent UN Joint Study on gender equality and women's leadership in DRR recommended that the UN pursue a gender-responsive mid-term review and reporting process, call for a gender work plan, and explore with Member States the potential to agree a Sendai Framework gender action plan to carry implementation through to 2030 (United Nations Joint Study 2021, 62). These recommendations were endorsed by the UN Senior Leadership Group on DRR in July 2021. Such a mechanism has the potential to provide more practical guidance and capacity building on how to integrate SDG5 and CEDAW into Sendai Framework implementation, consistent with the objective of risk-informed and equitable sustainable development.

## 2.3 THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE AND THE PARIS AGREEMENT

A gender equality framework has been built gradually through the UNFCCC processes since 1992, although the original treaty did not include gender considerations, and even the 2015 Paris Agreement has relatively minor mentions of women and/or gender. The Paris adopting decision mentions the need for parties to consider a raft of human rights "as well as gender equality, empowerment of women and intergenerational equity," and the Agreement itself has only three references to gender and/or women (Paragraphs 7, 11, and 102). References to gender in earlier drafts were in fact significantly whittled down during the Paris negotiations (African Working Group on Gender and Climate Change 2016). This was one of the drivers for a renewed push for women's inclusion in national delegations and in international decision-making on climate change more broadly.

It was through years of activism by women's organizations that the formal Women & Gender Constituency was established at the UNFCCC Convention of the Parties (COP) No.14 in 2008, and this has driven the gender work program (Resurrección 2013). The gender infrastructure developed under the UNFCCC was set in train at the Cancun COP16 in 2010, which recognized the importance of "gender equality and the effective participation of women" (UNFCCC COP 16 2010, 16); followed by the adoption of the Lima Work Programme on Gender in 2014 (UNFCCC COP 20 2015, 20). It was under this mechanism that the Gender Action Plan (GAP) was developed and approved in 2017 to "advance women's full, equal and meaningful participation and promote gender-responsive climate policy and mainstreaming a gender perspective in the implementation of the Convention and the



work of Parties, the Secretariat, United Nations entities and all stakeholders at all levels” (UNFCCC COP22 2018). Although the original UNFCCC GAP focused more on gender parity in participation at the international level (UNFCCC Secretariat 2018), a new 5-Year GAP agreed at the COP 25 in 2020, along with an Enhanced Lima Work Programme, considers more substantive and sectoral issues that are central to ensuring gender-responsive adaptation.

The adoption of the new GAP and enhanced workplan are also important signals to encourage gender responsive national policies and plans. National Adaptation Plans (NAPs) and National Communications under the UNFCCC are important aspects of national policy frameworks on climate change. Although it has taken time, many Member State submissions on Intended/Nationally Determined Contributions (NDCs) under the Paris Agreement are also now incorporating substantial gender elements, mostly as they enter their second NDCs, and mostly regarding adaptation rather than mitigation, as discussed further in Part 3 below (Women’s Environment and Development Organization 2018; WEDO and Granat 2020; WEDO and Siegele 2020).

## 2.4 THE CONVENTION ON BIOLOGICAL DIVERSITY

The Convention on Biological Diversity 1992 (CBD) preamble recognizes “the vital role that women play in the conservation and sustainable use of biological diversity and affirming the need for the full participation of women at all levels of policy-making and implementation for biological diversity conservation”. Apart from that, the Convention itself does not consider questions of women or gender. However, in 2015 the convention of the parties (COP12) agreed a Gender Plan of Action (CBD COP12 2014). In 2018 the COP14 also agreed that the process to develop the post-2020 global biodiversity framework would be gender responsive (COP14 CBD 2018). It was intended to integrate a gender perspective and ensure appropriate stakeholder representation, particularly of women and girls, although two years later the 2021 draft gives little attention to gender issues except in the broadest sense (CBD OEWG 2021).

## 2.5 THE UNITED NATIONS CONVENTION TO COMBAT DESERTIFICATION

The preamble to the United Nations Convention to Combat Desertification 1994 (UNCD) stresses “the important role played by women in regions affected by desertification and/or drought, particularly in rural areas of developing countries, and the importance of ensuring the full participation of both men and women at all levels in programmes to combat desertification and mitigate the effects of drought” (United Nations General Assembly 1994).

Unlike the UNFCCC, it obliges parties to promote awareness and participation of local populations, particularly women and youth, in efforts to combat desertification (article 5(d)). It also calls for effective participation at local, national, and regional levels of both women and men in policy planning decision-making and implementation and review of national action programs (article 10(2)(f)) and for capacity building for public awareness “through the full participation at all levels of local people, particularly at the local level, especially women and youth, with the cooperation of non-governmental and local organizations” (article 19(1)(a)).

There have been a range of decisions in conferences of the parties relating to inclusion of women and gender sensitive approaches. Its 2015 conference of the parties in Ankara (COP12) adopted a land degradation neutrality (LDN) target, the conceptual framework for which “highlights that land degradation in developing countries impacts men and women differently, mainly due to unequal access to land, water, credit, extension services and technology” (Collantes et al. 2018). Then in 2017 the conference of the parties adopted their first Gender Action Plan (GAP). Overall, the UNCD treaty regime provides substantive guidance on the mechanisms for achieving GEWE through its focus on participation, an important element of empowerment because it facilitates women’s presence, voice, and agency in the institutional processes.

## 2.6 LINKING BACK TO CEDAW

Due to the limited focus on gender in these key international agreements, the way forward is to ensure that their implementation is conceptually and institutionally integrated with implementation of SDG5 and CEDAW, both internationally and at national and local levels.

The proposition that sustainable development cannot in fact be achieved in the absence of gender equality and empowerment of women and girls, is a fundamental premise of CEDAW, albeit using different terminology from that used in the SDGs. With CEDAW, the States Parties agreed to ongoing and binding obligations to make laws, policies and take other measures to eliminate sex discrimination (both direct and indirect) and to ensure women's full development and advancement, including through the use of special measures to correct prior disadvantage in order to reach substantive equality.

The specific risk governance dimensions of CEDAW are also now set out in the CEDAW Committee's General Recommendation No. 37 on "Gender-related dimensions of disaster risk reduction in the context of climate change", (CEDAW 2018). It provides guidance for States Parties on the implementation of their obligations under CEDAW in relation to disaster risk reduction and climate change, highlighting how structural gender inequality reduces women's and girls' capacity to adapt to the negative impacts of disasters and climate change. It is not restricted to analysis of the specific law and policy frameworks on disasters, climate change and the environment, but encompasses issue that affect the broader socio-economic position of women. Not surprisingly, this includes the national frameworks for gender equality, non-discrimination, political participation and access to justice, and the specific laws and policies on rights to work and social protection, health and living standards, including the right to be free from violence. Furthermore, it emphasizes the importance of data collection and the monitoring and assessment of laws.

## 3. PRIORITIES, GOOD PRACTICES AND CHALLENGES IN INSTITUTIONALIZING GENDER EQUALITY AND WOMEN'S EMPOWERMENT IN CLIMATE, ENVIRONMENTAL AND DISASTER RISK GOVERNANCE AT NATIONAL LEVEL

The foregoing international treaties and agreements establish a range of international norms, targets, and reporting requirements. However, the development and implementation of gender-responsive institutions, laws, policies, and programs on climate, environment, disaster risk management (DRM) and sustainable development must occur at country level. This is primarily the responsibility of national and local governments, in collaboration with civil society, the private sector and technical experts and, for developing countries, with support through regional and international cooperation.

