Women and Climate Change

The Status of Gender Equality and Women's Empowerment in OIC Member States

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WDO

Women Development Organization
l'Organisation pour Le Developpement del la femme
منظمة تنمية المرأة

"WDO hand in hand with member states, governments and international organizations will build a sustainable empowered future for our girls and women. Only when we secure their future, we can say we achieved our goals."

WDO First Executive Director,
Dr. Afnan Alshauiby,
March 2023, UNHQ, New York.

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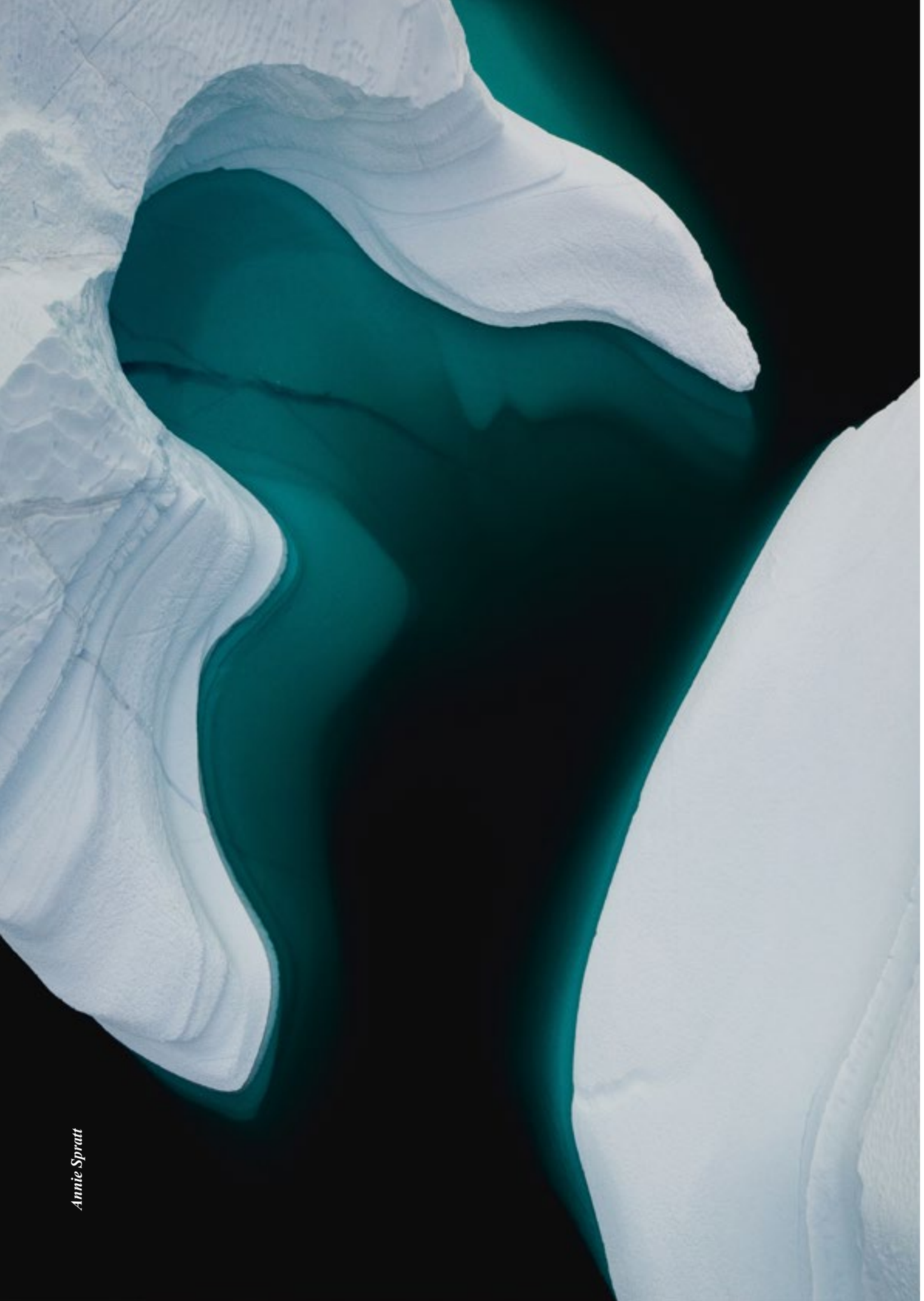


Annie Spratt

Acronyms

ACI	Advanced Chemicals Industries Ltd
AMR	Adult Mortality Rate
ARI	Acute Respiratory Infection
AYCM	Arab Youth Climate Movement
BBG	Bangladesh Border Guard
BDRCS	Bangladesh Red Crescent Society
BMD	The Bangladesh Meteorological Department
BoB	Bay of Bengal
BSF	Border Security Force (India)
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CEED	Climate, Environment, and Energy and DDR
CLAC	Climate Landscape Analysis for Children
COP	Conference of the Parties
CPP	Cyclone Preparedness Program
CRC	Convention on the Rights of the Child
CSW	Commission on the Status of Women
DPHE	Department of Public Health Engineering
DRR	Disaster Risk Reduction
EC	European Commission
ECRP	Emergency Crisis Response Project
ESG	Environmental, Social, and Governance risk
EU	European Union

FAO	Food and Agriculture Organization of the United Nations
FGM	Female Genital Mutilation
GBV	Gender-based violence
GCC	Gulf Co-operation Council
GCM	Global Compact on Safe, Orderly, and Regular Migration
GDP	Gross Domestic Product
Gender CC	Women for Climate Justice
GERD	Grand Ethiopian Renaissance Dam
GFDDR	Global Facility for Disaster Reduction and Recovery
GGGI	Global Gender Gap Index
GHG	Green House Gas
GII	Gender Inequality Index
GIS	Geo-Information Science
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPI	Gender Parity Index
GTZ	German Agency for Technical Cooperation
HD	Human Development
HAI	Human Assets Index
HDI	Human Development Index
IASC	Inter-Agency Standing Committee Independent Anti-Slavery Commissioner
ICAT	Interagency Coordination Group Against Trafficking in Persons
ICPD	International Conference on Population and Development
ICRC	International Committee of the Red Cross
IDA	International Development Association

IDMC	Internal Displacement Monitoring Centre
IDP	Internally Displaced Person
IFC	International Finance Corporation
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labour Organization
ILOSTAT	International Labour Organization Statistics
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
IPV	Intimate Partner Violence
IRIN	Integrated Regional Information Networks
KSA	Kingdom of Saudi Arabia
LEB	Life Expectancy at Birth
MAR	Managed Aquifer Recharge
MDGs	Millennium Development Goals
MENA	Middle East and North Africa
MICS	Multiple Indicator Cluster Survey
MMR	Maternal Mortality Ratio
NDCs	Nationally Determined Contributions
ND-GAIN	Notre Dame Global Adaptation Initiative
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the High Commissioner of Human Rights
OIC	Organisation of Islamic Cooperation
OIC-SHPA	OIC Strategic Health Programme of Action
OPAAW	Plan of Action for the Advancement of Women

OR	Odds Ratio
PWDs	Persons with Disabilities
PWP	Public Works Project
QMUL	Queen Mary University London
RCCC	Red Cross Climate Center
RCP	Representative Concentration Pathways
RR	Relative Risk
SDGs	Sustainable Development Goals
SFD	Social Fund for Development
SFDRR	Sendai Framework for Disaster Risk Reduction
SGBV	Sexual Gender-based Violence
SRHRR	Sexual and Reproductive health and Reproductive rights
SLR	Sea Level Rise
SOM	Smuggling of Migrants
TC	Tropical Cyclone
TFPM	Task Force on Population Movement
TIP	Trafficking in Persons
UAE	United Arab Emirates
UN	United Nations
UN OCHA	The United Nations Office for the Coordination of Humanitarian Affairs
UN WOMEN	The United Nations Entity for Gender Equality and the Empowerment of Women
UNCED	United Nations Conference on Environment and Development
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nation Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFPA	United Nations Population Fund
UNGA	UN General Assembly
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNISDR	The United Nations International Strategy for Disaster Reduction
UNODC	United Nations Office on Drugs and Crime
UNSCEB	UN System Chief Executive Board for Coordination
USAID	United States Agency for International Development
VAWG	Violence Against Women and Girls
WASH	Water, Sanitation, and Hygiene
WDO	Women Development Organization
WECF	Women Engage for a Common Future
WHO	World Health Organization
WIN	Women and Water Diplomacy in the Nile Network
WiSER	Women in Sustainability, Environment and Renewable Energy Initiative
WMO	World Meteorological Organization
WWUG	Women Water User Group

Matt Palmer

Abstract

The WDO will be launching periodic Flagship Reports highlighting issues that affect women and girls in the OIC Region. Periodically, the report will focus on a specific priority thematic area that either stems from expressed needs of our member states or is in line with global trends. The main objective of these reports is to generate comprehensive data, raise awareness and propose policy recommendations to Member States on the issue under discussion.

This first edition of the flagship report under the theme “Women and Climate Change” recognizes that climate and environmental crisis is not gender neutral and has differentiated impacts on men, women, and children. The report explores the intersection, connectivity, and nexus between climate change and an increase in structural vulnerabilities of women and girls in different aspects such as food security, education, water scarcity, access to health services, migration, abuse, early marriages, exploitation, trafficking, forced labour, Gender Based Violence and other forms of physical dangers.

Considering the novelty of the organization, the research methodology was a participatory approach, and the report is a sum of efforts from partner UN Specialized agencies and OIC general secretariat whom all contributed with standalone chapters. Each chapter presents first-hand evidence through context-specific case studies within the different geographies of the OIC region in addition to examining the international frameworks. Each chapter provides substantive recommendations on how to enhance women’s roles in mitigating, building resilience, policy-making, and sustainably reducing women’s vulnerabilities to climate-related events.

The major findings of this report highlight that, Climate Change compounds pre-existing inequalities and numerous challenges already faced by women and girls in the political, social, and economic spheres. This situation consolidates poverty cycles, thwarts their socioeconomic and political inclusion, deprives them of their fundamental rights, and retards advancement of their livelihoods. In addition, the report also highlights that women and girls have not only been passive victims but are and can also be at the forefront of global, regional, and national advocacy processes and community-based initiatives aimed at building their resilience and adaptation capacities.

The WDO therefore through this report is calling the attention of OIC member states that, while the effects of climate change are felt by everyone across the spectrum, there exist differential impacts on women and girls, hence developing and implementing more gender climate-sensitive policies is crucial in sustainably addressing climate change issues and ensuring climate justice for all.

Introduction

Background on The Status of Women and Girls in the OIC Member States

This background is composed of a first part that highlights the efforts of the OIC in advancing the status of women and girls in its member states. While the second part will provide a brief on the progress achieved in the areas of: women's participation in decision-making, education, health, economic status, social protection, and protection of women against violence.

WDO Photo Bank 2023

Ghaly Wedinly

Setting The Context

The last decades within the OIC[1] member states have witnessed progress in the development and advancement of women and girls' issues as presented in OIC progress reports on the status of women and girls, highlighting noticeable progress in women's education, economic empowerment, health, elimination of violence against women and harmful practices, and participation in decision-making.

The OIC believes that sustainable development and peace cannot be achieved without ensuring respect for international, regional, and national commitments, including obligations to promote and protect women's human rights as stipulated in the Beijing Declaration and Platform for Action, the Woman's World Conference and the 23rd Session of the General Assembly entitled «Women 2000: Gender Equality, Development and Peace for the Twenty-first Century», and commitment to the provisions of the United Nations Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and other relevant international frameworks.The Organization has adopted several institutional policies and measures in relation to empowering women and advancing their status such as launching a Ministerial Conference on Women, establishing OIC Women Consultative Council, the OIC Prize for Women's Achievements, and adopting several resolutions addressing Women and girls' needs in the educational, cultural, scientific, social, economic and political fields in alignment with Islamic values.

In addition, the organization adopted the OIC's "Plan of Action" for the Advancement of Women (OPAAW) during the Sixth Session of the second Ministerial Conference on Women held in Cairo, Egypt 2008, to respond to the enormous challenges faced by women and girls in its member states. This is a crucial instrument for the advancement of women as it represents a revolutionary vision of women's rights for the Member States of the Organisation of Islamic Cooperation (OIC).

The Plan of Action is focused on nine priorities aimed at improving and empowering women and girls; related to Decision-making participation, Education, Health, Economic Empowerment, Social Protection, Protection of Women from Violence, Women in Crisis Situations, Women in Disasters, and Women in armed conflict.

In terms of the implementation of OPAAW, it was revised in 2016 to be in line with the UN Sustainable Development Agenda and the OIC Program of Action 2025, and guidelines for preparing national progress reports on the implementation of the plan had been adopted. Moreover, the establishment of Women Development Organization (WDO) in 2020, shows the continuous commitment of the OIC towards developing and strengthening the role of women in its Member States. The WDO is a specialized institution aimed at empowering, integrating, and supporting women and girls in the political, social, educational, cultural, and economic fields in all OIC Member States. There are four priority thematic areas that are of interest to the current and potential member states on which WDO's work is anchored on. These thematic areas are: (1) elimination of all forms of violence and harmful practices against women and girls; (2) promotion of women's economic empowerment and financial inclusion; (3) the role of women-inclusive societies.

1.The Organisation of Islamic Cooperation (OIC) is the second largest Organisation after the United Nations with a membership of 57 states spread over four continents. The Organisation is the collective voice of the Muslim world. It endeavours to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world. The Organisation was established upon a decision of the historical summit which took place in Rabat, Kingdom of Morocco on 12th Rajab 1389 Hijra (25 September 1969) following the criminal arson of Al-Aqsa Mosque in occupied Jerusalem.

Among the OIC's key bodies: the Islamic Summit, the Council of Foreign Ministers (CFM), the General Secretariat, in addition to the Al- Quds Committee and three permanent committees concerned with science and technology, economy and trade, and information and culture. There are also specialized organs under the banner of the OIC including the Islamic Development Bank and the Islamic Educational, Scientific and Cultural Organisation, as well as subsidiary and affiliate organs that play a vital role in boosting cooperation in various fields among the OIC member states. In addition of its newly established Organisations Women Development Organisations focusing on women and girls› issues.

For additional information about the OIC, please visit https://www.oic-oci.org/page/?p_id=52&p_ref=26&lan=en

An overview on The Status of Women and Girls in the OIC Member States

There are currently around 940 million females living in OIC member countries constituting 49.3% of the OIC total population, according to the OIC Women Development Report (2021). Following the adoption of OPAAW, significant changes have crafted their way into the social, economic, and women empowerment domains. These changes were aimed at challenging the existing factors that hinder women's development.

The following section presents an overview that focuses on examining and highlighting women's development progress in different sectors such as education, health, political representation, decision-making, access to the job market, and violence against women and girls.

OIC, Seham Eid, Egypt

A. Education

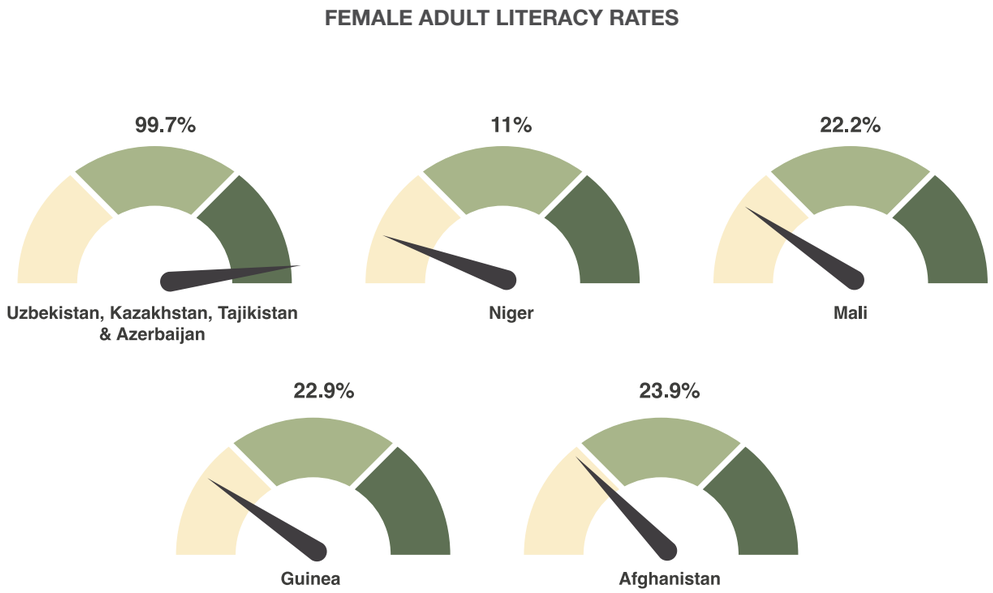
Education plays a crucial and key role in the development and advancement of nations economically and socially. In addition, literacy rate is one of the developmental indicators used to calculate the Human Assets Index (HAI) and the Human Development Index (HDI). It is a vital indicator of social development since it assesses the existence of reading and writing skills in society. (The State of Gender in OIC Countries Report, 2016) "Illiteracy among women and access to education remains amongst the most challenging key factors that have a negative impact on the dynamics of the development process that advocates women's empowerment in underdeveloped countries as a whole". (Elgousi, 2016, p.10)

According to the report on the State of Gender in OIC Countries: Prospects and Challenges "looking at the adult literacy rates from a gender disparity perspective shows an even less optimistic picture for OIC member countries. There is a larger disparity between men and women in the group of OIC member countries compared to other country groups". (Elgousi, 2016, p.10) The report also pointed out that on average; only 70.4 out of 100 women can read and write, whereas 81.2 out of 100 men can, indicating a nearly 10-point disparity.

Although the average adult literacy rate among males in OIC Member States is higher, it remains lower than the average of non-OIC developing countries (89.8 %) and the global average (87.5 %). However, there is a positive change on the individual country level. Distinguished progress was achieved by "OIC central Asian countries [as they] occupy the top six positions as the best-performing countries regarding female adult literacy rates.

Namely, Uzbekistan, Kazakhstan, Tajikistan, and Azerbaijan [which have] achieved female adult literacy rates of over 99.7%. In contrast, Niger (11.0%), Mali (22.2%), Guinea (22.9%), and Afghanistan (23.9%) had the lowest rates of female adult literacy in the OIC group" (Elgousi, 2016, p.11). Having said that, it is worth mentioning that these figures have improved according to the OIC Women and Development Report (2021) indicating that the male literacy rate increased from 80.8% in 2010 to 82.1% in 2018, while female literacy rates also improved from 66.9% to 72.8% during the same period.

Husniati Salma



The improvement also covered youth literacy, and a more positive picture for OIC Member States emerges. The data shows that literacy rates are above 80% for both men and women, and the gender disparity among them is only 4.4 % points, compared to 10.8 % points in the adult population. Additionally, between 2010 and 2018, the average Gender Parity Index (GPI) of OIC member countries increased from 0.91 to 0.94. This is largely attributable to an increase in the number of girls enrolling in schools. However, admission to primary schools doesn't guarantee graduation or completion of school, particularly for girls. A key factor resulting in gender inequality in education is the high rate of girl's dropout. And thus, it is a key factor in the high illiteracy rates in the developing countries and many OIC member countries, attributable to restrictive social norms, traditions, inadequate infrastructure, and economic factors. (Statistical, Economic and Social Research and Training Centre for Islamic Countries [SESRIC], 2021)

"However, even though the overall trends in literacy were positive, the gap between female and male literacy rates persisted across all country groups highlighting inequality in access to basic education for women across the world. This inequality was the highest in the OIC group in both 2010 and 2018" (OIC Women and Development Report, 2021, p.15)

B. Health

Health plays a significant role and has a vital influence on the overall human development, socio-economic progress, and poverty alleviation. Thus, the health sector has been recognized as a fundamental area of cooperation identified by the OIC Member States. This understanding translates into the development and adoption of the OIC Strategic Health Programme of Action (OIC-SHPA) 2014-2023, aiming at addressing public health-related issues and challenges across the Islamic world. The OIC adopted its Ten-Year Programme of Action at the 3rd Extraordinary Summit Conference held on the 8th–9th December 2005 in Makkah Al-Mukarramah. (SESRIC, 2019)

Access to health care/health- care services, and enjoying a healthy life is recognized as one of the fundamental principles of human rights. But also, prevention and control of diseases and pandemics are considered one of the most significant areas to be addressed in the domain of health in addition to health education. On the other hand, the issue of "health has gained greater importance as a major driver of socio-economic progress around the globe, with more resources than ever being invested in this sector" (SESRIC, 2019, p.1) Therefore, the provision of health services was at the heart of the United Nations Millennium Development Goals (MDGs). The Goals represented an ambitious vision to combat poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women. It consists of a set of Eight Goals, which the UN Member States have committed to achieving by the year 2015. The MDGs declaration was ratified in September 2000 by the world leaders. (WHO, 2022).

In 2015, all United Nations members adopted the Sustainable Development Goals (SDGs) as a part of the 2030 Agenda for Sustainable Development. The SDGs build on the successes of the Millennium Development Goals (MDGs), which embody specific targets and milestones. The SDGs expanded its scope to 17 goals from the eight (8) goals in the MDGs, which covers universal goals on fighting inequalities, increasing economic growth, providing decent jobs, sustainable cities and human settlements, industrialization, tackling ecosystems, oceans, climate change, sustainable consumption, and production as well as building peace and strengthening justice and institutions. Unlike the MDGs, which only target developing countries, the SDGs apply to all countries whether rich, middle, or poor countries. The SDGs are also nationally-owned and country-led, where each country is given the freedom to establish a national framework in achieving the SDGs (Philippine Statistics Authority,n.d.).

The SDGs serve as a blueprint for making the world a better place for all people while also protecting the environment. They present an opportunity to improve the lives of billions of people by promoting inclusive and sustainable economic growth.

"The seventeen Sustainable Development Goals (SDGs) are our shared vision of humanity and a social contract between the world's leaders and the people."[2]

Ani Kolleshi

The OIC Health Report stated that "many OIC Member States have paid special attention to the issue of health and development of modern and sustainable health systems by allocating more resources to the health sector than ever before" (SESRIC, 2019, p.Viii). Such attention led to a significant improvement in health-care/healthcare coverage, yet it wasn't the case for other Member States where their healthcare system was unsubstantial due to insufficient financial resources, weak infrastructure, an inadequate workforce, and slow progress in the health sector reforms, resulting in significantly low access to health services.

The following are examples of selected primary health features in OIC Member States to be presented[2]:

Life Expectancy at Birth (LEB)[3] : On average OIC countries, as a group, witnessed an improvement in life expectancy at birth between 2000 and 2017, (LEB) rose from 62.6 years in 2000 to 68.1 years in 2017. As of 2017, female (LEB) was 70, which was 3.7 years higher than male (LEB) at birth in OIC countries.

Adult Mortality Rate (AMR)[4]: In the OIC countries, between 2010 and 2017, (AMR) for males decreased from 227.9 to 208.1, whereas (AMR) for females went down from 174.5 to 155.0 deaths per 1000 population. The gender gap in terms of (AMR) reduced from 53.4 to 53.0 which was a minor change for the OIC group.

2.Under this section, all the data published in the OIC Health Report 2019. Thus, the author depends on it heavily as it is the official document.

3.Life Expectancy at Birth (LEB) defined as "the average number of years that a new-born could expect to live, if he or she were to pass through life exposed to the sex- and age-specific death rates prevailing at the time of his or her birth, for a specific year, in a given country, territory, or geographic area.

4.Adult Mortality Rate (AMR) defined as the "probability of dying between 15 and 60 years per 1000 population".

Maternal and Child Mortality: Starting from a higher base rate of 559 deaths per 100,000 live births in 1990, OIC Countries managed to reduce maternal mortality ratio (MMR) by (42%) which is 326 deaths per 100,000 live births in 2015. Having said that, in OIC countries, about 149 thousand women died from preventable causes related to pregnancy and childbirth in 2015. Maternal mortality remained highly concentrated in a handful of OIC countries. In 2015, almost half (49.7%) of the OIC's total maternal deaths were reported in three countries only, namely: Nigeria (38.9%), Pakistan (6.5%), and Indonesia (4.3%)

Figure 1.1: Maternal Mortality Ratio per 100,000 live births (1990-2015)

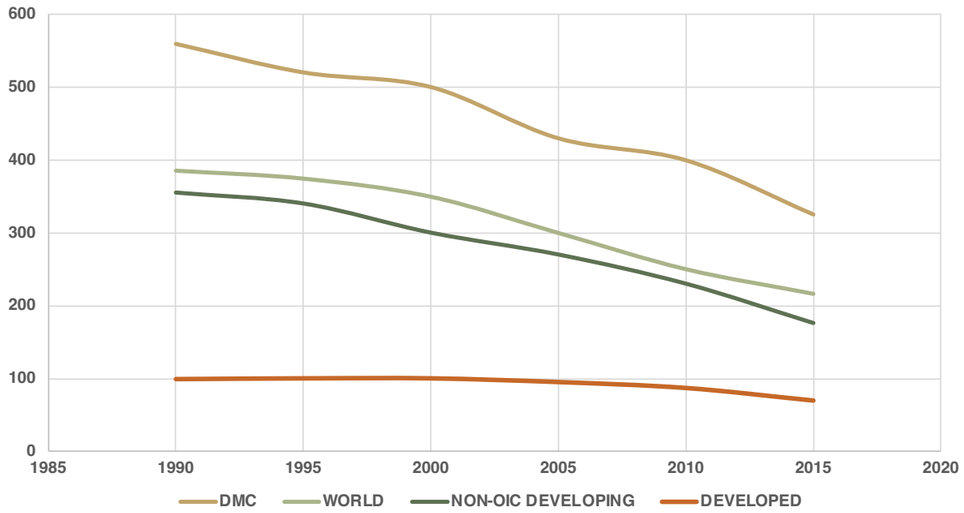
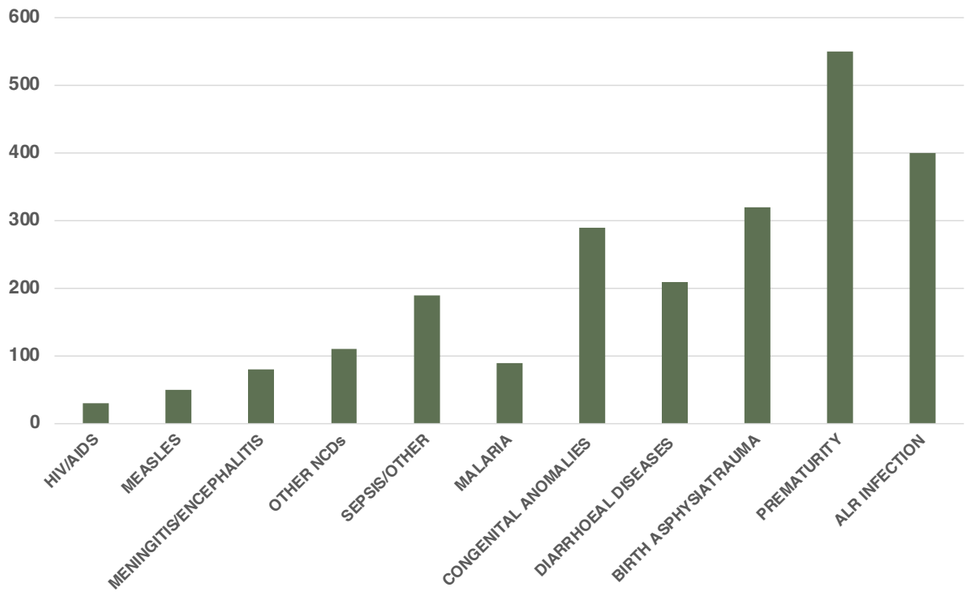


Figure 1.2: Major Causes of Child Mortality (number of deaths in thousands by cause), 2017



As for the child mortality ratio it has also declined from 126 deaths per 1000 live births in 1990 to 60 per 1000 live births in 2015, corresponding to a decline of (52%). Nevertheless, despite this improvement, OIC group made the least progress in reducing maternal and child deaths since 1990. Although there is a decline in maternal and child mortality across the OIC regional groups, Sub-Saharan Africa and South Asia remained the most difficult places for a mother and child to survive". As for the major causes of under-five mortality in OIC countries, which are similar to those in other developing countries, there are three infectious diseases representing the major cause of 4.6, (37.8%) of under-five deaths (as shown in Figure 1.2). These diseases were acute lower respiratory infections (19.2%), diarrhoea (10.5%) and malaria (8%). Among the pregnancy and birth related complications, prematurity (18.5%) remained the major cause of under five deaths followed by asphyxia (15%) and congenital anomalies (8.4%).

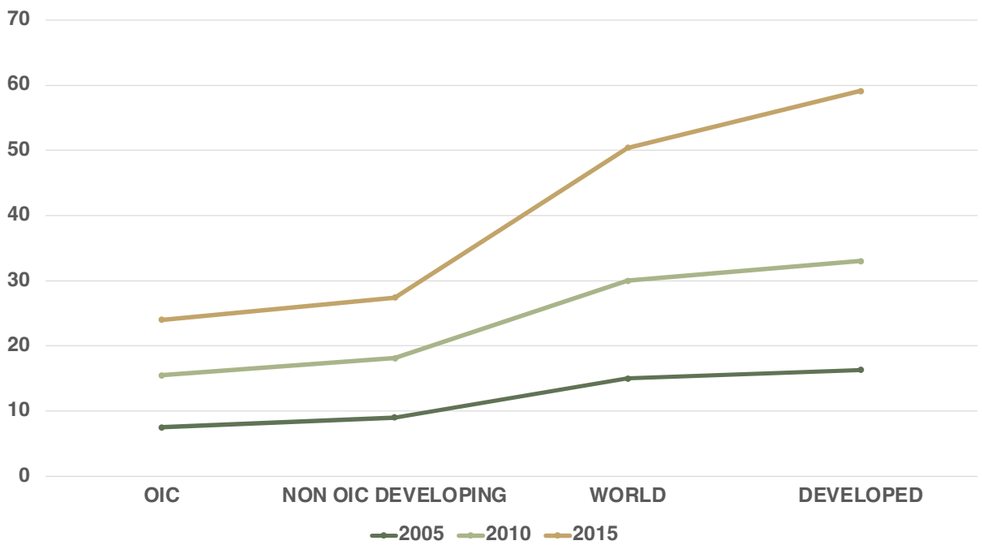
Bill Wegener

Government Expenditures on Health: The figures below show that governments of the OIC countries spent a total of 8.5% of their expenditures in 2016 on health, while the developed countries spent 26.1% worldwide, and 9.3% in non-OIC developing countries.

The allocated low budget was due to public financial constraints, and also due to low priority given to the health sector. Nonetheless, between the year 2005 and 2016 a trivial increase (1%) occurred on government expenditures allocated to the health sector.

"At the individual country level, 11 OIC countries allocated more than 10% of their national budgets for the health sector in 2016. Among these countries, Iran, Maldives, and Suriname reported the highest figures of 22.5%, 20.1% and 16.5%, respectively. On the opposite side of the scale, 14 OIC countries allocated less than 5% of their total budgets for the health sector in 2016. Among these countries, Iraq and Afghanistan reported the lowest shares of 1.6% and 2%, respectively followed by Gambia (2.7%) and Cameroon (2.9%)."
(OIC Health Report, 2019, p. 6-7)

Figure 1.3: Share of Health Expenditure in Government Total Expenditure (2005-2016)



There is a vital need to increase government expenditure on health, as it has impacted access to healthcare/health-care services. For example, number of people in the health workforce, number of beds, number of healthcare/ healthcare facilities; such as hospitals, clinics, and immunization centres, in addition to the efficiency of designing and implementing the health education system.

Lucio Patone

"Without the proper health education, a huge burden is experienced by countries in terms of economic costs, health of individuals and society and expansion of health issues. For example, scientific studies suggest that there is a huge disease burden in African countries because of the lack of health education. Therefore, health education is a salient issue of concern for individuals, communities, governments, and society as a whole. The aim of health education is providing accurate and up to date information to wide range of actors including individuals, families, communities, and health care providers. It aims to expand knowledge, raise awareness, and provide the right skills and attitudes for individuals to make healthy choices."
(OIC Health Report, 2019, p.100)

Sneha Sivarajan

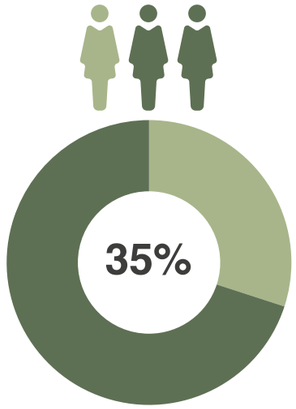
C. Violence Against Women and Girls

Gender-based violence remains a significant subject that attracts global attention to women's rights. Violence is perceived as a vital obstacle that hinders women's development and progress due to its negative impact on their mental and physical health. In 1979, the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), adopted by the UN General Assembly, was a turning point in women's rights in modern history as it represented a significant vision of equitable human rights for both women and men. Based on the CEDAW definition, ***"gender-based violence constitutes any form of violence that is directed at a person based on sex. It includes acts that inflict physical, mental, or sexual harm or suffering, the threat of such acts, coercion, and other deprivations of liberty."***[5]

This definition constitutes a broad understanding of acts that result in jeopardizing female lives and wellbeing, such as domestic violence, domestic abuse, Female genital mutilation (FGM), early and forced marriages, honour killing amongst other examples. Due to the gravity of such practices, the OPAAW includes the "protection of women from violence" as one of its main objectives and identifies nine sub-objectives from preventing child and forced marriage to improve gender disaggregated data collection on violence. (SESRIC, 2021, p.30)

5.General recommendation No. 19: Violence against women- Eleventh session for the year (1992)

According to the key-fact sheet published by the World Health Organization (WHO) “1 in 3 (35%) of women worldwide have experienced either physical and/or sexual violence in their lifetime” and in addition “almost one-third (30%) of women who have been in a relationship report that they have experienced some form of physical and/or sexual violence in their lifetime” (WHO, 2017, p. 1).
Such violence occurs in both upper and lower middle-income countries irrespective of economic, educational, and social status. It is a global phenomenon which all too often has the direst consequences (e.g., physical, and mental health) for women who experience it. It is also having a negative implication on the social and economic development of the countries.