### 3.1 CLIMATE, DISASTER AND ENVIRONMENTAL LAWS AS PART OF A NATIONAL FRAMEWORK

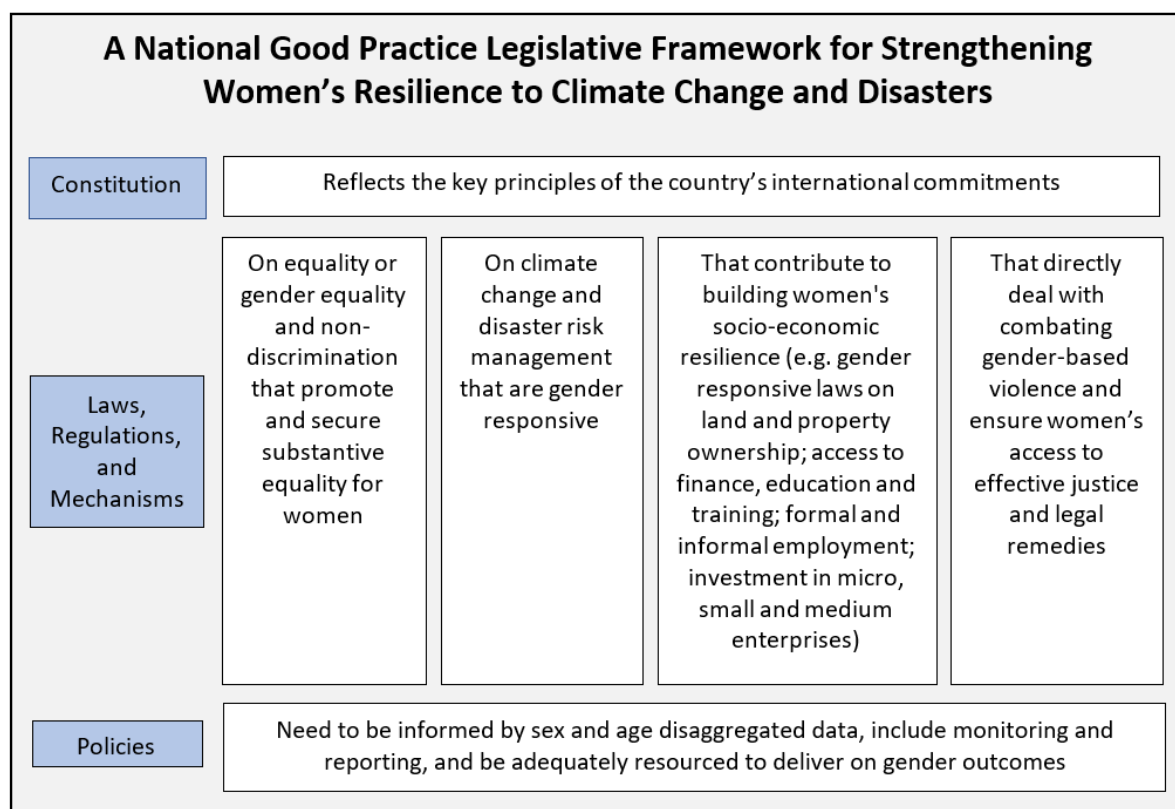
This part looks at the potential of laws and policies to institutionalize women's participation and empowerment and integrate gender-responsive approaches into climate, environmental and disaster risk governance, especially at national level. In doing so it draws on a "national framework approach" developed by Robyn Layton with the author as part of a regional project with the Asian Development Bank between 2019-2021, which looks beyond the specific laws on climate, environment and disasters and sees them as part of a national system that needs to be examined as whole to seek support for women's resilience to climate changes and disasters (ADB 2017; Layton and Picard 2021). The approach is essentially based on the understanding that wider gender inequality and marginalization of women are drivers of women's disaster and climate risk, so these need to be tackled both within the disaster and climate laws, policies, and institutions, and in wider

socio-economic and social protection spheres. However, this paper focuses on one specific aspect of the national framework approach, and that is the potential for greater connection between the gender equality frameworks and disaster and climate risk governance.

Specific laws and policies on disasters, climate change and the environment are best understood as part of the country’s national framework of laws, some of which are based on CEDAW and support gender equality in the wider socio-economic sphere. For example, the national framework for gender equality may include the constitution if it has a bill of rights with provisions relevant to women or gender, or specific laws on gender equality and non-discrimination, and/or laws that prohibit gender-based violence and sexual harassment and provide remedies. It may also include workplace laws that mandate decent work and equal pay for work of equal value, and provisions in a range of laws on equality in access to inheritance, land, property, finance, small business support, health education, public life etc., all of which support women’s resilience to shocks by reducing the gender gap in access to resources and supporting women’s agency.

Gender equality laws may also potentially fill gaps in the specific laws on climate, environment, and disasters if, for example, they include equality and non-discrimination provisions that apply to all other laws, or to all government operations. It is therefore useful to take the “national framework approach” when analyzing laws and policies relevant to GEWE in the context of disasters, climate change and environmental management laws, policies, institutions, and programs.

**Figure 1: A National Good Practice Legislative Framework**



Source: Layton and Picard (2021) Asian Development Bank (Forthcoming)

Figure 1 sets out how climate, environmental and disaster laws all come under the constitution, and are on the same level as other laws relevant to women’s resilience, as well as how these laws provide the basis for policies and implementation. Constitutional rights on gender equality apply in principle to all the laws lower in the hierarchy and to all the policies and governmental institutions authorized by them, but there are not always clear mechanisms for how they apply to other laws, or whether they can be enforced in implementation of other laws. In some national legislation this is

made specific, such as in the laws of Mongolia where, for example, the Law on Disaster Protection 2003 (Rev. 2017), Article 2 states that it includes the Constitution, so the constitutional human rights are also included in this way, but it is not set out specifically (Mongolia, n.d.).

Sometimes, laws at the same place in the hierarchy under the Constitution can also be applied to other laws if they are authorized by the Constitution. Continuing with the Mongolia example, Mongolia's Law on the Promotion of Gender Equality (LPGE) 2011 Article 2 states it includes the Constitution and international treaties ratified by Mongolia (which includes CEDAW). Additionally, it provides that "laws and other legal provisions for the public shall not weaken or worsen the gender equality norms adopted in this law" which is a form of priority over any non-compliant provisions in other laws (Mongolia, National Committee on Gender Equality 2017). Furthermore, the LPGE Article 3 states that it "applies equally to economic entities and organizations operating on the territory of Mongolia and to citizens of Mongolia, and, if an international treaty ratified by Mongolia does not provide otherwise, to all international and foreign organizations and foreign citizens and aliens operating or residing on the territory of Mongolia". It thus has a wide application to governmental and non-governmental entities and across other laws, including the Law on Disaster Protection, and the Law on Environmental Protection which do not have any gender equality provisions apart from incorporating the Constitution. There is no separate law on climate change, but by this definition the LPGE also applies to government administration, which includes the development of policies on climate change, and the engagement and promotion of civil service staff to work on all these areas.

Mongolia's LPGE has three additional features that make it a good practice example for inclusion of gender equality in the institutions and policy implementation of sectoral laws. The first is that it uses the full definitions based on CEDAW that take into account direct and indirect discrimination, formal substantive equality and special measures to correct past disadvantage (Articles 4 and 5). Secondly, it establishes gender quotas for the civil service in each sector (meaning "an absolute minimum measure of the representation of men and women in decision-making positions") (Articles 4 and 10). The third is that it requires the Government to undertake a range of measures to gather data and promote gender equality in all spheres, and an important way this has been implemented is through the development of sector gender strategies and plans that are formally approved at ministerial level. The first of these was the environment sector strategy in 2014 (Mongolia 2014, 2014–30), which faced implementation challenges but has undergone a mid-term review and has served as a for other sectors also, with now around a dozen sector gender strategies developed and under implementation (Layton and Picard 2021).