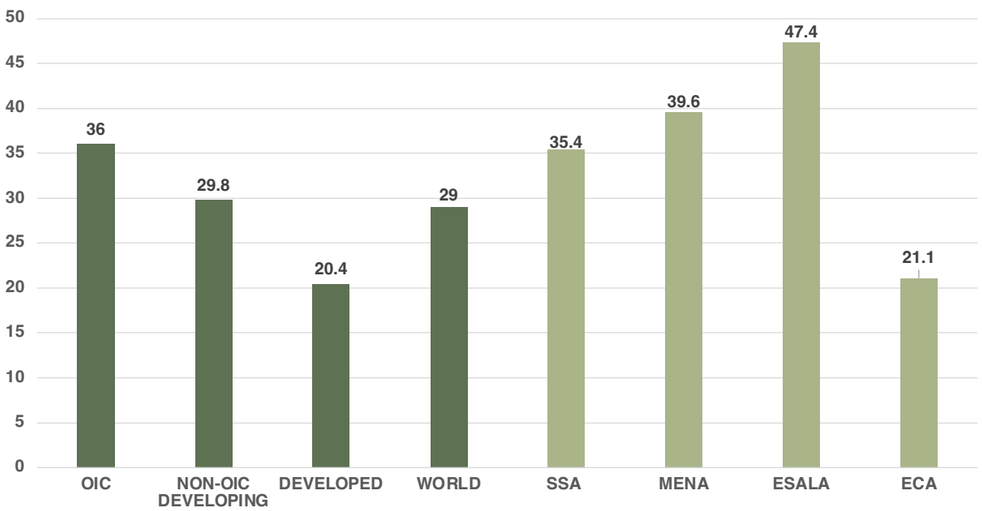


1 in 3 (35%) of women worldwide have experienced either physical and/or sexual violence in their lifetime

“More importantly, gender-based violence can occur in peaceful settings as well as in conflicts. This is partly why it also has a humanitarian impact. For example, human trafficking and victimization or demonization of migrants and refugees are both acts of gender-based violence that occur in conflict or post-conflict zones.” (OIC Women and Development Report, 2021, p.30)

Figure 1.4 shows the 2019 estimates prevalence of violence against women. According to the figure it “was at (29%) in the world in 2019 and this prevalence was the highest at (36%) in OIC member countries and the lowest at (20.4%) in developed countries. Among OIC sub- regions, the highest prevalence of violence against women was observed in East and South Asia and Latin America (ESALA) (47.4%).” (SESRIC, 2021, p.31)

Figure 1.4 Prevalence of Violence Against Women in the World (left) and OIC Sub-regions (right), 2019 (%)



Several factors contribute to gender-based violence (GBV) example: misinterpretation of religion, culture, tradition, illiteracy, poverty, and economic problems. It is crucial to mention some progress in combating GBV notably by the OIC member countries over the last decade. Based on experience in fighting against gender-based violence, there is a set of essential procedures/ approaches that need to be followed and applied, such as:

1. Developing successful monitoring mechanisms through conducting studies and provision of updated data

2. Allocating adequate human and financial resources to eliminate some of the problems faced in the implementation of such legislations

3. Raise women awareness about discrimination and different forms of violence

4. Equip women with the necessary information and knowledge on the issue

(5) training of law enforcement officers who handle cases of violence against women. Moreover “inclusion of civil society organizations and religious leaders in response mechanisms such as information sharing programmes can help in reaching women, especially in rural areas.” (SESRIC, 2021, p.33)

Mohammed Hassan

D. Political Representation

In his opening statement, Mr. Abdulla Shahid[6] emphasized that ***"violence against women in politics creates additional, and at times deadly, obstacles to women's active and meaningful participation in politics. We must do more to eliminate the pervasiveness of this violence."(UN Women News, 2022).***
Access to political representation is a long-dated battle for women in the region. In some Muslim countries, women obtained the right to vote and be candidates in parliamentary elections only in the 1950 and 1969[7]. Nevertheless, the Convention on the Political Rights of Women was approved by the United Nations General Assembly during the 409th plenary meeting, on 20 December 1952, adopted on 31 March 1953 and entered into force on 7 July 1954. The convention was the first instrument of international law aiming at recognizing and protecting the political rights of women everywhere.
The preamble of the convention emphasized on the following:

> *"Contracting Parties, desiring to implement the principle of equality of rights for men and women contained in the Charter of the United Nations, recognizing that everyone has the right to take part in the government of his country, directly or indirectly through freely chosen representatives, and has the right to equal access to public service in his country, and desiring to equalize the status of men and women in the enjoyment and exercise of political rights, in accordance with the provisions of the Charter of the United Nations and of the Universal Declaration of Human Rights, having resolved to conclude a Convention for this purpose." (Convention on the Political Rights of Women, 1952)*

The first three articles of the Convention assert the right of women to vote (Article I), to be eligible for election (II), and to hold public office (III)[8]. It is worth noting that the three articles end with a specific phrase which is "established by national law, on equal terms with men, without any discrimination."

6.Mr. Abdulla Shahid , the president of the 76th Session of the General Assembly A special event hosted by him, which was dedicated to eliminating violence against women in politics on the side-lines of the 66th session of the Commission on the Status of Women

7.In 15 of 52 OIC countries, the women suffrage was introduced within the decade of 59 -1950. Adding [eleven] countries where the voting rights of women were first obtained during 69-1960, the women in half of the OIC countries began to vote during the period 1969-1950. Azerbaijan and Kyrgyzstan were the only two member countries [in which] women's suffrage has been effective as early as 1918 (Sate of Gender in OIC Countries: Prospects and Challenge, 2018, p.73)

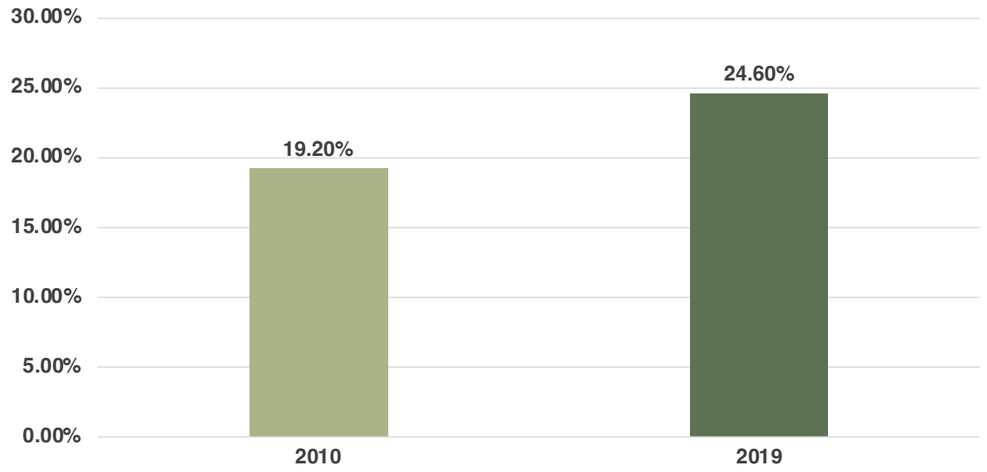
8.The Organisation of Islamic Cooperation (OIC) is the second largest Organisation after the United Nations with a membership of 57 states spread over four continents. The Organisation is the collective voice of the Muslim world. It endeavours to safeguard and protect the interests of the Muslim world in the spirit of promoting international peace and harmony among various people of the world. The Organisation was established upon a decision of the historical summit which took place in Rabat, Kingdom of Morocco on 12th Rajab 1389 Hijra (25 September 1969) following the criminal arson of Al-Aqsa Mosque in occupied Jerusalem.

Among the OIC's key bodies: the Islamic Summit, the Council of Foreign Ministers (CFM), the General Secretariat, in addition to the Al- Quds Committee and three permanent committees concerned with science and technology, economy and trade, and information and culture. There are also specialized organs under the banner of the OIC including the Islamic Development Bank and the Islamic Educational, Scientific and Cultural Organisation, as well as subsidiary and affiliate organs that play a vital role in boosting cooperation in various fields among the OIC member states. In addition of its newly established Organisations Women Development Organisations focusing on women and girls› issues.

For additional information about the OIC, please visit https://www.oic-oci.org/page/?p_id=52&p_ref=26&lan=en

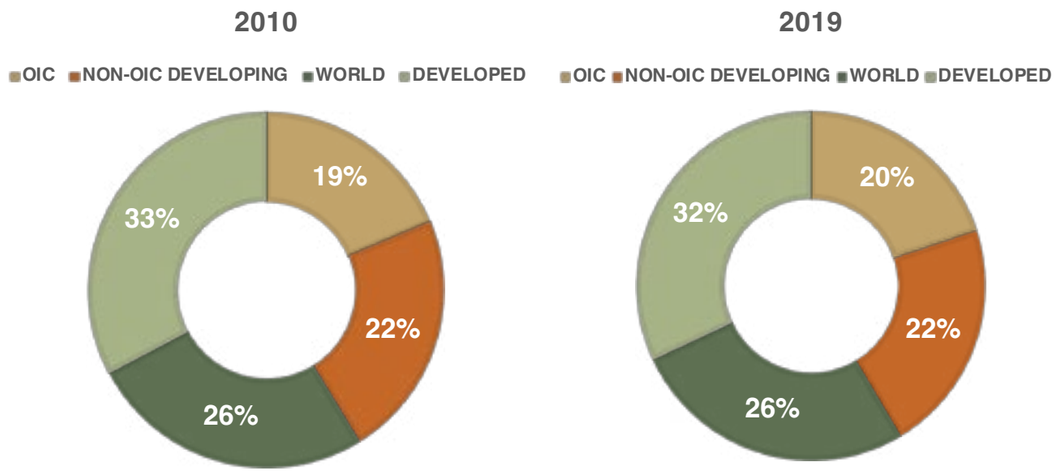
According to the OIC Women and Development Report 2022, stated that "women's participation in national politics has increased between 2010 and 2019. The global average for the proportion of seats held by women in national parliaments increased from (19.2%) in 2010 to (24.6%) in 2019. OIC member countries, just like developed and non-OIC developing countries, also improved the participation of women in their national parliaments by raising this ratio from (13.8%) to (18.4%) in the same period.

Global average for the proportion of seats held by women in national parliaments



However, despite this improvement, they still lag behind other country groups on average terms. (SESRIC, 2022, p.10-11)

Figure 1.5: Proportion of Seats held by Women in National Parliaments (%)



E. Women Economic Empowerment

Women's meaningful economic participation is critical to achieving greater global security and stability. When women are economically empowered, they invest in their families and communities, resulting in economic growth and more stable societies.
Accelerating women's economic empowerment is critical to ensuring that developing countries achieve economic self-sufficiency and transition from aid to trade partners (US Department of State, 2022). Thus, women's economic empowerment has been a priority for international and regional organisations such as the United Nations, World Bank, Organisation for Economic Co-operation and Development (OECD), and OIC. For example, SDG 8 of the United Nations includes targets for women's empowerment. Following a similar approach, the OPAAW identifies fifteen specific sub-objectives under objective four on "women's economic empowerment."

"According to gender-disaggregated data, labour force participation rate (LFPR) of women increased slightly from (41.6%) in 2010 to (42.3%) in 2019 in the OIC group. Considering the decline in LFPR for men in the same period, gender disparity in labour force participation decreased from (32.1%) points to (30.6%) points. Overall, OIC member countries have recorded some progress in advancing women's participation in [the] labour force and [a reduction of gender] disparities in labour markets over the past decade. Compared to the world average LFPR for females (47.2% in 2019), OIC member countries, as a group, still lag behind with their respective average of 42.3%." (OIC Women Development Report, 2021, p.22)

There is no doubt that women in the OIC Member States are keen to effectively participate in the labour market and engage in economic advancement.
Yet there are tremendous challenges hindering their participation. These challenges range from facing discrimination based on disability, gender stereotypes, social and traditional norms, weak social protection mechanisms, underinvestment in their education, legal barriers, to participation in certain professions, some administrative and legal challenges that may affect women participation in labour force, etc. In addition to the burdens of unpaid family care.
Thus, advancing women's full and free participation in the economy requires addressing these barriers in comprehensive and meaningful ways. Therefore, there is a rigorous need for OIC member countries to review the existing legislations and regulations to remove existing legal barriers that hinder women's economic empowerment. Additionally promoting and encouraging policy makers to create a more enabling environment for women employers and employees, including tax incentives and quota schemes which are instrumental in increasing the labour force participation of women. In addition to designing and putting in place social security programmes and safety nets for working women. These are a broadline to encourage women and allow them to become more economically active. (SESRIC, 2022)

Chapter 01

Understanding of Vulnerability and Resilience Dynamics: **Climate Change and it Impact on Women**

IOM THE UNITED NATIONS MIGRATION AGENCY

Annie Spratt

Part 1: Global Frameworks and Recent Developments

Climate change is a universally acknowledged global crisis of unprecedented and worsening proportions, with impacts today as well as on future generations. The effect of climate change is already felt on the health, nutrition, and well-being of girls and boys, as well as their access to education, water and sanitation. Climate change and disaster risks are not gender neutral but rather amplifying already existing gender inequalities in relation to socioeconomic and political status, land rights, livelihoods, health, domestic labour, gender-based violence and safety and security, with the most marginalized communities experiencing the greatest impacts. Gender norms, roles, responsibilities, behaviours and power structures determine how different groups of people experience and manage climate change and disaster risks.

Due to structural inequalities and discriminatory practices, women, young women, adolescent girls, and girls have less access, use and control of natural resources, physical mobility, decision-making power and are subject to household/community expectations which makes them disproportionately affected by climate change and disaster risks (UNEP, 2020).

These gendered factors, as well as lack of access to information, make women and girls 14 times more likely to than men to die when a disaster strikes (UN Women, 2022; IUCN, n.d.). Around the world, children and youth are taking up the challenge to promote adaptation strategies within their communities to strengthen resilience and promote policies for climate change mitigation. Countries with higher rates of women in climate leadership and increased schooling for girls fare better in terms of their country's overall vulnerability to climate-related disasters. With strategic investments and feminist mentorship, adolescent girls are taking bold actions to address climate change and to mitigate its impact on them, their families, and their communities.

In 1992, following the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit or Rio Summit, the United Nations Framework Convention on Climate Change (UNFCCC) was established as part of an international environmental treaty to combat «dangerous human interference with the climate system», in part by stabilizing greenhouse gas concentrations in the atmosphere (UNFCCC, 1992). The Convention also established two key bodies:

1.The Conference of the Parties (COP) which manages the implementation of the Convention and any related legal instruments. The COP meets every year unless the Parties decide otherwise. The first COP meeting was held in Berlin, Germany in March 1995 (UNFCCC, n.d.).

2.The UNFCCC Secretariat provides institutional coordination and support for the COP and other relevant international bodies under the Convention, and assistance to the state Parties, particularly developing country Parties.

At this summit, the Rio Declaration Principle 20 noted, for the first time, the role of women as being crucial in climate management and environmental development (UN, 1972; UN, 1992). Several global commitments and agreements make the linkage between gender equality and climate change including: the International Conference on Population and Development (1994), the Beijing Declaration and Platform for Action (1995), the World Summit on Sustainable Development (2002), and the 2005 World Summit, all of which acknowledged the pivotal role girls and women play in sustainable development. Children were explicitly recognized in the Paris Accords as well as the Sendai Framework.
The Kyoto Protocol[9] was signed in 1997, however, it was not until the Bali Climate Change Conference (UNFCCC, 2007) resulted in the Bali Road Map and Bali Action Plan, that gender issues were well framed (Terry, 2009). For the first time in UNFCCC history, a worldwide network of women was established: Gender CC - Women for Climate Justice which published several position papers on women's and gender perspectives on the most pressing issues under negotiation (Gender CC, n.d.).
Since 2002, the Commission on the Status of Women (CSW) considered the issue of climate change as a top priority on its agenda with the CSW66 session adopting agreed conclusions on "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" (UN, 2022) on 25 March 2022 (UN, 2009)

9.The Kyoto Protocol is considered very significant as it operationalizes the UNFCCC by committing industrialized countries in transition to reduce greenhouse gas (GHG) emissions by agreed individual targets.

WDO Photo Bank 2023

Li An Lim

COP18 came to an agreement that additional efforts were needed to improve the engagement of women in all bodies established under UNFCCC and Tokyo protocol (UNFCCC, 2021a). It urged the secretariat to keep data regarding the composition of women in bodies established under UNFCCCA and the Tokyo protocol. It also requested the secretariat to include data of gender composition on its implementation of decisions that involve a gender approach. At **COP21** in 2015, the Paris Agreement[10] was adopted by 196 attending Parties (UNFCCC, 2021). It is a legally binding international treaty that sets up long-term goals for guiding all nations to reduce global greenhouse gas emissions to limit the rising global temperature to well below 2 degrees, preferably to 1.5 degrees Celsius (UNFCCC, 2021). The Paris Agreement requests each country to outline and communicate their post-2020 climate actions, known as their NDCs (UN, n.d.). The Nationally Determined Contributions (NDCs) is a climate action plan to cut emissions and adapt to climate impacts.

Each Party to the Paris Agreement is required to establish an NDC and update it every five years (UN, n.d.). Climate change adaptation and mitigation plans should be child inclusive. The agreement also affirms an obligation on parties to respect, promote and consider their obligations on the empowerment of women and intergenerational equity (UNFCCC, 2015). Article 7(5) specifically encourages the need for a country-driven, gender-responsive, participatory, and fully transparent approach "to climate adaptation, taking into consideration vulnerable people, communities, and ecosystems".

In 2019 at COP25 in Madrid, Parties agreed on a 5-year enhanced Lima work programme on gender and its gender action plan (Decision 3/CP.25). The enhanced gender action plan sets out objectives and activities under five priority areas that aim to advance knowledge and understanding of gender- responsive climate action and its coherent mainstreaming in the implementation of the UNFCCC and the work of Parties, UN entities and all stakeholders at all levels (UNFCCC, 2020). The five priority areas are: capacity-building, knowledge management and communication, gender balance, participation and women's leadership, coherence, gender-responsive implementation and means of implementation and monitoring and reporting.

The 2021 Climate Change Conference, COP26, was held in Glasgow, Scotland, the first event since the Paris Agreement that sought enhanced commitments to mitigating climate change via a process known as the ‹ratchet mechanism'. The result of COP26 was the Glasgow Climate Pact, among the 197 attending parties. The proceedings of COP26 included specific aspects devoted to gender issues and the conference outcomes included a draft decision (UNFCCC, 2021b) on gender issues related to climate change and the work of the UNFCCC. COP26 also recognized that the meaningful and equal participation and leadership of women in all aspects of the UNFCCC process and in national and local-level climate policy and action is vital for achieving long-term climate goals (UNFCCC, 2021a). It also recognized a need for improving the representation and leadership of women in Party delegations and all bodies established under the Convention, the Kyoto Protocol, and the Paris Agreement (UNFCCC, 2021a). The agenda also affirms having the 'gender-responsiveness' of climate finance to strengthen the capacity of women and work under the gender action plan to provide access to climate finance for grassroots women's organizations (UNFCCC, 2021a).

Increasingly girl-led and girl-centred organizations are emerging as part of the climate change policy dialogue and debate, advocating for a brighter future for girls and their communities.

During COP27 Reports submitted by Parties indicated that gender dimensions are being integrated into their climate policies and nationally determined contributions over time. Discussions around this issue focused on the need for public and private sector actors to move beyond understanding the gendered dimensions of climate change, towards taking action at this crucial nexus.

10.The agreement is based on five-year of commitments from all countries to climate actions to decrease their emissions (via Nationally Determined Contributions - NDCs) and work together to adapt to the impacts of climate change.

Nimno Jackjr

Part 2: Gender and the Climate Change, Conflict, and Migration Nexus: Navigating Ecologies of Vulnerability in the MENA Region

This Part introduces the “ecologies of vulnerability” framework to nuance existing conversations on the climate change, conflict, and migration (CCM) nexus. It looks at the way in which factors including migration, climate change, environmental degradation, water scarcity, and conflict interact with and influence community resilience against climate and conflict shocks, and how women differentially experience these dynamics

Recent studies on climate change effects aim to account for the multiple and complex variables that mediate differential distributions of vulnerability as well as capacities for adaptation. This Part contributes to advancing understanding of vulnerability-resilience dynamics by providing a better grasp of gendered experiences of migration in the context of conflict, climate change, environmental degradation, and disasters due to natural hazards. It also lays the groundwork for a more evidence-based approach to assistance and protection for female migrants and displaced persons in these contexts.

The MENA Region was examined as a case study due to the availability of data and is also one of the most severely affected regions by climate change within the OIC.

1.Introduction

Addressing the Gendered Dimensions of Climate Change, Conflict, and Migration

Climate change and water scarcity are increasing existing threats to vulnerable communities in all the world including the OIC Countries. A good case study is MENA region as it's the most water scarce in the world and is projected to be one of the most severely affected by the impacts of climate change globally. Extreme weather events, like floods, droughts, and wildfires are likely to increase in scale and frequency as a result of climate change, with severe impacts on people's livelihoods, security, well-being and resilience. This displacement can amplify disaster risk, alongside resource and water scarcity in areas where large-scale movements strain already limited water sources. This can result in tensions over access to key resources, such as water, between different community groups, thereby amplifying fragility.

The International Organizations such as IOM have a proven history of developing and implementing interventions that support communities and governments to prepare for, reduce the risks of, and respond to, the effects of climate change, environmental degradation, and disasters, such as water scarcity, as part of its Migration, Environment, and Climate Change and Risk Reduction (MECR) portfolio. To further strengthen the knowledge and evidence base on the nexus between mobility, climate change, and water scarcity, and inform future policy development and programming, in 2022 IOM, conducted regional research with Libya and Sudan as the focus countries to analyse how factors including migration, climate change, environmental degradation, water scarcity, and conflict interact and influence community resilience against climate shocks. It is intended that the research findings will provide IOM, partners, and governments, with the knowledge and tools to design and implement interventions that support community and government efforts to strengthening resilience against future shocks. Also, the research will provide insight on the gendered dimensions of vulnerability and resilience within intersecting dynamics of climate change, conflict and migration in the MENA region. Recent studies on climate change effects aim to account for the multiple and complex variables that mediate differential distributions of vulnerability as well as capacities for adaptation (Arab Water Council, 2019; UN ESCWA, 2017; UNEP, 2020). Towards this aim, this part considers the gendered dimensions of climate change effects through an "ecologies of vulnerability and resilience" framework. This approach nuances the more common "nexus" terminology by considering the full combination of political, economic, social, and environmental conditions of risk and adaptative capacity - including human mobility- that make some groups and regions more vulnerable to the effects of climate change than others. The research builds on acknowledgments that gender is not a categorial descriptor, but rather socially produced and can (re) produce structures and relations of (in) equality (Lama et al.2021)

Jeff Ackley

Unsplash | Michael Starkie

2.Gender Norms and Vulnerability:

Resilience Dynamics in Middle East and North African (MENA) Countries

Gender inequality plays an important role in how vulnerability is differentially distributed in communities, as well as attenuated by gender-specific capacities for adaptation and resilience to climate change (Kvinna till Kvinna Foundation, 2022; Lama et al., 2021; Chindarkar, 2012). Studies have documented how the economic, social, and low political participation of women in the MENA region potentially compounds the effects of climate change such that women experience increased vulnerabilities in these domains. The gender norms of traditionally patriarchal societies, such as women's responsibility for household labour and childrearing without land ownership, can hinder projects aimed at bolstering women's abilities to adapt to climate change through growing their participation in the economic and political sectors of life (UNEP, 2020).

Patriarchal social structures and gender norms should be understood in a dynamic relation to other social, political, and economic forces, and in many cases, gender norms are changing rather dramatically in response to environmental necessities. Studies document how the demands and pressures of climate change are altering traditionally patriarchal social structures across the MENA region. These shifts in social, structure do not automatically work in favour of increasing women's security and wellbeing. For instance, Sudan is experiencing a "feminization" of its agricultural sector as traditionally pastoralist women are becoming sedentary in order to economically support themselves and their communities.

As men from rural communities migrate to urban labour markets for work, women stay behind to continue supporting themselves and their families via agricultural work, which tends to amplify the burden on women to alleviate the region's growing food shortages (Baada & Najjar, 2020). Other MENA countries encountering this trend, like Egypt and Syria, where women's wages differ, and this may cause heighten their vulnerability as well as their economic, social, and political marginalization (Baada & Najjar, 2020).

While male out-migration might similarly provide the impetus for women to fill positions in the irrigation sector, which holds potential for higher wages, attitudes regarding traditional gender roles in the workplace are instead being reinforced (Najjar et al., 2019). Thus, despite the rapidly changing landscape of the labour market and gendered divisions of labour in connection with political and economic instability and the complex effects of climate change, women's vulnerability persists and often intensifies

At the same time, the large numbers of women left behind by men who migrate from rural zones to urban centres in search of work opens new possibilities for women's involvement in communal decision-making at the local level (Lama et al, 2021). One of the persistent challenges of gender- focused research and policy implementation in rural contexts was how to maintain women's substantive engagement in the presence of male heads of household (UNEP, 2020). In contexts marked by the significant out-migration of men, initiatives and aid interventions have the opportunity to include women's critical perspectives and feedback in new ways. Indeed, women's contributions to conflict resolution and natural resource management throughout the MENA region demonstrate that they have the ability to effectuate positive adaptation and collective resilience strategies amidst climate change. Such strategies can include both planned and orderly migration for survival and economic livelihood and efforts to build sustainable alternatives for people who remain in climate-change affected places (UNEP, 2019). Programs that address the intersection of water-scarcity, migration and community resilience have found some success through engaging and strengthening collectives of women to manage communal water resources and many international aid projects are aimed at increasing resilience to drought and lessening conflict between crop farmers and pastoralists have rehabilitated water channels and reservoirs with community women leaders in order increase agricultural yields (UNEP, 2019; UNEP 2018). For instance, UNEP and the EU partnered on a project to distribute seasonal water supplies to increase agricultural yields in North Darfur (UNEP, 2018), and an IOM project for women-led Water Management Committee in the village Jebel Kheir in South Sudan effectively maintains three communal water points and empowers women as community leaders at the same time (Putsoa, 2022).

Current international programs such as Water Wise Women and the Women and Water Diplomacy in the Nile (WIN) Network train local women to take the lead in water conservation and increase transnational knowledge-sharing among community leaders and decision-makers (Aamer, 2021; UNEP, 2018). A FAO-led project in Yemen, demonstrates that programs focused on water management can contribute to broader peace-building missions in conflict zones (2021). Since 2015, Yemen has experienced a significant degree of armed conflict between the state and Ansar Allah insurgency that has displaced over 3 million people and exacerbated conditions of physical, economic, and climate insecurity (FAO, 2021). Food and water insecurity in particular are the nation's largest stressors, and over 80% of rural armed conflicts occur over water disputes (FAO, 2021). Migrant, displaced, and rural women serve an essential role in this process via women water user groups (WWUGs), which help to strengthen both legal and tribal conflict resolution infrastructures. In sum, these regional studies and aid programs suggest that efforts to support adaptation to climate change should include gender-specific socio-economic and political empowerment initiatives that are not only directed at challenging patriarchal traditions, but that are evidence-based, responsive to women's concrete needs as they define them, and that build on their existing spaces of power and authority within their communities.

Unsplash | Duaa Hassan

3.Focus Areas of Gender-Specific Vulnerability

A) Conflict and Natural Disaster- Driven Migration and Displacement

Disasters like floods, droughts and wildfires are likely to increase in scale and frequency because of climate change, with severe impacts on women's livelihoods, security, well-being and resilience. In many contexts, planned and orderly migration can be a positive coping and adaption strategy. However, there is a growing number of people forcibly displaced in the context of disasters and the effects of climate change (El Ghamari et al 2020; Al-Dayel et al 2021). In combination with other factors, this can result in tensions over access to key resources between different community groups, thereby amplifying fragility.

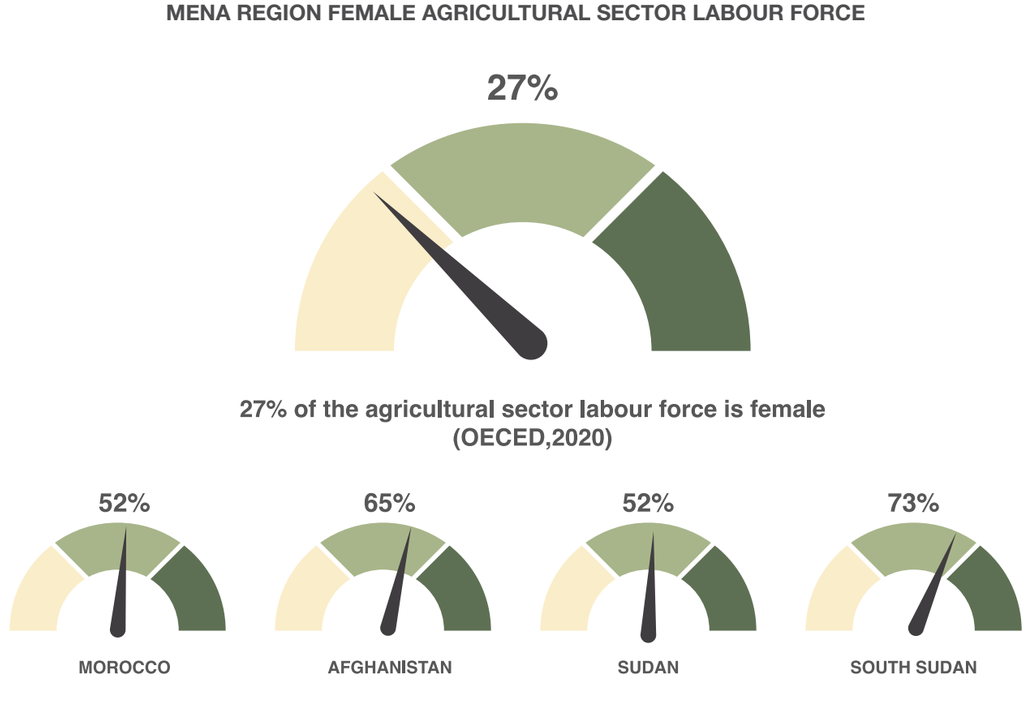
The rise in severe climate events and worsening climate conditions throughout the MENA region coincides with pre-existing conditions of social strife and conflict. In particular, the women among forcibly displaced and migrant populations face additional vulnerabilities as a consequence of the distinct gender roles and social status ascribed to them. Expectations regarding childcare or house duties presume that women will be at home during disasters, which puts them and their children at an increased risk to be injured or killed. Childcare responsibilities have the potential to hinder women's ability to travel after a climate event. Moreover, women migrating without a male head of household are more susceptible to gender-based violence and human trafficking (World Bank Group, 2021; Hassan et al., 2021; Yousaf, 2017).

B) Livelihood Loss

Given that the agricultural sector throughout the MENA region is one of the main modes of subsistence and economic income for women as well as men, the reduction of agricultural livelihoods due to climate change further strains their capacity for positive adaptation.

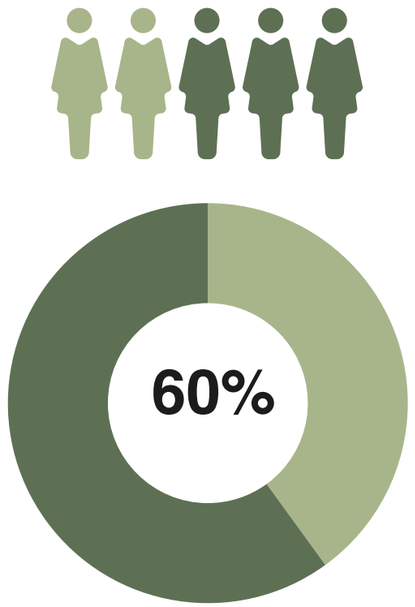
Throughout the MENA region, 27% of the agricultural sector's labour force is female (OECD, 2020). However, more rural countries like Morocco, Afghanistan, Sudan and South Sudan have agricultural workforces made up of approximately 52%, 65%, 52% and 73% women, respectively (OECD, 2020; ILO, 2021).

IOM



In total, 60% of MENA women work in the informal sector without written employment contracts, and female refugees are often required to work in informal positions in agricultural or domestic sectors. Consequently, these women without social safety net yet are still expected to maintain traditional gender roles like caring for children, and increasingly elderly family members, thereby reducing their economic opportunities (Kagan, 2017).

Moreover, women are usually the first to be laid off in times of crisis, which was starkly demonstrated during the COVID-19 pandemic, given that the majority of national labour laws in MENA countries either do not explicitly protect workers in agricultural and domestic sectors or are not regulated to the degree necessary (OECD/ILO/CAWTAR, 2020; OECD, 2020).



Markus Spiske

C) Drought and Water Scarcity

The MENA region is the most water scarce in the world and is projected to be one of the most severely affected by the impacts of climate change globally. Because water is a core element of household labour (e.g., cooking, washing, and caring for the ill, children, and elderly), many of the difficulties associated with water scarcity tend to disproportionately burden women (HRW, 2019). For instance, women could be adversely affected by current initiatives to mitigate water scarcity by transitioning from freshwater to treated wastewater irrigation in the MENA region. A recent study based in Egypt documented those women reported negative health effects on themselves and their children from eating food grown with recycled wastewater.
Research has also shown how the out-migration of men leaves women behind to deal with growing problems of water scarcity, often compounded with the dangers of conflict zones. As mentioned earlier, this phenomenon sometimes leads women to gain community decision-making powers (Chindarkar; 2012; Lama et al., 2021). For instance, in UNEP's Community Environmental Action Planning Process and the IOM's enhanced water access development programs in the North Kordofan region and Jebel Kheir, women are playing an essential role in facilitating conflict resolution regarding water scarcity and gaining leadership experience on communal water management committees (UNEP, 2019; Putsoa, 2022).
Women's empowerment and vocational training are integral components to these projects, which not only support their continued involvement in water management infrastructure, but also promotes other livelihood opportunities to safeguard their own economic security.

Chapter 1 Conclusion

To conclude, acknowledging women's specific struggles allows for more adequately tailored aid programs to be implemented in light of other factors of climate change vulnerability, such as migration patterns, sexual violence and conflict, and gender inequality in social and political arenas. By orienting climate policy initiatives towards benefitting women and girls in particular, not only will their ability to adapt to climate change be improved, but also social tensions and conflict have the potential to be reduced. It has been demonstrated in a variety of peace and conflict studies that incorporating women into the peacebuilding process enhances the quality and implementation of policy objectives (Hassan et al., 2021).

Consequently, supporting women to secure their own individual physical and economic security is crucial for greater peacebuilding processes and more just climate and migration policies.

By considering the gendered dimension of climate change, conflict, and migration within the "ecologies of vulnerability" framework, we are better equipped to begin to understand the daily lives of these women, the problem-solving capabilities that they bring to bear, and the possibilities for weaving together local experience with global thought partners. More studies are needed to understand the nuances of these multiple and sometimes competing dynamics.

Finally, there is a need for qualitative insights about the lived realities and needs of affected communities. More primary data collection and mixed methods studies are needed to support empirically informed policy and program designs that value and promote the perspectives and leadership capacities of women.

Mohamed Nohassi

Chapter 02

Impacts of Climate Change on Girls and Adolescents and their Role as Change Champions in their Communities

unicef
for every child

1.Setting the Context:

The Climate Crisis is not Gender Neutral

Climate change is not “gender neutral”. Women and girls experience the greatest impacts of climate change, which amplifies existing gender inequalities and poses unique threats to their livelihoods, health, and safety (UN Women, 2022). Given that boys and girls face different risks of vulnerability to natural hazards, this results in different impacts of disasters on them both. Across the world, women and girls have limited access to natural resources and hold a disproportionate responsibility for securing food, water, and fuel.

The World Humanitarian Summit, held on 23–24 May 2016 in Istanbul, stressed upon the urgent need to safeguard the rights of young people (aged 10–24 years) and engage them in humanitarian response efforts. The Inter-Agency Standing Committee (IASC) Guidelines on Working with Young People in Humanitarian and Protracted Crisis notes that approximately 175 million children every year will be affected by natural hazards attributed to climate change.

In crisis and post-crisis settings, adolescent girls and women often find themselves acting as the new head of their households due to separation or loss of male household members. The IASC Gender Handbook for Humanitarian Action notes for example, that one in four of all Syrian refugee families in Egypt, Iraq, Jordan, and Lebanon are female-headed. In Mali, over half of the displaced families are headed by women, who are not always able to access resources and life-saving support because there is no assistance for childcare or acquiring resources like food or water. Consequently, women and girls are more likely to suffer from food insecurity in emergency settings (IASC, 2018).

Less than 2% of national climate strategies mention girls, according to the World Association of Girl Guides and Girl Scouts and UNICEF. While 43% of NDCs reference women or gender, this is predominantly within the context of women as a vulnerable group rather than contributors to climate action. Furthermore, only a third of 192 national energy frameworks from 137 countries include some gender considerations however women are characterized as potential beneficiaries, but rarely as agents of change. In the year the Paris Agreement was established, only 35% of national delegates were women (WAGGGS, 2022).

In the Middle East and North Africa region, agriculture is the most important employment sector for women. On average, women constitute around 43% of the agricultural workforce in North Africa and data indicates that if women were given the same access to productive resources as men through climate finance, they could increase the yields of their farms by 20-30%, and thus support the reduction of the number of hungry people in the world, by a proportion of 12% to 17% (African Development Bank, 2022). Furthermore, during periods of drought and erratic rainfall, women must work harder to secure income and resources for their families. Where this is difficult, adolescent girls (and boys) must leave school to help manage the increased burdens of their households (African Development Bank, 2022).

2.Impact of Climate Change on Women and Adolescent Girls

Structural discrimination means that women and girls constitute the majority of the world's poor and are more dependent for their livelihood on natural resources, than men that are threatened by climate change. Moreover, they face social, economic, and political barriers that limit their coping capacity. The combination of factors which limit women's agency: unequal access to resources and to decision-making processes and limited mobility, results in women and girls being disproportionately affected by climate change as highlighted below.

Disproportionate impact on girls and women

4 out of 5 people displaced by climate change are girls and women.

Around the world, girls are the first to leave school to support their families and take on extra domestic chores created by new climate conditions. Girls are also less likely to re-enroll in school than boys after an environmental crisis.

When water is scarce, women and girls are forced to travel long distances, oftren in unsafe conditions, to reach water and bring it home. This also exposes them to increased risks of gender-based violence.