Mongolia is a good practice example, and no others have been identified that are so clearly linked with other legislation and sectors, but it shows how constitutional rights and gender equality laws can work together in a national framework to underpin gender equality in sectoral laws.

This national framework approach also leads to a practically-oriented theory of change about the role that laws and policies can play in building women's resilience to disasters, climate change and environmental risks through broader GEWE, as set out in Figure 2 (Layton and Picard 2021).

**Figure 2: Theory of Change**

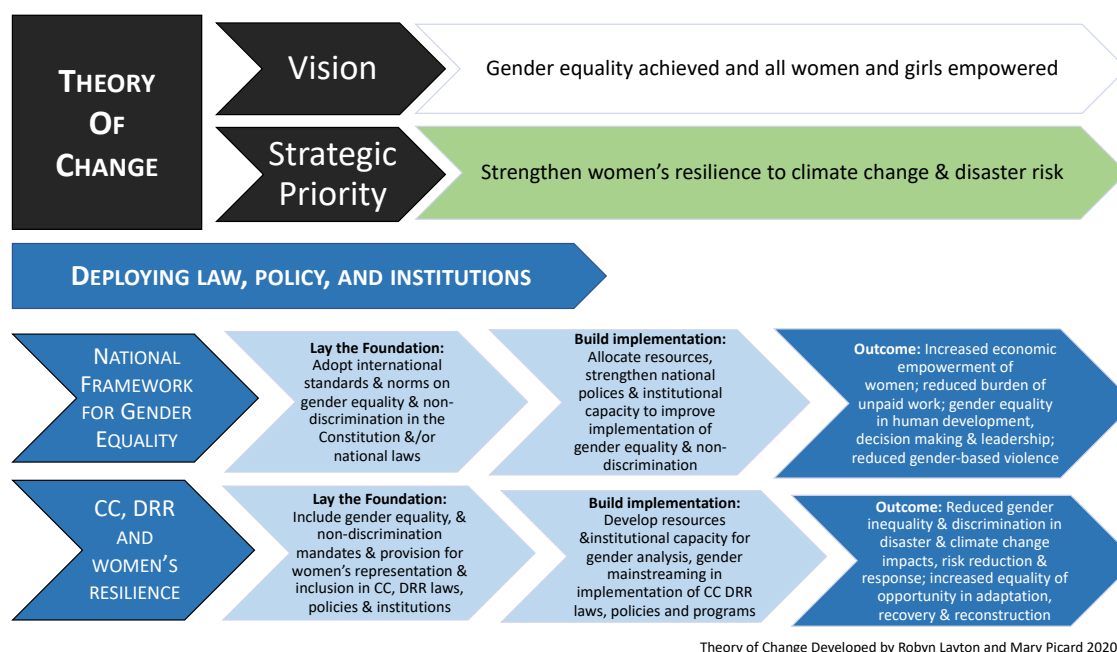


Figure 2 characterizes the theme of GEWE in disaster and climate change as a strategic priority under the overall vision of society-wide GEWE. It then sets out briefly how laws and policies can be used to lay the foundations for change, build implementation capacity to support gender-responsive programming, and produce outcomes that increase gender equality and empowerment of women and girls.

The interactions between the national framework for gender equality and laws and policies on disaster, climate change and environmental management expand the ways that GEWE provides legal underpinning for risk governance. It is not only about what is in the sectoral laws.

### 3.2 SCOPE OF CLIMATE, DISASTER AND ENVIRONMENTAL LAWS AND POLICIES CONSIDERED

Laws and policies are significant tools for all governments in managing and reducing disaster, climate change and environmental risks. In these fields of practice, laws are often used to establish specialist institutions and their mandates, as well as to set out long term policy objectives, define government responsibilities, describe how citizens and communities may participate, and often to establish budgets and reporting requirements. Policies set out shorter term and more detailed government policy agendas, strategies and plans for action, as the basis for programming. Both of these types of frameworks have an important role to play in risk governance and the extent to which GEWE is an integral part of it. Policies are shorter term, and not enforceable, but they provide more detail for implementation, while laws provide binding obligations, they are harder to change and may not keep up with all the new policy objectives related to CC and DRR and gender equality.

When discussing climate, disaster and environment laws and policies it should be noted that the way these instruments are named, their scope and which government ministries are responsible for their implementation varies between countries. For example, disaster laws may be described by a range of titles, including disaster management, disaster risk management, comprehensive disaster management, civil protection, and emergency management. Some have a broader focus on preventing and reducing risk reduction or managing disaster recovery than others. Newer laws are often more comprehensive, but the titles do not necessarily reflect the breadth of their current content as most have been amended over the years, so it is always important to look at what the

law includes. Most countries now have National DRR Strategies or Plans in line with the Sendai Framework target to ensure these are in place by 2020, and some also have local strategies or plans.

A common characteristic of disaster laws in developing economies with high levels of natural hazard risk, is that they establish permanent institutions, generally described by titles such as national disaster management office (NDMO), which may be part of the civil service or a statutory authority. The laws also commonly create high-level national disaster management committees or councils that exercise command-and-control roles during emergencies, but under normal conditions advise the government on DRR policies, procedures and budgets. Disaster laws also frequently provide for devolved responsibilities down to local level, including sub-national and local committees that mirror the national committee in composition and powers. The composition of the civil service secretariats/NDMOs, and the appointment criteria for staff and disaster management committee members, is a key focus area for attention concerning women's meaningful participation in DRR, as these institutions, and indeed the whole field of DRR, is extremely male dominated.

Climate change laws and policies are even more variable than DRM. Laws relevant to CC are not only those called "climate change" laws, as CC is often regulated within environmental laws. Some countries have chosen to regulate climate change under the main environmental management laws, rather than passing specific CC laws (Asian Development Bank 2020b; Asian Development Bank 2020a). Some have created new CC institutions and other establish centers within existing environment ministries. National CC policies and strategies are often as important as the laws, or more so, in detailing the priorities and means of implementation for CCA.

Most developing countries have National Adaptation Plans (NAPs) which are important for setting out long term objectives and framing projects and programmes for funding under the financial mechanism of the UNFCCC. All the parties to the UNFCCC also lodge National Communications to report on mitigation targets under the UNFCCC (UNFCCC 2021), and all the parties to the Paris Agreement submit Nationally Determined Contributions (NDC), which set out their efforts to reduce national emissions and adapt to the impacts of climate change (UNFCCC Secretariat 2021). The NAPs and the NDCs have effectively become focal policy documents for both developing country efforts and climate finance and technical support, and they are a good indicator of national commitments to GEWE in climate risk governance.

Environmental or related natural resource management laws also include provisions on reducing pollution, managing water catchments, forests and fisheries, preserving ecosystems and biodiversity, reducing land and soil degradation and desertification. However, it is not possible to consider this broad scope in the present paper, so one focus area is chosen, and that is inclusion of women in environmental impact assessments (EIA) that determine whether or not new development projects can proceed. EIAs are mandated under environmental laws and, depending on the project scale, the decisions may be made at national or local level. Most EIA processes provide for some form of consultation with affected communities, which can be an opportunity to ensure women's voice are heard, and some also assess proposals against climate change and disaster risk criteria. Issues and good practice examples are discussed in Part 4.

Local government mandates under the constitution and/or local government legislation are also important in determining land use, building approvals and local projects on climate change adaptation or disaster risk reduction. The degree and nature of women's involvement as elected officials and staff in local government is therefore important in ensuring gender responsive risk governance at the local level. This issue also cannot be addressed in detail in the present analysis but is highlighted in relation to local ecosystem based adaptation projects in Part 4.