Climate emergencies, like droughts and floods, can make girls miss school during their periods due to lack of water and adequate sanitation for menstural hygiene maagement.

During severe weather conditions, girls in vulnerable households, are more likely to drop out of education and be forced into marriage.

By 2025, climate change should keep more than 12 million girls from completing their education every year.

Tobias Rademacher

2.1. The Impact of Climate Change on Access to Education

Research conducted on 'Adolescent Girls in Change Crisis' revealed significant implications for girls' and young women's life courses. Some of these impacts were the result of an inability to access education due to physical access restrictions caused by extreme weather events such as flooding. Some responses to these impacts can be termed 'maladaptive', mediated by gendered household decision-making as a response to climate-related impacts that reduced girls' access to education. Others related to the increased exposure to physical and sexual abuse caused when schools provide temporary shelter from extreme weather events. For adolescent girls with disabilities, the impact of climate change can be further exacerbated. UNICEF's CLAC in Kazakhstan notes inaccessible or inadequate WASH facilities in schools create additional barriers for children – particularly those with disabilities - to attend school, and lead to a denial of a school education. In Kazakhstan, adolescent girls, who must manage menstrual hygiene as well as a disability, are especially vulnerable to conditions that may undermine their dignity, health, and school attendance (Molyneux, 2018).

In Jordan on October 2018, 21 school children lost their lives with their teachers near the Dead Sea. Jordan is prone to extreme events such are storms, floods, and heatwaves which in addition to endangering lives, have a severe impact on infrastructure. When hospitals and schools are compromised because of these events (for example during the 2020 heatwave which resulted in severe power outrages affecting access to school), children are denied their right to access medical attention and education (Terre de Hommes, 2019). Similarly in Lebanon, school children are impacted by unreliable electricity supplies, and public schools are subject to the extra costs of diesel generators. Poor energy service had led to insufficient heating and hot water supply in winter and cooling in summer, impacting the well-being of staff and students (UNICEF, 2020).

A situational analysis conducted by Terre des Hommes (2019) notes that strong tendencies towards patriarchy and gender inequality lead to girls dropping out of school, and staying at home particularly involved in domestic work, especially for older children who must support family needs. According to the 2016 Child Labour Survey, of all children engaged in economic activities, 88.3% (67,114) were boys and only 11.7% (8,868) were girls.

According to UNICEF, the Maldives is affected by coastal erosion which has led to climate-induced migration. Consequently, children have had to move to other schools which lack the essential equipment or are worse off than their previous ones. This causes child protection challenges for girls and boys.

Finally, the psychosocial impacts of climate change on children and adolescents are important to consider. UNICEF's Climate Landscape Analysis for Children (CLAC) report on Lebanon noted that young people are expressing negative emotions such as fear, sadness, helplessness, and anger at the prospect of climate change, which may contribute to diminished well-being, and increased risk of diminished long-term social and cognitive development. Similarly, in a poll taken across countries in South Asia, more adolescent girls than boys reported being worried about the impact of climate change in their communities.

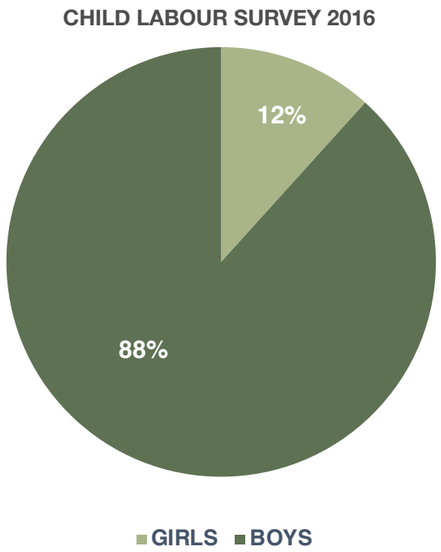
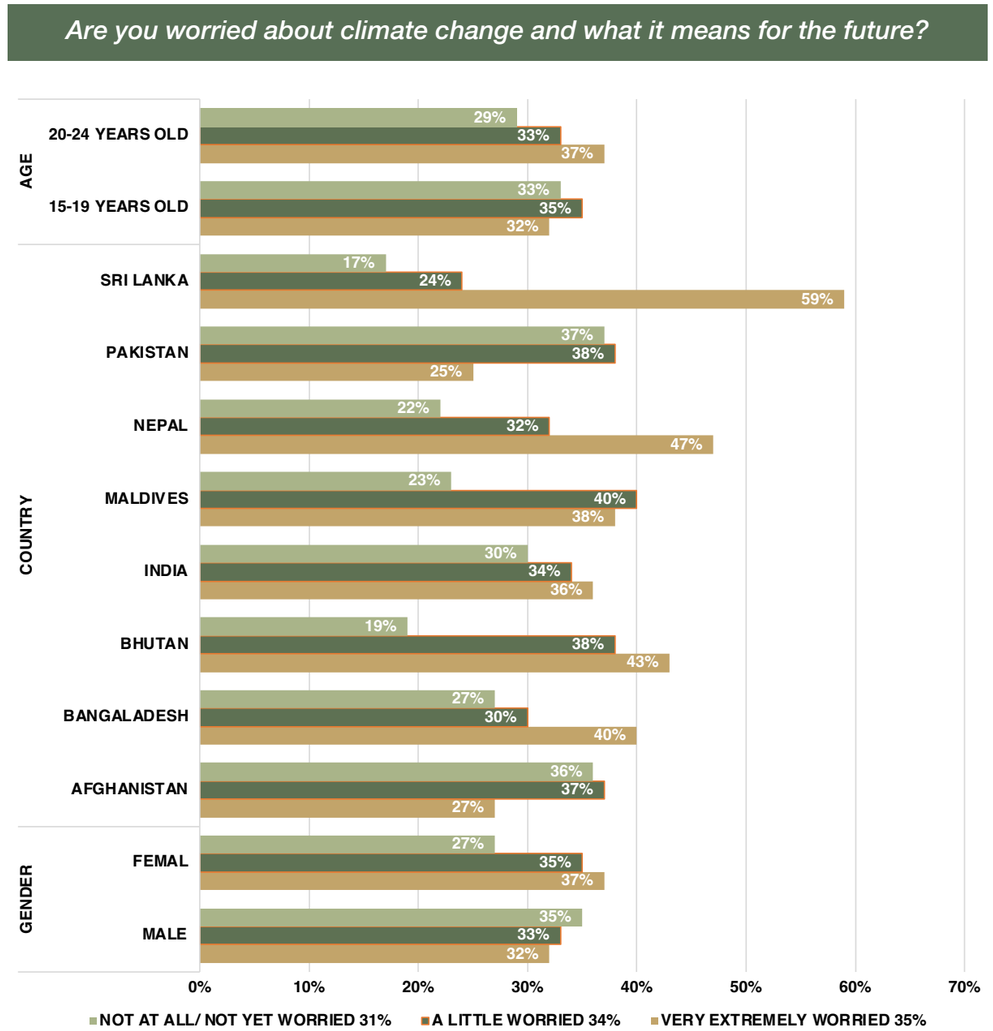


Figure 2.2: Worry about climate Change
Source: Rising to the Challenge | UNICEF South Asia, 2021



Number of Respondents: 15,064

2.2. Impact of Climate Change on Food Security and Nutrition

The worst affected countries are and will continue to be, the poorest impacted by rising sea levels, increasing temperature, and extreme weather conditions (UNFCCC, n.d. a).

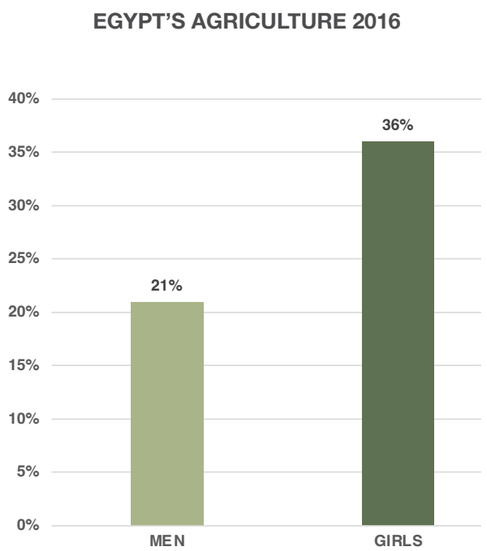
The poorest, mostly women within these countries have the fewest opportunities to protect themselves (UNFCCC, n.d. a).

UNICEF MENA Accelerators, Women in Agriculture

Employment in the agriculture sector accounts for one third of total female employment in Arab world compared to 18% of total male employment and is mainly through informal work sectors. Water scarcity, jeopardize the income opportunity, amplifying economic vulnerability while also risking foor insecurity.

The impact on women (and their dependents) who play a pivotal role in food security, is likely to be heightened where livelihoods are dependent on natural resources. Reduced agricultural resources result in loss of income, limited farm maintenance, and negative impacts on livestock. Women and adolescents, often play a greater role in ensuring nutrition, food safety, and quality, and tend to be responsible for processing and preparing food for their households, as well as spending a considerable part of their cash income on household food requirements (UNFCCC, n.d. a). Diverse challenges faced by young and adolescent girls, and women due to discriminatory social norms, policies, and political/social crises place them in a uniquely marginalized position. Moreover, across the region, women and girls continue to face various restrictions (in mobility, agency, and independence), especially in contexts where economic survival becomes a priority for households and considerations of individual rights take lesser precedence (US Department of Labor, n.d.).

Further, male outmigration in many countries leads to both the feminization of agriculture in addition to mandating women's engagement in a range of low-paid, low-productivity, and high-risk informal sector activities (UNICEF, 2020), thus impacting the health and well-being of women themselves and the children for which they are frequently the main caregiver (ESCWA, 2017). In Egypt for example, agriculture employs 36% of women as compared to 22% of men (Al-Kamel, 2016). According to the International Labour Organization (ILO), as men migrate or are displaced due to climate change, leaving women behind in rural areas (provided they may still be liveable), and in charge of households and land, there is an opportunity for involvement in decision making, within and outside their households (Al-Kamel, 2016).



UNICEF's Climate Landscape Analysis for Children (CLAC) aims to assist UNICEF country offices to understand the overall climate, environment, energy, and Disaster Risk Reduction (CEED) landscape as it applies to children's rights. It is also a tool to assess, prioritize and respond to the immediate and future climate and environmental sustainability challenges. In Jordan, the CLAC noted the water sector will face several projected concerns including a reduction in groundwater recharge, deterioration of ground water quality, reduced streamflow and increased demand for water, eventually increasing the numbers of farmers migrating from rural areas to urban centres, leading to more reliance on food imports and directly impacting food security. Moreover, Jordan faces increasing risk of flash floods.

In Lebanon, the CLAC report notes a lack of sufficient nourishment for pregnant women and young children will increase the incidence of low birth weight and infant mortality and exacerbate child malnutrition. Furthermore, stunted children who survive will experience greater incidence of disease, more extensive learning disabilities, and reduced physical capabilities. The long-term effects could be devastating with the added impact of lower productivity at home and in school, increased healthcare costs, shortened work life, and reduced earnings (UNICEF, 2020).

There is additional information on the impact of climate and environmental threats on children's nutrition in Azerbaijan however the UNICEF CLAC report for the country notes the 2014 droughts in Azerbaijan caused severe reduction of agricultural outputs, which reduced incomes and food supplies of rural families. It also points to a relationship between pregnant women's nutritional health and poor environmental conditions, to low birth weights (UNICEF, 2018a). Food insecurity is also an important driver of child marriage and the prevalence of violence against women and girls (VAWG). Food insecurity is not only affecting women disproportionately, but has a range of gendered social impacts. The UNFCC synthesis report noted an increase in GBV following climate-induced disasters across the submission of reports – highlighting for example, the plight of Yemeni women and girls who are particularly at risk due to climate change impacts, environmental degradation, and conflict (UNFCCC, 2022a). The UNFCC report also noted child marriage had also been observed across all report submissions as a means of coping in the event of a disaster as families struggle to secure assets or funds (UNFCCC, 2022a).

UNICEF, Yemen, Saleh Hayyan

2.3. Water crisis and its impact on women and children's rights and health

Globally, women suffer from reduced life expectancy and mortality, increased morbidity, and health deterioration due to natural disasters (including droughts, earthquakes, extreme temperatures, famines, fires, etc.) that affect their access to health facilities and healthy nutrition (Erman et al, 2021). Studies show that adolescent girls are affected differently from boys by rainfall shocks and malnutrition resulting from such a climate crisis (Georgiadis et al, 2021). Climate-crisis induced malnutrition can also be transmitted from one generation to the next, both increases in heat extremes and agricultural/ ecological drought have been specifically identified and measured as affecting the Middle East and North African regions by the IPCC (Georgiadis et al, 2021; IPCC, 2021). Changing weather patterns are increasing the frequency and intensity of droughts, floods, dust storms, and heatwaves (Hassan et al, 2021). Throughout the region, an additional 80 to 100 million people are expected to experience water stress by 2025 as a result of decreased rainfall which impacts rivers flows and ground water supplies (UNDP, 2010). Additionally, many of the region's economic activities and urban centres are located in flood-prone coastal zones, as are the region's most fertile agricultural lands, making them further vulnerable to sea level rise, storm surges, and coastal erosion (AFED, 2016).

UNICEF, Sudan, Ahmed Ammar

UNICEF, Yemen, Saleh Hayyan

The World Economic Forum 2015 Global Risks Perception Survey ranked the water crisis as the most likely risk to businesses and economies in the Middle East and North Africa over the next ten years up to 2025 and beyond, alongside unemployment and ahead of social instability and failures in governance (World Economic Forum, 2015). Similar concerns around water stress and sea-level rise were cited in successive survey reports in 2017 and 2019. Moreover, according to the World Bank, by 2050, the region is expected to have the greatest economic losses from climate related water scarcity as a share of Gross Domestic Product (GDP), between 6% and 14% (depending on the underlying economic and climate projections used) (World Bank Group, 2016).

Research findings show that climate change could push temperatures in some Gulf States beyond a threshold of human adaptability (UNDP, 2018a). Decreases in water availability and food security caused by a changing climate could further impact human health (UNDP, 2018a).

In Yemen, women and children must travel long distances to access portable water, exposing themselves to safety and security hazards as well as the health impacts of what is often intense physical labour (UNDP, 2018a). This additional labour has forced girls in rural areas to drop out of schools (UNDP 2018a). According to the UNICEF MENA Accelerator Background Paper on Gender, women and girls are responsible for collecting, safeguarding, and managing water (UNICEF, n.d. a). When they spend time fetching water, they lack the time to engage in activities that would provide them with income or go to school, or engage in other responsibilities, earn money, engage in public activities, read, or simply rest. As girls are pulled out of school to help gather water (or fuel), there is a "perpetuating cycle of disempowerment" which is exasperated by injuries caused by carrying heavy loads and a heightened risk of sexual harassment and gender-based violence (UN, 2009).

Consequently, water scarcity caused by climate change amplifies the burden of discrimination on women and girls in the region. In addition, lack of sufficient water affects the ability for adolescent girls to manage their monthly menstrual cycle which also has negative impact on their psychosocial well-being.71 Inadequate access to water and poor water quality however does not only affect women and girls – as they often bear primary care responsibilities around the health of their families due to gender norms and stereotyped expectations. It also impacts agricultural production and food security, increases the overall amount of labour involved to collect, store, protect and distribute water (UN, 2009).

UNICEF's CLAC in Kyrgyzstan also reflects on the increased vulnerability of children due to climate threats, which are likely to worsen. Thus, children will have higher susceptibility to vector borne diseases, undernutrition and diarrhoea; respiratory infections caused by air pollution; physical danger associated with flooding and landslides; a greater reliance on functioning public services such as schools and hospitals, equipped with sufficient electricity for lighting and heating, and water for sanitation; and as climate change worsens poverty, a higher risk of abuse, exploitation, trafficking, and child labour (UNICEF, 2017a).

The most recent studies on child labour in Kyrgyzstan reports that 39% of children aged 5-17 are engaged in child labour. UNICEF reported that working children (both boys and girls) are commonly involved with agriculture (96.2-99%) especially cotton, various food crops, and livestock. Agriculture productivity in Kyrgyzstan is predicted to become more precarious due to growing water availability concerns undermining production in a warmer, more variable and possibly drier future forcing children, who are likely to be the first to be exploited, laid off and forced to find work in other sectors. Moreover, where climate induced poverty forces parents to migrate for work, children may be left in vulnerable situations, sometimes outside of education and social service systems, potentially leading to their entering into the worst forms of child labour, particularly for children belonging to the Lyuli (Gypsy) ethnic group, who are thought to be especially vulnerable to child labour (UNICEF, 2017a).

The Kyrgyzstan Multiple Indicator Cluster Survey (MICS) 2014 revealed that 29.3% of households used solid fuels as a primary source of domestic cooking energy, and 2.3% of children had acute respiratory infection (ARI) symptoms in the previous two weeks to the survey. UNICEF reports that where indoor use of biomass prevails, incidences of respiratory infections in women and children are high, cognitive development of foetuses is impaired, and miscarriages, early delivery and low birth weight are more common (UNICEF, 2017a).

Rising temperatures can also lead to food-borne diseases causing food poisoning outbreaks and other associated diseases. In addition, if prolonged the situation leads to outmigration of rural families due to water shortages (UNICEF, 2021). Moreover, UNICEF notes increased risk of death due to higher temperatures and hyperthermia, or respiratory or cardiovascular failure, especially for the elderly. Mortality risk due to malnutrition, diarrhoea and malaria would affect children predominantly (UNICEF, 2020). During the summer months and intense heat waves. In Lebanon, UNICEF's CLAC report highlights a rate of 42% for respiratory infections, and 23% of diarrheal diseases (UNICEF, 2020). UNICEF identifies a number of additional key risk factors for young people including: diseases from vector-borne diseases such as Malaria, Dengue, West Nile fever, and Chikungunya, which may spread or intensify, physical injuries resulting from frequent or more intense floods, storms, or landslides increasing the risk of infections, disability, or even death (UNICEF, 2020). Improving access to clean, sufficient water with respect to improving women and children's health is one of the most critical development issues in Turkmenistan.