### 3.3 THE CHALLENGES

Three practical challenges identified for institutionalizing GEWE in climate, environmental and disaster risk governance at national and local level are:



- 1) Under-representation of women in leadership and decision-making roles within the national and local institutions;
- 2) The frequent absence of gender equality commitments in, and gender-responsive implementation of, national laws and policies on climate, environment and disaster risk management; and
- 3) Institutional barriers that do not facilitate cross-sectoral integration between gender equality, DRR, climate change and environmental management, and development planning.

### 3.4 GENDER IN DISASTER RISK MANAGEMENT LAWS AND POLICIES

As yet there is very little publicly available or comparative data on women's representation and participation in DRM and CC institutions at national or local level, and in fact filling this data gap is one of the recommendations of this paper. It is not a simple calculation, due to the different sources of personnel involved, including the civil service across a range of possible ministries, staff of statutory authorities, appointments to cross-sectoral committees and multi-partner platforms, and local government and community levels.

With regard to DRM, the identification of these three challenges is based on an extensive body of international and comparative research on how DRM institutions are established within DRM Laws, which shows that very few make any provision for gender balance or women's participation, or have any provisions for representation of women's ministries or women's organizations, and many derive DRM leadership and committee positions from other senior roles in government which few women occupy, adding an additional filter (IFRC, UNDP, and Picard 2014; IFRC, Picard, and Bannon 2017; Picard 2017; Layton and Picard 2021).

Additionally, based on the author's observations during consultations and analysis of national DRM systems in a range of national and comparative projects over the last 15 years, the vast majority of senior national DRM officials and most technical staff are in fact male, and the sector is seen and experienced by women working in it as a masculine occupation (IFRC and Picard 2017, 56). As the former Governor of Chiba Prefecture in Japan, Akiko Domoto, remarked at a 2012 meeting of women civil society experts on DRM:

“A lot of actual work is being done by women, but not integrated into policies and the decision-making process. It's a challenge for women to be visible. In disaster risk reduction, more social issues need to be advanced, not just infrastructure related issues.” (Ferris, Petz, and Stark 2013, 81).

So far, very few disaster laws include specific principles, priorities or objectives to promote gender equality for women. Many include a priority relating to women's health needs in pregnancy, childbirth and post-natal care. The vast majority of disaster laws analyzed in a range of studies by the author and others, if they mention women at all, describe women as a vulnerable group.

National DRR policies, strategies and plans primarily implement the relevant law and are also the responsibility of a national disaster management office. But since the adoption of the Sendai Framework, with its target (E) for national and local DRR strategies and plans that implement its wider scope, there are more DRR strategies that take a broader approach to the subject matter, including other sectors and other actors such as civil society and the private sector. For example, the Lao PDR National DRR Strategy 2020-2030 (publication forthcoming 2021) takes a cross-sectoral approach that dovetails with the national socio-economic development plan, and includes an objective on gender and vulnerability, and guidance on participation of women in DRM planning, which are small but significant advances on GEWE in the context of a DRM law that does not consider gender or women other than pregnant women as a vulnerable group (Lao PDR, n.d.).

These broader national DRM policy documents have the potential to be more gender responsive, if they take their cue from the Sendai Framework regarding the inclusion of women in DRR, although

as yet there is no specific guidance to Member States on how to mainstream gender effectively into DRR strategies.

No comparative resource on gender in DRM policies was identified, but there are some good practice examples of laws or legal provisions from the above body of work which can be highlighted (Layton and Picard 2021).

The best example identified comes from the Philippines, where the Philippine Disaster Risk Reduction and Management Act, 2010 has an overall objective to “Ensure that disaster risk reduction and climate change measures are gender responsive, sensitive to indigenous knowledge systems, and respectful of human rights” (Philippines n.d., Article 2). It includes these gender equality principles, provides for specific representation of women’s agencies in its institutions at national and local level, adopts a participatory model that gives other opportunities for women’s inclusion (through civil society and the private sector), and indicates the need to investigate how and when women’s needs may differ from men.

The Disaster Management Act of Bhutan 2013 also has provisions which address representation of women on Disaster Management Committees as well as using the concept of “Affirmative Action” to address women’s special needs during disasters. It requires that “Due care shall be taken to ensure that women are adequately represented on Disaster Management Committees established under this Act” (Bhutan 2013, Article 133).

The Nepal Disaster Risk Reduction and Management Act 2017 provides that the National Council for Disaster Risk Reduction and Management is to include the women’s Minister as well as “three persons including one woman” appointed for their expertise in disaster management; and also that the Executive Committee of the National Council must also include the Secretary of the women’s ministry, as well as social welfare; and from outside Government, the Nepal Red Cross and private sector organizations, which also have the capacity to nominate women (Nepal 2017, Article 3). Added to this, in the Nepal Constitution there is a special article on the rights of women that includes the right to “access and participate in all state structures and bodies on the basis of the principle of proportional inclusion” which for women should mean 50% (Nepal 2015b, Article 38(4)).

These examples remain very small in number, and it seems likely that better integration of GEWE in DRM systems will occur most rapidly through national and local DRR strategies and plans, and through much stronger mutual engagement between DRM system institutions and the national gender equality frameworks and institutions.

### 3.5 GENDER IN CLIMATE CHANGE RELATED LAWS AND POLICIES

In relation to CC policies and systems, the above challenges are inferred from published analyses of Nationally Determined Contributions (NDCs) and National Adaptation Plans (NAPs), especially the work of the Women’s Environment and Development Organization (WEDO and Granat 2020; WEDO and Siegele 2020); and from the author’s (more limited) direct experience with national climate change and environment institutions in Southeast Asia, as well as global and regional research on gender and climate change laws and policies (ADPC iPrepare Business Facility and Picard 2017; Asian Development Bank 2020b; Layton and Picard 2021).

With regard to NDCs, there are signs of progressive improvement. A 2016 analysis by WEDO showed that 64 of the 190 NDCs analyzed included some reference to women or gender, but the overall conclusion of the analysis was that the NDCs submitted up to that time fell far short of the necessary commitments in linking gender and climate change or taking specific actions to address the issues (WEDO 2016). A further study in 2020 looked more broadly at both NDCs and “climate relevant planning, policy and measures” as an important indicator, and found that of the 168 countries’ documents studied, 51 of these countries were actively engaging in processes to integrate gender into NDCs and policies, 41 were taking some steps towards this and 101 showed no public evidence



of doing so (WEDO and Granat 2020). A more recent December 2020 policy brief on the updated or new NDCs showed that 7 of the 14 updated NDCs and all 4 of the new NDCs included substantive provisions on gender and/or women (WEDO and Siegele 2020). New NDCs have also been lodged during 2021 but primary analysis of these was beyond the scope of this paper.

Some of the good practice examples from the WEDO studies that focus on institutionalization of women's participation or gender equality are worth noting. The best example identified, comes from Nepal's NDC, which considers gender equality and social inclusion (GESI) as a cross-cutting issue and commits to a GESI and Climate Change Strategy and Action Plan and Climate Resilient Planning and Budgeting Guidelines by 2021, a strategy and action plan on gender-responsive climate-smart technologies and practices prepared and implemented by 2025 and an Action Plan for integrating GESI in achieving NDC targets by 2030 (WEDO and Siegele 2020, 8). It focuses on gender-disaggregated data, and promoting the leadership, participation and negotiation capacity of women (as well as Indigenous Peoples and youth). An important element is also that by 2030 all local governments are required to prepare and implement climate-resilient and gender-responsive adaptation plans, that include women as one of the focus groups.

Also amongst the new NDCs in 2020, Granada, the Republic of the Marshall Islands (RMI), and Suriname have included significant gender provisions. Some highlights of these include that Grenada's NDC is linked to the country's national gender equality policy framework, including its Gender Equality Policy and Action Plan; RMI applies to the NDC its 2015 National Gender Mainstreaming Policy that guides the development of laws, policies, procedures and practices to address "the needs, priorities and aspirations of all women and men and to eliminate all forms of discrimination and inequality"; and Suriname requires the use of gender impact as a criterion for assessing NDC policies and measures (WEDO and Siegele 2020, 7–9).

Of the updated NDCs in 2020, notable features include: Chile's NDC incorporating a gender approach in all policies, programmes, climate change plans and actions; Moldova's NDC sets out gender as a separate adaptation priority category with its own set of key activities, as well as integrating disaster and climate risk into its National Strategy on Ensuring Equality between Women and Men; Norway's section on planning processes refers to the 2018 Equality and Anti-Discrimination Act; and the Rwanda NDC positions gender mainstreaming as central to its sustainable development process and as a priority at all levels in the NDC (WEDO and Siegele 2020, 5–7).

By contrast, legislation related to climate change so far rarely mentions women or gender. For example, the author has been unable to identify any legislative examples that ensure women's equal and effective participation in the policy making or implementation processes on climate change. The two main global databases on climate law, (LSE Grantham Research Institute on Climate Change and the Environment n.d.; Sabin Center for Climate Change Law n.d.) and a small number of published global analyses of climate laws and policies that include environmental and energy laws (Nachmany, Byrnes, and Surminski 2019) do not use gender criteria as a key element for searching or reporting. In some cases, it is not clear whether gender is absent from reports because it was not considered, or because there is nothing to report due to a lack of gender inclusion in the laws themselves.

A recent Asian Development Bank report on "National Climate Change Legal Frameworks in Asia and the Pacific" that analyzed national climate change law and policy in 32 Asia-Pacific countries, identified a number of national climate change strategies and policies that include significant provisions on gender, but did not report any examples of climate change-related legislation that did so (Asian Development Bank 2020b). However, some initial elements of good practice laws on climate change were identified from a different study (Layton and Picard 2021).

The best prospective example of a gender responsive climate change law is the Fiji Draft Climate Change Bill 2020 which has been open for public consultation since 2019 and been revised once already. In its principles it states "there are inextricable links between gender equity, social inclusion and the Sustainable Development Goals including the pledge that no one will be left

behind, and when taking action to address climate change Fiji will respect, promote and consider the Sustainable Development Goals, gender equality and responsiveness, women's human rights and the empowerment of women..."(Fiji, n.d., Draft Section 5(i)) The same section refers to the Constitutional bill of rights, which includes gender equality. The Draft Bill also has a section on planned relocation due to climate change, in which it reiterates in section 77 (e) that relocations of at-risk communities will only occur "with the full free and prior informed consent of the communities, following inclusive and gender responsive consultation and participatory processes".

Other good practice examples of laws in operation include the Kenya Climate Change Act 2016, one of the aims of which is to "mainstream intergenerational and gender equity in all aspects of climate change responses" (Kenya, n.d., Article 3-2). It also establishes a high-level National Climate Change Council as an overarching national climate change coordination mechanism that must "approve a national gender and intergenerational responsive public education awareness strategy and implementation programme" (Article 6).

The Philippine Climate Change Act 2009 policy clause has gender mainstreaming as one of its aims, it includes the Chairperson of the main national women's organization as member of the Climate Change Commission, and gives the Commission the responsibility to mainstream climate change into all sectors, including disaster risk reduction and management (Philippines, n.d., Articles 2,3,5,9) . The Act also requires the development of a National Climate Change Action Plan that includes the "identification of differential impacts of climate change on men, women and children" and names rural women as a priority for allocation of climate change funding, including micro-credit schemes (Articles 13, 15, 18).

It appears that with regard to climate change and related environmental laws and policies, an increasing number of the policies such as the NDCs are embracing gender equality as a key factor in adaptation, while the laws are slower to move in this direction.

### 3.6 OBSERVATIONS ON INSTITUTIONALIZING GENDER EQUALITY AND WOMEN'S EMPOWERMENT IN RISK GOVERNANCE AT NATIONAL LEVEL

Overall, national law and policy frameworks for disaster and climate risk governance do not yet provide a solid basis for gender responsive programming that fulfils the rights and needs of women and girls, because so few of them include gender equality principles or ensure women's participation and empowerment in decision-making. While there are some few good practice laws and evidence of improvement at the policy level, especially for climate change, progress towards GEWE in risk governance appears to be slow. It seems most likely to be accelerated if Member States and stakeholders focus on working with the existing national frameworks and institutions for gender equality, to pursue the 'new' policy coherence agenda that includes action on gender along with action on climate change, disasters, and sustainable development.

## 4. PRIORITIES, GOOD PRACTICES AND CHALLENGES IN INSTITUTIONALIZING GENDER EQUALITY AND WOMEN'S EMPOWERMENT IN LOCAL LEVEL "GREEN" DEVELOPMENT

This part looks at local level decision-making and initiatives, from the perspective of how they can (a) integrate disaster risk governance and development in ways that enhance environmental protection and ensure a voice for women and/or (b) focus on gender transformative change that creates greater benefits for all, including eco-systems. The three themes used as examples are: (1) women's participation in local government, (2) women's participation and voice in Environmental Impact Assessments, (3) gender-responsive eco-system-based agriculture and adaptation.

## 4.1 WOMEN'S PARTICIPATION IN LOCAL GOVERNMENT

UN Women reports that, based on data from 133 countries in 2021, globally women constitute 36 per cent of elected members in local deliberative bodies; only two countries have reached 50 per cent, and an additional 18 countries have more than 40 per cent women in local government (“Facts and Figures: Women’s Leadership and Political Participation” 2021). Given the degree of responsibility that local governments have for physical planning, land use, urban planning and social services and infrastructure projects, all of which impact communities’ disaster and climate resilience, gender parity in local government continues to be a priority focus for achieving GEWE in risk-informed sustainable development. Mayors also frequently have lead roles in local disaster response under DRM law and policies, so these roles are also part of the DRM system.

Law and policy frameworks can be an important impetus for achieving more women in local government. For example, India’s Constitution (Clause (3) of Article 243D) ensures participation of women in Panchayati Raj Institutions (local government) by mandating not less than one-third reservation for women out of total number of seats to be filled by direct election and number of offices of chairpersons of Panchayats; and in 2020 46% of these local elected positions were held by women (India, Ministry of Panchayati Raj 2020). Furthermore, women may bring a different focus to these roles that benefits everyone. For example, research on *panchayats* in India discovered that the number of drinking water projects in areas with women-led councils was 62 per cent higher than in those with men-led councils (Chattopadhyay and Duflo 2004).

Local women’s organizations and other community civil society organizations are also an important influence at local level, as they often have more continuity than local governments that change with the electoral cycles. At the same time, they also provide opportunities for women to build their leaderships skills to move into local government.

## 4.2 WOMEN'S PARTICIPATION AND VOICE IN ENVIRONMENTAL IMPACT ASSESSMENT

In principle, environmental assessments are an important tool for governments to protect the environment and the interests of affected communities while also approving medium to large developments and infrastructure projects that benefit development. The process is normally guided by environmental laws and regulations, which recognize environmental protection as a public good, and sometimes but not always include impacts on the social environment, and the potential impacts on and from developments of disaster and climate change risks. Specific environmental impact assessments (EIAs) are generally precursors to the approval of significant projects by national or local governments, and the outcomes can have far-reaching impacts (positive and negative) on the livelihoods and resilience of nearby communities in the face of climate change and disasters (which may be positive, such as providing jobs and/or negative such as environmental pollution or reduced access to land and water resources).