The issue is most pressing in rural areas where services are insufficient and water conditions are worsened by settlements' proximities to agriculture landscapes and the resulting widespread contamination of sources of drinking water. UNICEF's CLAC in Turkmenistan reports that the likelihood of water borne diseases increasing where water quality decreases is widely recognized, and the Government's Second National Communication document on climate change predicts increases of intestinal infections, cardiovascular diseases and blood disease due to climate warming (UNICEF, 2017b). In turn, increases in exposure to water borne diseases and respiratory diseases, impacts children's attendance and educational results

ICRC-International Committee of The Red Cross

(especially in Dashoguz and Lebap provinces). Moreover, broad relationships between climate change and incidence of birth weight, and general health complications in women and children can be inferred. Dashoguz Velayat records the highest incidence of low live birth weight measured by "mother's assessment" and "weighed at birth", closely followed by Ashgabat city (UNICEF, 2017b).

Climate change in some of the Arab states has also had a significant gendered impact on the leishmaniasis disease transmission in the region (ESCWA, 2017). The disease presents a threat to the health and socioeconomic status of women. Cutaneous Leishmaniosis, which can cause disfiguring scars, can have a severe impact on women's psychological well-being, as well as quality of life due to social stigmatization. Tunisian women involved in agriculture are more vulnerable as they engage in irrigation activities. In Yemen, rural children (including girls) who work in agriculture and animal care have higher exposure to sandflies that transmit the disease (Al-Kamel, 2016).

2.4. Women and girls in the agricultural sector; climate change, social norms, social protection, and impediments to inclusive development

The agriculture sector is the largest employer of women in the region and female share of the agricultural workforce increased significantly from 30% in 1980 to almost 45% in 2010, exceeding 60% in Jordan, Libya, Syria and the occupied Palestinian Territory (CIMMYT, 2020). However, they also lack the opportunities to attain the resources to use as entrepreneurs. As addressed by the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas, female small-scale producers face many barriers to adopting innovative and sustainable agriculture despite their role as primary contributors to food security, particularly in developing countries. These barriers include limited access to land – for example in 2016, 100% of the land in Qatar and Saudi Arabia was owned by men (Haddad, 2016) - water, agricultural inputs, markets and price information, credit, improved technologies, extension services, weather information, risk management tools, social protection, and low negotiating power in economic and political relations.

UNICEF, Egypt, Ahmed Mostafa

Egypt is facing two threats; water scarcity and rising sea levels that impact women and children (Goodman, 2021). According to UNICEF in 2021, the country faced an annual water deficit of approximately seven billion cubic meters and could run out of water by 2025 (UNICEF, n.d. b)[12]. Over 80% of Egypt's water supply goes to agriculture and irrigation, therefore, water scarcity represents a huge threat to Egyptian farmers (UNICEF, n.d. b). The United Nation Development Programme (UNDP) highlights agriculture as Egypt's greatest vulnerability in terms of the "severity and certainty" to face the challenges of climate change (UNDP, 2018b). Females constitute over 50% of the total labour engaged in agriculture. Both as paid and unpaid labour, in Egypt, data clearly demonstrates that rural women play a significant role in agricultural and food production and in household food security.

UNICEF's CLAC analysis in Jordan indicates that there has been a reduction in the main dam storage to around half the capacity in the last 20 years due to decreasing base flow and flood flow in the main vallyes. The low rainfall, the decrease in base and flood flows, and reduction in dam storage are causing a considerable deterioration in land productivity and an increase in desertification. The declining agricultural production of Jordan's primary staple crops raises concerns about food security and malnutrition, particularly because Jordan imports over 80% of its domestic food requirements. Access to nutritious foods that are affordable is becoming more difficult particularly among the displaced and other vulnerable populations, because of rising food prices (UNICEF, 2021). Based on a 2016 National Child Labour Survey, approximately 70,000 children aged 5 to 17 years in Jordan are engaged in child labour, most commonly in agriculture and in the retail trade. Approximately 80% of child laborers are Jordanian and about 15% are Syrian, whereas boys constitute 90% of those involved in child labour. 94.8% were also attending school (US Department of Labor, n.d.). According to the CLAC in Jordan and ILO, there were more than 70,000 child labourers in Jordan in 2014. Most working children tend to be between the ages of 12 – 17 years. According to the ILO (2014), of a sample of 112 children from Mafraq governorate and the Jordan Valley, 25% were working girls going to school, out of the total girls surveyed. With diminishing crop yields and increasing costs, labourers may be replaced by children from poorer, rural families.

12 Absolute Water Scarcity is defined by the United Nations as less than 500 cubic meters of water per person per year. Estimates place Egypt's current water resources at 560 m3 per person per year – in 2001 the supply per capita was 950 m3 per person per year (source: FAO, 2002).

UNICEF-Egypt 2022-Ahmed Mostafa

Based on a 2016 National Child Labour Survey, approximately 70,000 children aged 5 to 17 years in Jordan are engaged in child labour, most commonly in agriculture and in the retail trade. Approximately 80% of child laborers are Jordanian and about 15% are Syrian, whereas boys constitute 90% of those involved in child labour. 94.8% were also attending school (US Department of Labor, n.d.). According to the CLAC in Jordan and ILO, there were more than 70,000 child labourers in Jordan in 2014. Most working children tend to be between the ages of 12 – 17 years. According to the ILO (2014), of a sample of 112 children from Mafraq governorate and the Jordan Valley, 25% were working girls going to school, out of the total girls surveyed. With diminishing crop yields and increasing costs, labourers may be replaced by children from poorer, rural families.

UNICEF's CLAC report in Lebanon provides a similar analysis, to that of Jordan, noting that climate change is affecting the poorest by increasing inequality, prolonging existing poverty traps and creating new ones, leading to more deprivation and marginalization of vulnerable groups. In Lebanon, populations from rural agricultural areas are relatively poor and farm households are considered highly vulnerable. Moreover, Syrian refugee informal settlements which concentrate in the governorates of Baalbek-Hermel and Bekaa, have a poverty rate of 38%. Around 75% of children engaged in labour in Bekaa Valley work in agriculture in occupations considered hazardous and inappropriate for their age.

UNICEF-Lebanon

UNICEF, Lebanon, Fouad Choufant

Both the children and adults are poorly paid and susceptible to the uncertainties caused by decreasing precipitation and increasing temperatures, which create water stress for agriculture and trigger longer droughts, forest fires, and new crop pestilence. All these factors have serious consequences for child protection such as increased likelihood of early marriage and sexual exploitation, and as a result of migration of one or both parents who leave the home to find work, and increased prevalence of child labour and child marriage. Children may be forced to supplement the family income by sacrificing their education and going to work. An estimated 24% of Syrian girls aged 15 to 17 are forced into early marriage, a fourfold increase over the pre-Syrian war rates (UNICEF, 2020).

2.5. Climate change, civil/political crises, displacement and internal migration

The Sendai Framework explicitly recognizes that children and women are disproportionately affected by disasters and there is a need for a people-centered approach to disaster risk reduction (DRR), which embraces women, children, and youth as key agents of change in designing and implementing gender- sensitive DRR policies, plans and programmes. However, few countries collect disaster loss data that is adequately disaggregated by age, sex, and disability. Following the 2010 floods in Pakistan, a study found that flood-related displacement was highly gendered, with women and children making up 85% of the displaced population and 59% of women severely food insecure, compared to 43% of the overall affected population.

Moreover, because of floods, 22% of girls dropped out of school compared with 7% of boys. The report found that there are differentiated impacts of disasters related to underlying gender inequalities and socio-economic contexts embedded within the country the disaster occurred in. While the specific impacts change between contexts, the gender inequality and socioeconomic context is often the underlying driver (UN Women, 2019).

There are several examples of the intersection of climate change with civil, social, political crises and urban migration.

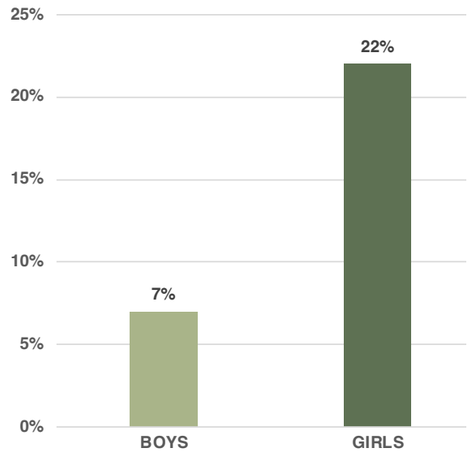
In Lebanon, the precarious livelihood of many women, including refugee women that work in the agricultural sector at Bekaa valley is negatively impacted by decreasing water resources. Since 2013, the displacement of people fleeing the Syrian conflict has multiplied the population and its demands for water. This, in turn, has amplified the environmental challenges and the impact on children (King-Okomu, 2016). Furthermore, since 2019, the country's economic troubles and economic disparity have adversely affected the most vulnerable children and their families. Broad protests and political crisis have prevented aid organisations from reaching those in need according to UNCEF's CLAC report in Lebanon (2020), and these challenges are amplified by intensified effects of floods, drought, coastal erosion and disease outbreaks (UNICEF, 2020). For example, more than 44% of 5,605 informal settlements assessed had experienced flooding at least once during the year, while 63% of those sites were flooded over more than half the site area (UNICEF, 2020).

Rejaul Karim

Denniz Futalan

Women and adolescent girls affected by disaster often face increased protection risks of Gender-based violence (GBV), exploitation and trafficking. Furthermore, a consequence of disaster is limited access to healthcare, and this can also impede women's and girls' access to life- saving health services, including reproductive and mental health services (UNHCR, 2022). Water scarcity represents a threat in the context of the COVID-19 pandemic and refugees. Many refugee/ internally displaced person (IDP) females do not have adequate access to water for washing their hands regularly (King-Okomu, 2016). The discourse of water scarcity in relation to refugee populations is a rising one in Lebanon and other host countries such as Jordan, as refugees may be perceived to put additional pressure on already scarce water resources (King-Okomu, 2016). Furthermore, UNICEF's CLAC in Lebanon reports the dangers posed by a lack of sufficient lighting and power supply in Lebanon contributing to social instability especially in informal settlements for women and children, as well as for people with disabilities and other vulnerable people (UNICEF, 2020). Poor access to services is also an emerging issue in some new areas within Kyrgyzstan where there is internal movement of people to Bishkek and Osh- resulting in informal settlements in surrounding peri-urban areas. The informal "Novostroika" settlements are largely characterized by poor access to services, including limited or non- existent schools and health facilities, unpaved roads, poor electricity and water supply, unregulated and unsuitable housing construction, absence of sewage systems and general unhygienic conditions. UNICEF CLAC in Kyrgyzstan reports that children living in Novostroika settlements may be unregistered, unknown to social services, and at risk of falling though social safety nets in terms of access to basic rights and protections (UNICEF, 2017a).

SCHOOL DROP OUT RATE DUE TO FLOODS



3. Girls and Women as Effective Actors and Agents of Change

Women and children represent the majority of displaced populations and are 14 times more likely than men to die during a disaster (UN Women, 2020), and patriarchal structures and gender norms means that women's and girl's voices are not necessarily heard. However, women also manage scarce resources and mitigate climate risks by utilizing their experiences, practices and traditional knowledge as stewards of many natural resources (UN Women, 2020). This makes them effective actors and agents of change in relation to both mitigation and adaptation. Moreover, examples of the roles women and men play as agents of change are context specific.

For example, women in dryland areas have garnered important knowledge related to environmental management for medicines, food, and water (UN Women, 2009). Women and girls in the Arab region, including those from rural and Bedouin or desert communities have developed valuable knowledge and skills in dealing with limited food or supply of water. In response, development organisations are closely involved in investing in water harvesting, watershed management, improved agriculture management practices, and introduction of crops and techniques suitable for desert areas.

UNICEF has engaged in consultations with young individuals in regions that were affected by climate- related shocks, in Senegal for example, to understand the impact of climate change on their lives (Andriamasinoro, 2021). UNICEF found from the discussions that children (girls and boys) were not given significant opportunities to air their views on issues related to climate change. UNICEF prepared a report titled "the climate crisis is a child rights crisis» that urged stakeholders to act at their respective levels.

Women and girls have been at the forefront of different initiatives aimed at building their resilience and adaptation capacities. The initiatives span across global, regional, national and community levels.

Mor Shani

WDO Photo Bank 2023

3.1. Global and Regional Initiatives

Over the course of the history of climate change efforts, civil society actors have operated in concert with the multilateral and transnational initiatives taking place to address climate change, notably in advocating for a focus on people, particularly women and girls, and people living in marginalized circumstances.

The UNFCC highlights the Feminist Action for Climate Justice Action Coalition as a good example of cooperation among governmental and non-governmental actors aimed at empowering women and girls globally to act on climate justice (Generation Equality Forum, 2021). In 2021, UNICEF developed the Children's Climate Risk Index (CCRI) that provides country rankings based on children's exposure to climate and environmental shocks, such as cyclones and heatwaves, as well as their vulnerability to those shocks based on their access to essential services. This is an effort to gather data and evidence to inform and shape DRR and CCA action for and with partners. UNICEF suggests that the data can be used as a programming tool to help prioritize actions for and with those most at risk of disasters and climate change impacts (UNICEF, 2022a).

The Network Gender CC - Women for Climate Justice group began to take shape at COP9 in Milan (2003), when a small group of civil society organizations LIFE, The Green Energy Provider (ENERGIA), and Women Engage for a Common Future. (WECF) hosted an informal meeting to discuss whether the issue of ‹gender' should be given more attention at the climate change negotiations (GenderCC, n.d. a). The network is driven by membership made up of women and gender activists and experts working for gender and climate justice all over the world including from Mali, Mauritania, Bangladesh, Indonesia, Pakistan, and Sudan (GenderCC, n.d. b). At the Bali Conference in 2007, the Gender CC network published several position papers articulating the women's and gender perspectives on the most pressing issues that resulted in increasing awareness, and a growing expression of commitment to gender justice from several stakeholders (GenderCC, n.d. b). As of 2022, the network's membership had expanded to 44 organizations worldwide.

During COP26, approximately 2,800 'non-party' organizations representing a wide variety of themes and interests across the civil society/ NGO and academic sectors had been invited to attend the event (UNFCCC, n.d. b). Of these, more than 60 were specifically focused on women and the environment, based in Qatar, Lebanon, Bangladesh, Egypt, Kazakhstan, Malaysia, Mauritania, Morocco, Algeria, Jordan, Iraq, Saudi Arabia, and others. Many of these organizations undertake a variety of environmental advocacy efforts on behalf of vulnerable women, while others work on women's rights in general that are affected by the issues caused by climate change. In 2010, the LAS, with the contributions of many regional technical institutes, UN agencies, the World Bank, IFRC, and civil society networks, developed the Arab Strategy for Disaster Risk Reduction 2020 (ASDRR), which was adopted by CAMRE in its 22nd session. The strategy is the commonly agreed regional framework to integrate DRR measures into development, while also helping to build regional, national, and local capacities in DRR (UNDRR, 2011).

The strategy aims to be in line with the global priorities for DRR outlined by the Hyogo Framework for Action, and the Sustainable Development Goals (UNDRR, 2011). The strategy notes the specific marginalization of women to climate change effects, notably around migration pressure, and commits to inclusion of gender disaggregated data for risk assessments (UNDRR, 2011). It also encourages particular consideration of the needs of "women, children and internally displaced persons and other vulnerable groups" in risk-reduction national policies and planning and their participation in capacity building, both individually and institutionally, via women's organizations (UNDRR, 2011).

3.2. National and Institutional Level

UNICEF's CLAC in Kazakhstan reports that there is growing global evidence points towards important linkages between environmental health and mental health. Thus, the School Parliament (SP) initiative in schools across the country is part of a broader engagement within Youth and Child Friendly Local Governance approach for bringing child and youth needs and rights into the daily routine of the local development planning and implementation (UNICEF, 2017a). The SP forum, which stimulates active engagement by youth, discussion, and debate, generates heightened climate change awareness amongst school children, influences school-level decision-making, generates action within the community and even impacts local government programs towards improved climate resilience and mitigation.

In Bangladesh, UNICEF's collaboration with the Department of Public Health Engineering (DPHE) in the development of climate resilient WASH services reduced the risk related to the inundation of drinking water points for vulnerable populations living in areas most prone to recurrent flooding. UNICEF reports show that user feedback strongly suggests that the double-platform raised tube-well have contributed to a reduction in hardship for vulnerable families in both flood and non-flood conditions.

Women particularly express the benefit of the ground-level platform, thereby confirming the advantage of this technology compared to the single raised-platform well. User feedback also suggests that the DPTs have contributed to the prevention of an outbreak of waterborne diseases during the floods (UNICEF, n.d. c). Moreover, in Bangladesh, where approximately 20 million people are exposed to the threats of increasing sea water intrusion into surface and ground water sources in coastal areas, UNICEF and partners have piloted and scaled-up Managed Aquifer Recharge (MAR), a technique which collects and treats water from ponds and roofs (rainwater) and injects it underground for storage and future use. The increased salinity has maternal and child health implications. Women in southwest coastal areas have a higher prevalence of gestational hypertension compared to women in other areas. The MAR system has the potential to be used throughout Bangladesh and in low-lying areas around the world to improve WASH climate resilience in the most vulnerable communities (UNICEF, 2018b).

In Pakistan, the Ministry of Climate Change updated its Nationally Determined Contribution by incorporating climate-resilient WASH, in line with the Clean Green Pakistan initiative (UNICEF, n.d. d). A core component of the revised strategy will be the addition of a fourth star for climate resilience to ensure that UNICEF and its partners' contributions focus on climate adaptation and the long-term sustainability of WASH services in schools for children. In 2021, a new Gender-Responsive Programming in WASH course was launched which covers four subject areas in relation to WASH programming: gender equality, gender analysis, gender in implementation, and gender in monitoring and evaluation (UNICEF, 2022b).