A broad consensus reflected in many EIA regulations is that good practice environmental assessment requires stakeholder participation as an essential element. However, the meaning of participation can range from simply providing information to stakeholders, to a quasi-judicial process in which stakeholders can formally assess, submit evidence, and cross-examine witnesses (Joseph, Gunton, and Rutherford 2015, 248). The degree of empowerment for communities involved in such participation depends on the formal rights conferred by the relevant law or procedure and the whether the procedures are conducted in a way that enables participants to engage meaningfully and to have a real voice in determining outcomes.

The scope and conduct of EIAs is an acutely important gender issue, especially for women, whose reduced access to land and resources compared with men, and gendered roles in family and paid work, may mean they face different livelihood impacts or have specific concerns about societal and family health impacts. If affected communities are treated as undiversified groups that speak with

one voice, women in many contexts may not have sufficient presence, voice and agency in such processes to have their concerns heard and acted on (Singh and Wankhede 2018).

Done well, EIA processes can provide an opportunity to address gender issues at an early stage of project planning and explore means to reduce adverse impacts on women (Singh and Wankhede 2018, 7). Although the process of EIA does include public hearings and consultations, at times these are not very meaningful due to factors such as lack of information, absence of gender responsive processes including male-dominated spaces, stereotypes attributed to women and, in some contexts, illiteracy of the local population especially women (Singh and Wankhede 2018, 9).

A range of different types of projects can have different impacts. Some major infrastructure projects such as dams and mines have increased gender disparities by imposing a disproportionate share of the social costs on women without giving them a fair share of the benefits, including compensation for loss of land and housing (Singh and Wankhede 2018, 10–13). This also highlights one of the limitations of EIAs, because they concern a specific proposal that can be modified, accepted or rejected, when at times an entirely alternative approach may be more adaptive and beneficial for the local community in the face of climate change, such as “green infrastructure” or ecosystem-based adaptation as discussed below. They may also be beneficial, such as giving access to water for irrigation, transport routes to markets, or direct employment. But such forms of development can be maladaptive for the community as a whole, including women, and may also have differential impacts on women and men that should be identified through prior gender analysis (Selby and Daoust 2021).

However, within the limitations of EIA as a participatory model, there are some good practice laws and regulations (Layton and Picard 2021). The best example identified, because it includes climate change, disasters and gender, is the Lao PDR Law on Environmental Protection, 2012 and the Decree on Environmental Impact Assessments 2019 (EIA Decree; Lao People’s Democratic Republic, n.d.; Lao People’s Democratic Republic, n.d.).

The Lao PDR law itself is unusual because it refers to both natural hazards and climate change risks as one of the bases for EIAs, which is good practice from the climate resilience perspective. The law does not refer to women or gender, but it has provisions that recognize socio-economic considerations and provide for consultations as one of its underlying “Principles of Environmental Protection” (Lao PDR 2012). However, the new 2019 EIA Decree includes provisions on participatory consultations and assessments that mainstream gender, such as the requirement for project owners to collect baseline information on gender- and ethnicity-related issues and conduct assessments with management and monitoring plans relating to gender and ethnicity (Lao People’s Democratic Republic, n.d., Articles 13, 37, 36). There also EIA Guidelines which provide guidance on gender, including a requirement for consultation with the Lao Women’s Union and consideration of factors such as the livelihoods of both women and men (Lao PDR 2012)

The Lao PDR EIA Decree requires the collection of information and conduct of assessments relating to gender but does not take the next step to use such assessments for positive measures to equalize women’s participation or improve their resilience. Although the Lao PDR EIA Decree does not specify that community consultations must seek the views of women, the stipulations for gender data and assessments essentially make this necessary to fulfil the procedural requirements.

Although the nature of EIAs is limited to the scope of a particular development, they can provide a voice for communities, and for women as a group, in local development decisions that impact climate and disaster resilience. EIA project and local area assessments also occur in specific environments with specific populations and have the potential to examine closely any differential socio-economic impacts of climate change on men and women locally, which can also inform law and policy revisions.

### 4.3 GENDER-RESPONSIVE ECO-SYSTEM-BASED AGRICULTURE AND ADAPTATION

Ecosystem-based agriculture and “green infrastructure” are two forms of adaptation to disaster and climate change risk that are undertaken at local government and community level. They are integrated approaches to risk governance and development that can reduce negative impacts and produce new and positive change to support community resilience, especially for rural communities in agrarian economies. If well designed with GEWE objectives, such initiatives combine women’s participation with climate and disaster risk reduction, preserve biodiversity and ecosystems and sustain and build women’s livelihoods that utilize environmental services for family nutrition and market products.

Many projects of this nature are undertaken through international development assistance, including climate change funding under the UNFCCC financial mechanism, such as the Green Climate Fund (GCF) which applies strict gender mainstreaming criteria for project design (GCF 2017). This is an important form of capacity building as well as an incentive towards gender-responsive climate change adaptation. Successful projects done through international cooperation can often provide working models for local governments and communities, as well as having an immediate and appreciable benefit to the communities involved. But, as with all forms of development assistance, there can also be issues of continuity and sustainability of such approaches once a project has concluded. So, one important aspect to look at is how well projects are integrated with local and community governance, or whether the alternate structures they establish can continue within the resources, skills and knowledge of local participants. While this is a general issue, it is particularly pertinent to women-focused projects that have transformed gender relations towards greater equality if those gains are to be maintained.

#### ECO-SYSTEM-BASED AGRICULTURE

Eco-system-based agriculture is one aspect of eco-system-based adaption. When it takes a gender-responsive approach it addresses the different constraints faced by men and women and recognizes gender specific capabilities in a given context; it aims to reduce gender inequalities and ensure equal benefits from the interventions and practices, thus achieving more sustainable and equitable results (FAO and CARE 2019). Some successful examples of this approach are:

- In Peru, a 2018 project focused on both agrobiodiversity and indigenous women, to create a “Potato Park” of native potato varieties and other native Andean crops (Hannah Reid, Argumedo, and Swiderska, 2018). This helped to preserve indigenous biocultural heritage, while the resilient potato varieties reduced the risk of crop failure from frost, drought and disease, which improved food security and adaptive capacity and reduced vulnerability. It drew on women’s knowledge and practices as traditional seed guardians and led to higher incomes, especially for the women in micro-enterprises, through potato sales and tourism.
- A project in Mali and Niger focused on collective access to land for women, recognizing that lack of access to land is one of the structural inequalities that affect women’s agricultural livelihoods and status. Women played a significant role in and were paid labor in increasing agricultural production, primarily by rehabilitation of water harvesting systems and learning new agricultural practices. In Niger, a group of women from a rural community located on the outskirts of the capital, stated: “Now that we produce and sell vegetables, our husbands consult us before making decisions, and even the Village Head comes to take our opinion. Earlier, we were just here, full of dust, but now, we count.” (Pionetti 2016)
- In Zimbabwe, erratic rainfall and spells of drought triggered a livelihoods and food security programme which trained women in new sustainable farming techniques. The women experimented in the use of “zai” pits to water and fertilize individual plants with positive outcomes. The women became change agents, as the project supported them to take on

decision-making positions where they were under-represented and equipped them with leadership and negotiation skills so that they can contribute meaningfully. The three-pronged approach, combined provision of technical assistance, credit line and risk sharing mechanisms and the programme mentored and mobilized over 4 000 groups (FAO and CARE 2019).

## “GREEN” INFRASTRUCTURE

“Green” infrastructure, describes ecosystem-based adaptation as a means to protect, restore, and enhance ecosystem services to reduce climate change and disaster risks and impacts and improve the resilience of people. Some of the most common forms of this are reintroduction of mangroves to protect coastal areas from sea storms and erosion, replanting trees to protect water catchments and prevent erosion and landslides and replanting of freshwater vegetation in waterways to provide natural water cleaning and reduce erosion and the impacts of seasonal floods. These may be an alternative to structural solutions such as seawalls, levees and artificial waterways (“grey” infrastructure) or they may be combined to form “grey-green” infrastructure.