Kabiur Rahman Riyad

3.3. Community and Individual Initiatives by Women and Girls to Mitigate and Adapt to Climate Change.

The UNFCC states all individuals, regardless of gender, have a role to play in overcoming the climate crisis, implementing meaningful, effective, and long-lasting climate-resilient policies and promoting necessary systemic changes, however patriarchal structures and gender norms means that women's and girl's voices are not necessarily heard. Moreover, examples of the roles of women and men as agents of change are context specific.
Initiatives focused on empowering women and girls to participate in decision-making will help in improving adaption efforts in the longer term (UNFCCC, 2022b). Several UNFCC submissions noted that there is a lesser likelihood of dropping out of school when girls reside in a female headed household even in the event of a disaster – showing that women's empowerment will benefit children, particularly girls, and their long-term educational and empowerment opportunities (UNFCCC, 2022b). However, Plan International commissioned research to understand the disaster experiences and/or perceptions of adolescent girls (aged 10-19) and young women (up to 24), including in Indonesia and Pakistan, found that adolescents of both sexes may be "invisible" during disasters because they do not easily fit into the recognized categories of child or adult, and adolescent girls are often especially marginalised as they navigate the threats of becoming child brides, taking care of orphaned children, engaging in wage labour, working in reconstruction, fetching water and food and other responsibilities.
The research found out that while adolescent girls were potentially more visible, increasing their likelihood of receiving aid or support, also contributed to the risk of sexual exploitation and abuse (Shreve, 2018). Environmental activism by young people and women has intensified across the region over the past few decades, focusing primarily on environmental issues that affect public health, livelihoods, and essential services. Notwithstanding the challenges to civil society in many countries and at all levels, there is a range of youth, grassroots and community-led movements that operate to address climate change, many with a strong gender justice focus. A regional example is the Arab Youth Climate Movement (AYCM), an independent body founded in 2012 that works to create a generation-wide movement across the region to solve the climate crisis, and to assess and support the establishment of legally binding agreements to deal with the climate change issue within international negotiations. The International Climate Action Network was created in 2016 and conducted a range of networking workshops to link different national activist organizations.

Tedd Shaffrey - AP Images

Sekem

RISE 2030, a project managed by Sustain the World Organization and Sustainable Empowerment for Youth International, is a community-led initiative that focuses on women and youth empowerment, aiming at building capacity and improving living conditions of those living in deprived areas, through education, employment, and empowerment. It empowers women, youth, and refugees while contributing to Lebanon's climate transition by providing sustainable education and employment in the green sector in deprived regions of Lebanon (Rise2030, n.d.).
In Morocco, Dar Si Hmad, a women-led NGO, designed and installed the world's largest operational fog water harvesting system, an innovative solution to persistent water stress where fog is abundant, a technique inspired from ancient water practices to combat desertification. Dar Si Hmad's industry-leading Fog Collection Project, which uses fog nets to deliver potable water to resource-poor communities in Aït Baamrane, empowers women by distributing labor in more equitable ways and freeing time for women to focus on education and meaningful employment. Prior to the project, women spent more than four hours each day collecting water (Dar Si Hmad, n.d.).

In Egypt, SEKEM represents good practice in combatting climate change with a specific focus on gender in adaptation and mitigation in agriculture (Sekem, n.d. a). SEKEM includes a gender strategy which allows women the same opportunities as men in employment by helping to find a balance between work and family life. Additionally, SEKEM guarantees all the employees a safe working environment that is important for females who face opposition to working in places for fear of being harassed. The organization guides women on the application of biodynamic methods to address climate change (Sekem, n.d. b).
In Yemen, rural communities are recognizing the pivotal role of women after seven years of ongoing armed conflict (Sekem, n.d.a). Women play a valuable role not only in food security but also in land management and mitigation of the effects of climate change on water—which is already scarce (Sekem, n.d.b). Women farmers receive assistance from the International Development Association (IDA) to help harness water from irrigation canals and spate irrigation (which diverts water from rivers in full spate), as well as water conservation and integrated watershed management techniques (World Bank Group, 2022).

The World Bank funds Yemen's Emergency Crisis Response Project (ERCP) through UNDP Yemen and key national institutions, namely the Social Fund for Development (SFD), and the Public Works Project (PWP). Both have ambitious plans (World Bank Group, 2022). The extreme weather has had a devastating impact on farms, putting family livelihoods at risk. Yemeni female farmers have managed to mitigate these negative impacts (World Bank Group, 2022). Through access to training in farming techniques such as tending trees, fertilization methods, pesticide use, and when to spray agricultural production by women has been continued (World Bank Group, 2022).

In the United Arab Emirates, the Women in Sustainability, Environment and Renewable Energy Initiative (WiSER) is a joint effort between a renewable energy stakeholder in the private sector the Zayed Future Energy Prize which inspires women to become innovation catalysts, industry leaders and drivers of solutions. WiSER also addresses the lack of female representation in the renewable energy sector.

Consequently, several WiSER forums have been held globally to promote the role of women in industries that relate to sustainable and clean technologies. These platforms support women to engage in free dialogues about issues that relate to gender equality and entrepreneurship. In addition, WiSER focuses on positioning women at the core of challenges caused by climate change and enable them to create opportunities with minimal effects on the environment (Masdar, n.d.). Several other platforms that engage girls in climate change debates and discourse are emerging. One example is U- Report, a UNICEF's flagship digital platform started in 2011, to engage young people in programme priorities, emergency response and advocacy actions. It supports adolescent, youth, and community participation; and works as a tool to share information, raise awareness, and collect quantifiable data on specific areas that impact children, including the most vulnerable (Brookings, 2019). A recent global poll by the Girl Guides and Girl Scouts Poll on Climate Change and Gender Equality indicates that 53% of respondents know what climate change is and 55% have sometimes taken action to address climate change. Nonetheless, 38% feel that adults may support climate change projects initiated by youth, but do not join them. Moreover, 56% reported that the government has never requested youth opinion on policies related to the environment (U Report, 2021; WAGGGS, 2022), UNICEF has also partnered with Fridays For Future, an organization founded by Greta Thunberg, to foster dialogue and discussion around climate change and the role of youth activists to encourage a sharing of experience and action (UNICEF, n.d. e).

WiSER

UNICEF, Jordan, Nadia Bseiso

Jordan has a host of national strategies to address the impacts of climate change. The importance of girls' and women's participation and active role in the adaption to climate change is highlighted in the National Strategy and Action Plan to Combat Desertification 2015-2020[13], the National Biodiversity Strategy and Action Plan 2015-2020, and the National Water Strategy 2016-2025 (FAO, 2021). The Action Plan includes gender-sensitive investments to alleviate the disproportionate effects of decreasing food security and increasing poverty, as a result of deforestation. In doing so, the Jordanian Ministry of Agriculture and Arab Women Organization in cooperation with the International Union for Conservation of Nature (IUCN) revived the Hima system[14] that helps local communities to increase agricultural production and rural incomes in a sustainable and environmentally friendly way (FAO, 2014).

Moreover, more than 50% of the national strategies reflect the integration of Desertification, Land Degradation, and Drought (DLDD) into women's strategies (FAO, 2014). Additionally, the national water sector commits to include females as providers and users of water, as well as key actors in the protection of the environment. It also establishes mechanisms that ensure their engagement and participation in WASH activities.

13 The Desertification plan includes five main programs: (i) Desertification Information System; (ii) Drought Prediction and Desertification Control; (iii)Capacity Building and Institutional Development, (iv) Restoration of Degraded Ecosystems of Rangelands and Forests; and (v) Watershed Management.

14 Hima is a traditional institution of tenure which has governed rangeland resources in Jordan and the Arabian Peninsula for over 1400 years. Since then, the community-managed system has evolved slightly to signify the setting aside of land to allow regeneration and sustainable use of natural resources for the benefit of the communities living adjacent to it.

Sahara Forest Project, Inc

The Sahara Forest Project (SFP)[15] is a host for young Jordanian women to receive training in modern agricultural technology (Sahara Forest Project, n.d.). The project empowers young females to obtain job opportunities in the modern agricultural sector in Jordan. The project establishes a saltwater value chain that makes electricity generation from solar power more efficient and operates energy- and water-efficient salt water-cooled greenhouses for growing high-value crops in the desert (Sahara Forest Project, n.d.). To address a dysfunctional solid waste management system in Cairo, Egypt, women inside the Zabbaleen community represent an important potential in waste sorting and recycling (El Mahdy, 2016). A prominent social enterprise called "Upfuse" is working with local craftswomen in the Zabbaleen community[16]. Upfuse is an eco-friendly fashion model based in Cairo managed by three Egyptian young women. Upfuse creates jobs for local artisan women by integrating them into the creative process of transforming plastic waste into innovative products (Ismail, 2022). Roh El Shabab (Youth Soul)[17] NGO in cooperation with Upfuse teaches local women the process of cleaning, sanitizing, and compressing plastic bags. They also organize workshops for local women to cut and sew the plastic bags and turn them into fashionable products. Upfuse encourages local artisans and designers to work with eco-friendly materials and raises awareness about plastic bags over consumption (AbdElMoneim, 2022). Moreover, Upfuse extends its activities and concepts into Algeria. In coordination with GIZ Algeria, and the Algerian Ministry of Environment and Renewable Energy, Upfuse took part in "The Role of Women in the Local Economy Conference" where they taught 80 women how to open their businesses by using leftovers and waste of advertisement banners (Up-fuse, 2021).

15 Sahara project works with partners through a facilitated platform for innovation, not only focusing on the development of new technologies but also on the integration of existing environmental technologies responding to challenges in the food-water-energy nexus. R&D activities are taking place throughout the value-chain from conceptual development through design, modelling and testing to field implementation

16 Zabbaleen is the informal garbage collectors 'community located in Mokattam Cairo. They are immigrant from several areas across Egypt.

In Indonesia, adolescents are taking a change-maker role in local DRR governance by identifying key hazards and risks in their communities and offering solutions around problems of water supply in their village, exacerbated by drought-inducing conditions and hampered school attendance. As in other countries girls were the most affected, tasked with fetching water from long distances away from home. Adolescents installed drilled wells with motor pumps and worked with their parents to advocate with the village council resulting in the installation of five village wells. It also transformed attitudes about gender roles and adolescent participation as village level DRR strategies, plans and budgeting were enhanced by adolescent participation (UNDRR, 2020).

Also in Indonesia, undergraduate students of the Department of Geography, Universitas Indonesia, arranged mapathon events for hazardous event response in 2018 and 2019 following the Central Sulawesi earthquake and tsunami, Anak Krakatau tsunami and the Sentani flash flood. They implemented participative mapping to prepare and deliver a report and collected GPS and other data on roads, buildings, etc. for the three locations. They also conducted spatial data analysis that would help in responding to a hazardous event (i.e., coordinating delivery logistics or sending a medical team to the affected area) in coordination with several partners including the Indonesia National Disaster Agency and the Indonesia Geospatial Information Agency (UNDRR, 2020).

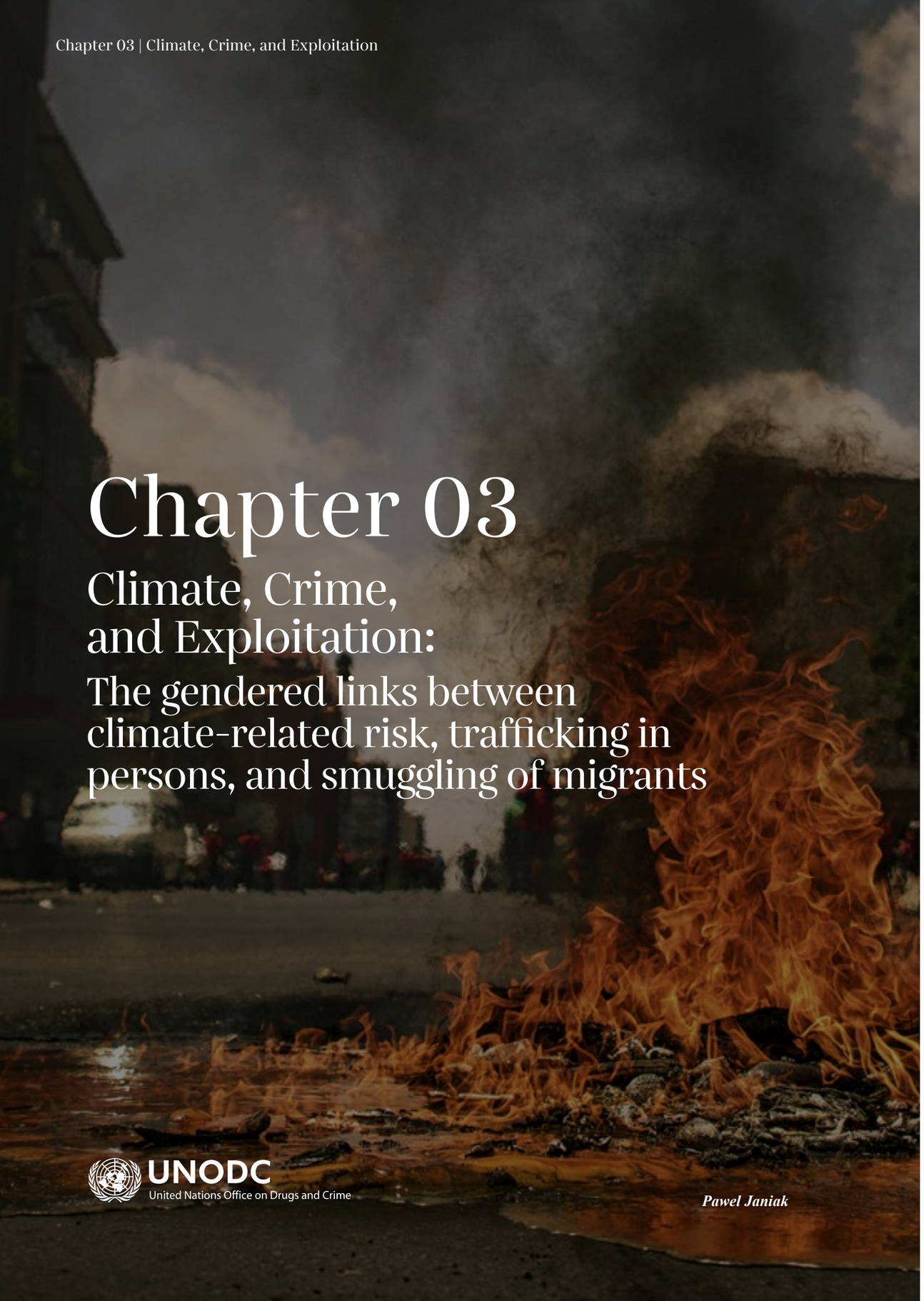
Yannis H.Uapa

17 Roh El Shabab NGO is helping local women in Manshiat Naser's community to continue their education,

Chapter 2 Conclusion

The impact of climate change today and in the future on girls is unquestionable as women and girls often face social, legal, and institutional barriers to basic education, employment, and owning property. This leaves many women and girls with limited access to platforms and decision-making tables in which they can advocate for their rights for climate change solutions. In all parts of the world including OIC Countries, women and girl's relationship with and dependence on ecosystems and biodiversity, land, and food security puts them at the front lines of climate action. Thus, there is a need for more engagement, resources, and capacities to close the gender gap in leadership, especially in climate policy and financing processes (Mung'ala, 2022). Therefore, gender equality, environmental justice and community resilience without explicit investment in climate mitigation and adaptation strategies that address the specific gender roles in water resource management and to secure the health, nutrition, wellbeing and education of generations to come, will not produce the expected results. Investments in girl-led movements and networks can ensure adolescent girls' leadership and adolescent girls-led solutions in disaster preparedness and climate action. By empowering adolescent girls and women as innovative decision-makers, local expertise and community level knowledge and practice will inform national policy, dialogue and advocacy with a gender-responsive approach and strategy. This approach, and its interlinked contribution towards Sustainable Development Goal 5, 13, 16, will enable holistic efforts to justice, resilience and peacebuilding. The effort to empower adolescent girls' leadership towards disaster preparedness is contributing towards development and economic growth at national level as well as strengthening communities and families (UNICEF, 2022c).

Yannis H. Uapa



Chapter 03

Climate, Crime, and Exploitation:

The gendered links between climate-related risk, trafficking in persons, and smuggling of migrants

UNODC
United Nations Office on Drugs and Crime

Pawel Janiak

Framing the Challenge

At least 3 billion people live in contexts highly exposed to the impacts of climate change (IPCC, 2022) and yet more to non-climatic environmental degradation and disaster. Even if the world meets the currently improbable target of limiting global warming to 1.5 C degrees set out in the Glasgow Climate Pact (Carver, 2022), extreme weather and environmental degradation will see the deterioration of ecosystems and loss of biodiversity depended on by billions. In climate vulnerable countries (Climate Vulnerable Forum, n.d.), children and future generations, women, the poor (among whom the majority are women (Sheu, 2021)), and Indigenous Peoples, are disproportionately impacted (UNFCCC, n.d.).

The international community is expanding its response and financing (Green Climate Fund, 2022). Mitigation measures aim to limit the damage by reducing and removing carbon, using regulation (like emissions limits) and technology (like artificial carbon sinks). Adaptation measures seek to help people survive sudden- onset disasters and reconstitute livelihoods undermined by slow-onset processes that degrade soils, rivers and forests. Additional factors threaten to exacerbate climate damage and undermine mitigation and adaptation strategies. Environmental crimes accelerate the destruction of natural resources and undermine the resilience of affected populations. The economic damage of COVID-19 has intensified competition for resources, increased the precarity of people on low incomes and with insecure migration statuses, and reduced the capacity of states to respond (UNODC, 2021a), as does the conflict and instability seen in some climate-vulnerable countries[18], such as those in the Sahel. Conflict and instability undermine adaptation measures.

This chapter explores how climate change, climate-related events, and crimes that affect the environment (UNODC, n.d. a) (environmental crimes) influence trafficking in persons (TIP) and smuggling of migrants (SOM) with special consideration of gender. It draws on expert interviews[19] and a desk review[20] to explore three key questions:

1.The effects of climate change, climate-related events, and environmental crime on TIP and SOM, and in particular its effects on women in Part 1. Climate, movement, and vulnerability.

2.How business practices shape exposure to TIP and SOM risk, in Part 2. Climate, industry and exploitation.

3.Current and emerging responses among policymakers, law enforcement, and civil society, in Part 3. Legal, policy and criminal justice responses.

4.The case of Bangladesh, a climate vulnerable and origin country for TIP and SOM, and a pioneer in adaptation, in Part 4. Environment and vulnerability in Bangladesh. The chapter concludes with Part 5. Framing the response and lists recommendations.

The analysis takes a human rights-based approach, integrating the United Nations Office on Drugs and Crime (UNODC) human rights and gender equality toolkit[21], which provides practical ways of integrating the protection of rights outlined in the United Nations Convention against Transnational Organized Crime (UNTOC) and sibling protocols on TIP and SOM into programmatic approaches. In particular, that approaches to countering TIP and SOM should not affect rights outlined under international human rights laws, including the 1951 Refugee Convention (UNODC, 2021b).