Green infrastructure or nature-based solutions are generally a much less costly option that communities can implement with few additional resources, while also enhancing the ecosystem including maintaining biodiversity. But they may not always protect existing key assets from floods or storms or provide continuity of water supply during dry seasons or droughts. From a gender perspective, one of the important questions to assess is whether the infrastructure choices will have different impacts on the social structures and livelihoods of women and men (or other groups within the community), and whether the cost-benefit analysis takes into account gender-equitable sharing of benefits or compensation for losses, as well as the longer-term costs to the eco-system itself and the services it will provide to women and men in the future.

Some successful examples of this approach are:

- In Tanzania, community-based mangrove restoration was undertaken in the Rufiji Delta. A key characteristic of the project is that it was done under a government sanctioned project through the Vice President’s Office–Division of Environment. During the project, village leaders facilitate selection of mangrove planting groups and women are given a priority for this paid work (collecting seedlings, replanting, weeding). Through this arrangement, between 2014 - 2016 about 1000 ha of mangroves were replanted in the delta. Importantly, village regulations now require that women comprise at least 40 percent of the village council committees for natural resource management, and this will be maintained and preferably upscaled in project operations (Kairo and Mangora 2020).
- A project in Senegal’s Saloum Delta was partly directed to reducing impacts from drought that affected the availability of fresh water and led to increased salinity in water and soil through mangrove restoration. But the initial analysis identified systemic gender inequalities in the mangrove restoration and fisheries sector, with policies and practices that were increasingly disadvantaging women, for example by prioritizing urban and export markets over local consumption. A total of 4,800 women from seven villages in the delta received training in public speaking, leadership, and advocacy. This has enabled them to develop skills that they have applied to defend their rights and ancestral knowledge of sustainable fishing practices. It has also led to better representation of women in the governance of the fisheries sector and restoration of mangroves, both in terms of their numbers and their capacity to articulate their needs and priorities (GiZ 2021). It thus includes institutional changes in the way women participate in these industry governance mechanisms.
- In Cambodia, the Chambok community-based ecotourism site, in Kampong Speu province has managed to reduce deforestation and other environmentally destructive practices and protects around 3,400 hectares of community forest (UN Women, 2020). Some women were able to take

up leadership roles and participate in the meetings of community-based ecotourism committee. Chambok community-based ecotourism has thus created community ownership while also contributing to women's empowerment and community forest protection, which can help stabilize the climate (Pross et al. 2020).

## CAPACITY BUILDING OF RURAL WOMEN IN ECO-SYSTEM-BASED ADAPTATION

A number of eco-system-based agriculture projects primarily work through empowering women as leaders with tailored capacity development. For example:

- In Rajasthan, India, 40 rural women leaders (4elected and to-be elected representatives) were trained to tackle water scarcity. One participant stated: "The training built my knowledge of water issues, understanding of available government schemes and initiatives to address water concerns. It also helped me bring about a major shift in the mindset of the villagers when I explained to them how climate change will be making water a very scarce resource in future. I was able to use my powers as an elected representative to address many water issues within our community."(Pross et al. 2020)
- In the State of Odisha, India, a project targeted 49 panchayats (village local self - government bodies) and 20 urban slums on the eastern coast facing the Bay of Bengal, which is known to be a "breeding ground" for tropical cyclones. In the project, 70 women in the villages undertook capacity building, and they were supported to join village-level committees. The women could put became confident enough to take an active part in local decision-making processes and demand their rights and entitlements (UNISDR 2015b).
- In the Bolivian high-altitude plains, are a harsh, cold and arid climate for agriculture, traditional agricultural and climatic knowledge was consolidated in groups of yapuchiris who were supported to sell their technological and financial services to local farmers. This resulted in significant reduction of crop losses from drought, hail, frost and flooding and has also stabilized market access for local crops. Female yapuchiris have also taken a specific leading role in negotiating long-term market access for local produce. The inclusion of women's expertise in the yapuchiri system has been vital for transferring agricultural success into stable livelihoods, through women's traditional skills and roles in crop and seed storage and in accessing markets. The female yapuchiris are also taking an active role in adaptive risk management and in monitoring bioindicators of climate- and weather-related hazards ("Training Module 2: Gender, Climate Change Adaptation and Disaster Risk Reduction" 2016).

This sample of successful ecosystem-based projects illustrate the range of possibilities for gender-responsive projects and innovation at local level that address livelihoods, disaster and climate risk and GEWE - especially through capacity building for women in advocacy and leadership roles. Some of them institutionalize women's participation in local or industry governance structures, and regulations, and this appears likely to give them more continuity. If local government capacity can also be further developed to initiate and lead such projects, for example using guidance from FAO (FAO 2016), these types of projects have great potential to impact GEWE and reduce poverty in rural communities.

### 4.4 OBSERVATIONS ON INSTITUTIONALIZING GENDER EQUALITY AND WOMEN'S EMPOWERMENT IN LOCAL LEVEL "GREEN" DEVELOPMENT

Increasing women's engagement in local government, local development approval processes through EIAs, and eco-system-based adaptation projects that improve agricultural production and reduce climate and disaster risk, can all have significant impacts gender equality and empowerment for women and girls in local level decision-making and reduction of rural poverty.



## 5. CONCLUSIONS AND RECOMMENDATIONS

The underlying message of this paper is that there is a need to redefine the problem, to increase understanding that the underlying cause of worse outcomes for women and girls in the impacts of disasters, climate change and environmental degradation is structural gender inequality, not any inherent vulnerability of women. It has focused on how to address gender unequal outcomes by addressing structural gender inequality as an underlying driver of risk, especially by empowering women through increased presence, voice, agency, and resources in the policy-making process and implementing institutions. Without such a change in orientation, truly gender-responsive laws, policies and programmes on disasters, climate change and the environment will remain rare, gender commitments will remain aspirational (and sometimes unimplementable), the national gender equality laws and institutions will likely remain outside risk governance, and there will continue to be a lack of data, capacity, and resources to implement gender responsive programmes at national and community levels.

Such a major pivot in how gender issues are addressed will clearly not be achieved overnight, and the approach of the paper has been to explore a number of practical ways to move incrementally in this direction. What makes this different from some current efforts to promote gender mainstreaming is that the end goal is clear. It is substantive gender equality between women and men and empowerment of women in the framing and implementation of risk governance to the point where women from a whole range of social backgrounds exercise equal power, authority and influence with men. It places gender equality and empowerment for women and girls as a central pillar of risk governance, not as an after-thought or an add-on after the framework is already set. The goal is fundamental system change, transformative change, which is no more, and no less, than the commitment made by Member States in Sustainable Development Goal 5.

The following recommendations for Member States and United Nations agencies focus on the law and policy frameworks that govern priorities and women's participation in climate, disaster and environmental risk governance. These are emphasized as a practical way forward because they provide the mandates and resources for gender-responsive programming; they are the 'gender equality infrastructure' needed to move from aspirational goals and targets to practical implementation at national and local levels.

### **1. Include gender equality and non-discrimination as policy objectives in climate, environmental and disaster risk management laws, policies, and programmes**

It is recommended that Member States review legislation and national policies on climate change, disaster risk and environmental management and revise them as needed to provide clear mandates for the policy objectives of gender equality and non-discrimination in both institutional participation and programming outcomes. This may be done through all the following mechanisms:

- a. Clear cross-referencing to constitutional rights and international treaty obligations for substantive gender equality and participation for women and men that align with CEDAW; and/or
- b. Clear cross-referencing to specific national laws promoting gender equality and prohibiting sex discrimination (direct and indirect); and/or
- c. Clauses promoting gender equality (substantive equality, including authorization of special measures to correct prior disadvantage), prohibiting sex discrimination (direct and indirect) and promoting meaningful participation for women and gender-responsive programming within the climate, environmental and disaster laws and policies:
  - i. At the level of principles and objectives;
  - ii. As part of the guidance for policy and programme development, authorizing the use of gender analysis and requiring gender mainstreaming; and



- iii. As part of the mechanisms of budget allocation, monitoring, reporting and evaluation.

All three of these mechanisms are recommended. The first two may require minor amendments to existing laws or policies while the third element may require more substantive review of existing laws, policies or administrative procedures. All need to be backed by capacity building on what they mean in practice, including how to mainstream gender effectively and practically into programmes and projects.

## **2. Institutionalize representation and meaningful participation of women and their organizations in climate, environmental and disaster risk governance institutions**

While recognizing that gender parity in climate, environmental and disaster risk governance institutions does not guarantee gender equality and empowerment for women and girls, or indeed gender responsive programming, the participation of a critical mass of women in staffing, leadership and governing bodies is a very significant enabler for this to occur. This was identified at the first Beijing Conference, but the mechanisms to achieve it have continued to be a challenge. It has not been an area of sufficient focus so far in the international frameworks for climate, disaster and environmental management, which do not suggest mechanisms for how to achieve SDG5 and the CEDAW obligations in this context; and ultimately it is the responsibility of each Member State to implement. It is recommended that Member States and United Nations agencies make this a significant priority as an area of research and analysis, advocacy and change in relevant laws, policies and institutional structures, and that they:

- a. Undertake a series of national and comparative qualitative and quantitative analyses of how women in general, women's ministries and women's organizations actually participate in staffing, governance and elected roles in the institutions that manage climate, environmental and disaster risk. The initial focus could be on national institutions, but local governance is also a critical area for research, as it is at this level that risk governance and development decisions are more integrated into one mandate for effective local governance. These studies would aim to provide a baseline in each country and globally to clarify the gender gap for women in climate, environmental and disaster risk governance, and identify institutional and structural barriers to women's meaningful participation in each context;
- b. At the same time, review legislation and national policies on climate change, disaster risk management and environmental management, and related civil service recruitment and promotion criteria, to implement immediately standard statutory requirements that:
  - i. All national and local advisory committees, councils or platforms for climate change, disaster risk management and environmental management include the women's ministry and at least one non-governmental women's organization;
  - ii. All governing bodies, elected offices, expert bodies and professional staffing roles in climate, environmental and disaster risk governance institutions are to have the goal of gender parity and in the meantime follow the "two-thirds gender rule" for membership. This would mean that none of these groups could be made up of more than two-thirds (or less than one-third) of either women or men. This would also need implementation mechanisms, to include screening, reporting and monitoring mechanisms, transitional provisions and capacity for exceptions based on rigorous criteria, as well as positive capacity building for women in contexts where there are not yet sufficient numbers qualified due to their historical exclusion from these roles;
- c. Establish standardized statistical collection and analysis to provide continuing data on progress regarding women's institutional participation in climate, environmental and disaster risk governance, which can eventually be used for international benchmarking. Some of this data is likely to be available through tailored analyses of data provided by Member States to the ILO, IPU and UN Women on gender equality in public life and decision-making related to (i) women's

share of government ministerial positions, (ii) proportion of seats held by women in national parliaments and local governments, and (iii) proportion of women in managerial positions, as set out in the United Nations Minimum Set of Gender Indicators (Inter-agency and Expert Group on Gender Statistics 2019, Ind. 43-45). Hence, such reporting could be done as an add-on to existing SDG, CEDAW and ILO reporting, and should not require the establishment of a new parallel system of sex-disaggregated data collection; and

- d. Use the qualitative and quantitative indicators arising from the foregoing in laws and policies to measure and monitor gender equality and empowerment for women in institutional participation. For example, these can be part of the targets and indicators in national and local DRR strategies, national climate change adaptation plans and nationally determined contributions under the Paris Agreement/UNFCCC, as well as in national policies and programmes for green and/or sustainable development. These should be consistent with the national gender strategy and progress could be co-monitored by the women's ministries and the ministries that govern climate change, disaster risk management and environmental management.

### **3. Measure the impacts of programming on gender equality and women's empowerment**

While a range of tools for monitoring, evaluation and assessment of gender programming outcomes are in use or under development, many of them are agency-specific or context-specific, and it appears that impact assessments are much less common than measuring processes and project outputs (United Nations Joint Study 2021 Annex 5 surveys). The recent work done on defining more clearly what we mean by gender equality and women's empowerment (van Eerdewijk and Wong 2017), and on measuring the impacts of humanitarian programming that aims to improve it (Goulart et al. 2021), offer scope for more rigorous measurement of gender programming in climate change, disaster and environmental risk governance. This would improve the feedback information to show what is working and what is not, and so to adjust policies, programming, resources and implementation capacity to be more effective in improving gender equality and women's empowerment. It is recommended that United Nations agencies work with Member States and experts in this field to further develop streamlined and practical methods to qualitatively measure the impacts of international cooperation, national and local gender-responsive programming in risk governance.

### **4. Embrace the "new" policy coherence: gender equality integrated with climate, disaster, environmental and development policy**

The sustainable development goals underline the importance of gender equality and empowerment for all women and girls as a precursor to sustainable development, and this paper has reiterated the importance of implementing SDG5 within climate, disaster and environmental risk governance for the same reasons. Another way to describe it is that "policy coherence", as a way of thinking about and achieving equitable and risk-informed sustainable development, must include gender equality.

At a practical level, this requires mechanisms to increase engagement between, on the one hand, women's ministries, women's organizations and gender experts and, on the other hand, climate change, disaster and environmental ministries, organizations and experts. In addition to the recommendation above concerning representation of women's ministries and organizations in the climate change, disaster and environmental policy and programming institutions, it is recommended that Member States and United Nations agencies:

- a. Establish ongoing mechanisms for women's ministries to be routinely involved from the outset in all key national policy development processes for green and/or sustainable development, climate change, disaster risk management and environmental management;
- b. Support the effective participation of women's ministries through targeted training, capacity building, and resourcing to ensure they have the technical skills and knowledge in climate

change policy, disaster risk reduction and development planning to lead gender responsive approaches;

- c. Recognize and formalize non-governmental “Women and Gender” constituencies within countries as key stakeholders in the above national policy development processes, including women’s civil society, academic, technical and private sector organizations; and
- d. Develop and apply qualitative and quantitative criteria and indicators to ensure that all national policies and programmes include gender equality criteria, advance women’s empowerment, and effectively mainstream these concepts into programme planning, implementation, monitoring and evaluation.

#### **5. Focus on women’s empowerment and capacity development in local and community governance mechanisms and facilitation of gender-responsive eco-system-based approaches to local development**

Local development approval processes and eco-system-based adaptation projects (e.g. climate-smart agriculture, “green” infrastructure development and other eco-system-based adaptation) and associated capacity development for women and their organizations at community level are important mechanisms to pursue gender equality and empowerment for women and girls at the local level. It is recommended that Member States and United Nations agencies focus on local government capacity and planning to integrate such models into local climate, disaster and environmental risk governance through:

- a. Reviewing procedures and criteria for environmental impact assessments to include gender analysis and gender-responsive consultation processes to ensure gender differences in project impacts are considered and women in stakeholder communities have a voice;
- b. Increasing women’s participation in local government and building capacity in rural local authorities to develop and implement gender-responsive eco-system-based adaptation projects with local communities; and
- c. Engaging with women’s organizations and other relevant civil society and educational organizations at local level to develop women’s leadership skills and technical knowledge of climate change, environmental management and disaster risk reduction.

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