18 The IPPC identifies the following regions as particularly climate vulnerable: West-, Central- and East Africa, South Asia, Central and South America, Small Island Developing States and the Arctic. IPCC, Climate Change 2022: Impacts, Adaptation and Vulnerability.

19 UNODC would like to thank all the interviewees. Opinions expressed in the paper do not necessarily reflect those of interviewees.

20 Academic (Google Scholar and the Climate Migration Database (https://climig.com/) and grey sources, with a focus on the last three years.

21 See here: https://www.unodc.org/unodc/en/human-trafficking/glo-act2/gender-and-human-rights-toolkit.html

Part 1. Climate, Movement, and Vulnerability

Humans experience the effects of changes in their environment via sudden-onset events and slow- onset processes (Table 1) (IPCC, 2022). Both are caused, intensified or accelerated by changes in the climate, such as global warming or sea level rises, and non-climatic drivers, including poor or illegal environmental management practices. Often, they are linked: for example (sudden-onset) flooding is common in places experiencing (slow-onset) sea level rises (IOM, 2020). Industrial activity can exacerbate the effects, particularly resource-intensive projects from infrastructure to mass farming, alongside environmental crimes including illegal pollution, logging, and waste disposal.

Mehedi Hasan

	Climatic	Non-climatic
Sudden-onset events	Extreme weather such as cyclones, forest fires, extreme heat events	Landslide (e.g., due to deforestation), floods (e.g. due to eroded river banks)
Slow-onset processes	Drought, desertification, ocean warming and acidification, sea level rise, reduced rainfall, average temperature rises, coastal erosion	River pollution, natural resource overconsumption, biodiversity loss, loss of abundance, water insecurity (manmade)

Half the world's population currently experiences severe water scarcity for at least some part of the year (IPCC, 2022). Ocean warming and acidification, soil erosion and desertification are causing food insecurity and reversing gains in public health, and people are dying in extreme weather events, from heatwaves to cyclones. Impacts are uneven within societies. In extreme events, mortality among women is consistently higher (Sheu, 2021). Slow-onset events affecting agriculture disproportionately impact small-scale food producers and low-income households, which are themselves disproportionately headed by women. Children, elderly people and pregnant persons are further impacted (IPCC, 2022). Individuals, usually women and girls, are having to travel further to obtain water, exposing them to the risk of violence on lone journeys by foot (UNFPA, n.d. a). People with disabilities are often disproportionately impacted by climate-related emergencies with higher mortality rates and difficulty accessing emergency services (OHCHR, n.d. a).

Impacts are also uneven between countries. Drought in Australia from 1995 to 2009 and Spain in 2008 (Van Reisen, 2019) did not produce widespread food insecurity. Yet droughts hit Kenya, Ethiopia and Somalia hard, where the rural population relies on favourable weather conditions for livelihoods such as pastoralism and subsistence farming (Van Residen, 2019). Agricultural degradation and food insecurity has been a major driver of irregular arrivals to the USA from Central America's "Dry Corridor" . Food insecurity has knock-on effects for public health, which are keenly felt by women. Ethiopia's worst drought in 40 years threatens to derail gains in maternal and new-born health (UNFPA, n.d. b).

Adverse climate-related events require adaptation. National Action Plans — climate risk and adaptation strategies for lower developed countries introduced by the Cancun Adaptation Framework (UNFCCC, 2012) articulate a broad range of government-led measures, from disaster risk reduction (Ministry of Environment, Climate Change & Forestry - Kenya, 2018) to governance reforms. Even so, populations experiencing vulnerability such as women and the poor will need to take continuous action to manage and repair the harm done to lives and livelihoods.

22 Drawn mostly from IPCC. "Climate Change 2022: Impacts, Adaptation, and Vulnerability.

23 "The term «Dry Corridor» emerged in the last three decades to describe the increasing frequency and intensity of droughts in the region. These droughts are linked to El Niño events, which are occurring more frequently and intensely

Julie Ricard

Migration can help people adapt

Environmental change is clearly already playing an important role in migration decisions. Direct effects include forced displacement due to disasters and the gradual erosion of livelihoods. Indirectly, climate is a "threat multiplier" (Crisis Group, 2022) in situations that are already driving displacement, such as conflicts, economic crisis and discrimination based on sex.

Migration offers an opportunity for affected people to act, even if options are limited. From pastoralists searching for new pastures to cyclone victims finding shelter and work in cities, migration can and is successfully deployed to access safety and build for the future. In such situations, those who are unable to migrate may feel trapped by the inability to move. Women in male-dominated societies may have less decision-making power and a lack of resources, therefore finding it harder to exercise agency to move (Sheu, 2021).

Migrants seeking to reconstitute lost livelihoods tend to "move the shortest distance possible to find alternative work" (IOM, 2022). Slow-onset processes tend to drive these decisions more than sudden- onset events. Migration requires resources, which most people need time to gather, and in many situations these resources can be more difficult for women to acquire (Sheu, 2021). Victims of sudden, more extreme events tend not to have the time to plan or save (IOM, 2022) and so if they do migrate, they are less likely to be able to move long distances.

In other situations, movement is a temporary fix. Displaced populations may anticipate the swift resolution of disasters and aspire to return home (Van Reisen, 2019) thereby placing their focus on reintegration and rebuilding in hometowns and villages, though recovery will be more difficult in places where disasters repeat with regularity[24]. Factors like ancestral attachment, confidence in local survival strategies, and social capital may make people reluctant to migrate (Adams, 2016).

as a result of climate change and have had severe impacts on agriculture and food security in the region." Green Climate Fund. "Consideration of Funding Proposals - Addendum VI: Funding Proposal Package for FP174," September 2021 ,14. https://www.greenclimate.fund/sites/default/files/document/gcf-b-02-30add06.pdf.

24 Daniel Umi. Interview 28 ,3# June 2022.

Migration can put people at risk

Migration can also take place in unfavourable conditions that put people, especially women at risk of harm. Environmental events and processes do not in themselves cause trafficking in persons and smuggling of migrants.

However, they can create unfavourable conditions at three levels: personal, situational, and contextual (UN, 2008), with existing vulnerabilities exacerbated by environmental issues.

Personal

Economic hardships increase the supply of people seeking to migrate, with some looking to recruit and exploit people. People on lower incomes often depend on natural resource-based livelihoods, which are more likely to be disrupted by extreme weather events and other forms of environmental harm (Green Climate Fund, 2021a). People with insecure land tenure may find it more difficult to resist land grabs or access compensation. Depleted savings or resources make affected populations more susceptible to offers from traffickers that promise to restore livelihoods or cope with losses, such as those advertising fake or deceptive job offers, the "sale" of children, exploitative work arrangements, and coercive labour practices (IOM, n.d. a).

A lack of financial resources further limits the possibilities of migrating longer distances, instead limiting affected people to nearby opportunities in the same industries that undermined their initial livelihoods in the first place (Terre des Hommes, 2017), or making them dependent on potentially exploitative arrangements with agents. Traffickers usually recruit, rather than kidnap[25], through "manipulation of consent"[26] with threats attached to the lending of money (UNODC, n.d. b).

The process often begins with the voluntary engagement of a broker, agent or facilitator[27]. The process can be used to trap migrants in debt-based servitude. Traffickers may charge large, up-front payments for recruitment services or lending money to families then using the debt as leverage to compel victims into exploitative labour.

While economic hardship increases TIP and SOM risk, other factors may mitigate this. For example, families may choose access savings or sell off livestock and other assets during hard times[28]. Separately, disaster and hardship may disrupt the patterns of everyday life, such as cultural connections and rituals, that in fact reduce the occurrence of child trafficking through marriage (Van Reisen, 2019).

Rejaul Karim

25 Sometimes the opposite is true, for example cases in several Pacific Islands highlighted by Maebiru, Veronica, Samantha Ryan, and Julian Tung. "Sexual Exploitation of Children by Travelling Workers in the Solomon Islands," 31 August 2021. https://ecpat.org/wp- content/uploads/08/2021/Save-the-Children.pdf.

26 Noted by UNODC as far back as 2003 in the context of trafficking recruitment from Assam, India. UNODC. "Compendium on Best Practices by Law Enforcement Agencies," 2003. https://www.unodc.org/pdf/india/publications/compendium_best_practices_100_51.pdf.

27 Smuggler, when concerning unlawful international migration.

28 Ibid

Situational

Social norms, such as gender-based discrimination, make some groups in these situations more vulnerable than others . Understanding gender equality through an intersectional approach ensures that interventions are based on an understanding of the convergence of different backgrounds and characteristics. Intersectional characteristics such as ethnicity, race, religion, age, and class can compound discrimination based on sex and on gender roles founded upon the cultural meanings given to being male or female (UNODC, 2021b).
For example, female-headed households, perhaps resulting from the migration of male household heads, may face heightened stigma, difficulty in accessing the labour market, and therefore exposure to exploitation risk. Indigenous peoples who choose or are forced to migrate away from their traditional lands often face double discrimination as both migrants and as indigenous peoples (ILO, n.d. a). Taking this intersectional perspective into account to recognize interrelated factors can help stakeholders to dismantle the layers of inequality and discrimination that may hamper response to trafficking in persons and smuggling of migrants (UNODC, 2021b). This approach is coherent with the principle of leaving no one behind.
Migration itself may put people in a vulnerable situation through dislocation from supportive networks and protective social capital. Women and girls arriving alone or heading households may face stigma and specific risks from gender-based violence and trafficking. Internal migrants or internally displaced persons often lack resources and therefore settle among other socio- economically marginalised residents[30].

Contextual

The capacity of criminal justice systems or strength of government policies may be more limited, and there may have weaker protection mechanisms (IOM, n.d. a) in industries operating in climate-vulnerable countries. Environmentally harmful and socially exploitative commercial activity often takes place in remote parts of countries where the presence of the State is limited. Migration policies and legal frameworks in receiving states usually do not recognize climate- specific migration drivers as a legitimate reason for humanitarian protection. Few can access forms of managed mobility supported by the international community, such as resettlement, family reunification, or labour migration schemes.

Precarious legal status can be used as a means of control by traffickers who leverage victims' fear of repatriation, while people less knowledgeable about international travel or less able to pay may be more likely to turn to irregular migration. The latter may put them at risk of harm by aggravated forms of smuggling[31] and potentially trafficking, violence and extortion from other actors such as police, and risks related to lack of shelter, the geographic terrain, and lack of basic services on route[32]. This includes children "pushed into" unsafe migration by climatic events (UNICEF, 2019).

29 As elaborated in detail by the Report of the Special Rapporteur on Trafficking in Persons, Especially Women and Children, Siobhán Mullally, "Addressing the Gender Dimensions of Trafficking in Persons in the Context of Climate Change, Displacement, and Disaster Risk Reduction" 2022.

30 Interview 23 ,1# June 2022.

31 The UN Protocol on the Smuggling of Migrants refers to aggravated smuggling as circumstances: (a) That endanger, or are likely to endanger, the lives or safety of the migrants concerned; or (b) That entail inhuman or degrading treatment, including for exploitation, of such migrants. For further discussion, see also the UNODC report: "Abused and Neglected: A Gendered Perspective on Aggravated Migrant Smuggling Offences and Response." https://www.unodc.org/documents/human-trafficking/2021/Aggravated_SOM_and_Gender.pdf

32 Along just a small section of the Western Mediterranean irregular migration route to Europe, UNODC lists "Trafficking in persons, kidnapping, deprivation of liberty, sale of a person, inhuman and degrading treatment, and torture". December 2021, UNODC Observatory on Smuggling of Migrants-First Edition | 8. "Migration Smuggling to Morocco and the Western Mediterranean." ArcGIS StoryMaps, 24 May 2022. https://storymaps.arcgis.com/stories/02059636e2fb441f8cd074a310869d7e.

Priscilla du Preez

Part 2. Climate, Industry and Exploitation

Some industries pose specific environmental and social risks

The private sector is well-positioned to strengthen and undermine both mitigation and adaptation strategies, to the benefit or detriment of stakeholders such as workers and their families in climate- vulnerable countries (OECD, 2021). Even where environmental safeguards are robust, business models dependent on raw materials, land, and other natural resources can have a significant environmental impact. Illegal practices or the manipulation of the law or officials to provide legal cover pose additional risks.

Measuring the impact of such environmental harm is difficult and an ongoing task . Nevertheless, some industries are more often than not associated with environmental harm and its social consequences, including those in the renewables sector. Fisheries, cattle ranching, gold mining, brick kilns, palm oil, wind power, and solar panels all have relatively high incidences of forced labour .TIP risks are not always obvious, as transnational supply chains are hard to map. The renewables sector faces the challenge of ushering an era of green energy justly, with-out the collateral of negative social outcomes

Industry-led environmental harm can increase the threat already posed by climate change. In the Bangladesh Sundarbans (more detail in Part 4), sea level rises, saltwater flooding to create shrimp ponds, and land grabs have reduced the availability and viability of land for homestead crops or fruit cultivation (Environmental Justice Foundation, n.d.). This followed land loss in earlier decades due to mangrove destruction, which quickened soil erosion and increased the vulnerability of farming land to flooding. An upstream dam and overfishing further undermined fishing livelihoods, increasing dependence on day wages.

The adverse social consequences can be further multiplied by the risk factors described in section one. Deforestation in Indonesia, Brazil and elsewhere by environmentally degrading industries including cattle, timber, mining, charcoal, and palm oil lead to insecurity of land tenure for local communities, undermining small-holder farming and the ability of communities to leverage their land for other commercial activities . The privatisation and nationalisation of rangelands places pressure on transhumance, a centuries-long and global adaptation strategy (Rayamajhi, 2020). Resistance by individuals in climate-vulnerable countries can further heighten vulnerability . Protests against land insecurity around the world have been linked to violent intimidation and murder, as well as sexual harassment, which disproportionately affects women and girls.

Resource-intensive industries are often labour-intensive too. Where labour demand cannot be filled locally, labour recruiters often step in to source workers from further afield. Such industries are often present in contexts that share other key factors risk factors in common, including “informal markets and operations; low wage and seasonal work; inherently dangerous working conditions; operation in remote and isolated environments removed from monitoring and enforcement, and diffuse illegal extraction of natural resources that increasingly attracts transnational criminal organizations as natural resources become more scarce” (Decker Sparks, 2021). In Thailand, most workers in the shrimp processing industries are migrants from Myanmar (UNODC, 2018) and roughly 20- 30 per cent are working in conditions amounting to forced labour and may have been trafficked (Accenture, 2013). The migration of workers often creates a demand for an auxiliary workforce too, such as prostitution or manufacturing factories often, filled by trafficked boys, girls, and women . Extreme weather events increase vulnerabilities in the affected population but also generate demand for labour. Reconstruction efforts can create an urgent need for labour, namely in construction where the trafficking risk is greater. For example, research shows the movement of labour from the agricultural to construction sector in response to earthquakes in Indonesia ; Thai nationals may have been trafficked to help with the reconstruction effort of Hurricane Katrina (Sheu, 2021).

Martin Reeve, Bangladesh - UNODC

33 Interview 25 ,13# July 2022.

34 For a discussion of the research into sectors with a high incidence of forced labour that also contribute to climate change, biodiversity loss, and environmental crimes, see GFEMS. “Contribution to OHCHR Call for Inputs: Trafficking of Persons in the Context of Climate Change,” May 2022 ,12. http://owncloud.unog.ch/s/kFQa8RmZP4mSGn9.

35 Farakka Barrage in India.

36 Deforestation further undermines mitigation strategies through reduced carbon sequestration. University of Nottingham Rights Lab. “University of Nottingham Rights Lab (Dr Bethany Jackson) Contribution to OHCHR Call for Inputs: Trafficking of Persons in the Context of Climate Change,” May 2022. http://owncloud.unog.ch/s/kFQa8RmZP4mSGn9.

37 In the transition minerals sector, Indigenous Peoples are disproportionately represented among human rights defenders and particularly at risk. GFEMS. “Contribution to OHCHR Call for Inputs: Trafficking of Persons in the Context of Climate Change.”

38 This has been reported in the mining and wider extractives sector. See for example Steele, Sarah. “Human Trafficking, Labor Brokering, and Mining in Southern Africa: Responding to a De-centralized and Hidden Public Health Disaster.” International Journal of Health Services: Planning, Administration, Evaluation 43, no. 80–665 :(2013) 4. https://doi.org/10.2190/HS.43.4.e

39 The study looks at how labour markets change in the after-math of natural disasters but does not explicitly make a link with trafficking. Kirchberger, Martina. “Natural Disasters and Labor Markets.” Journal of Development Economics 125 (March 58–40 :(2017. https://doi.org/10.1016/j.jdeveco.2016.11.002

Regulation is improving but limited in scope and enforceability

Responsible practices in the private sector are driven by a variety of forces, from intrinsic ethical standards, local and international laws and regulations, civic responsibility and industry standards, and the choices and pressures put on them by stakeholders in their business, such as customers. Efforts to formally regulate the environmental and social risk reporting of the private sector are advancing (European Union, n.d.) but are likely to remain limited in terms of the number of companies and sectors covered by the regulations and their explicit attention to gender- and migration-sensitive details. Regulation is challenged by enforcement difficulties in sectors that operate where monitoring and enforcement is difficult[40].

The responsible investment and business conversation is well-positioned to act

Investors from pension funds to development finance institutions have unique leverage over companies that depend on their capital. Investors determine the price at which companies in their portfolio can access capital and can set standards for how companies assess and mitigate risks related to the environment, social issues, and companies' internal governance standards (ESG). Most progress has been made around environmental standards, with social issues lagging behind (and the links between the two even further behind).

Even the leading standard-bearers have made limited progress in integrating migration and mobility concerns. For example, the International Finance Corporation's (IFC) Performance Standards (IFC, 2012) are routinely applied to major infrastructure, extractives, and renewables projects across climate-vulnerable countries. The IFC standards require robust assessments of involuntary displacement, refer to the "negative socioeconomic impacts of displacement" and require "livelihoods restoration plans" (IFC, 2012) where relevant, and attention to the risk of forced labour in the workforce and supply chain[41].

A recent review of the Green Climate Fund's Environmental and Social Safeguards similarly identifies the risks of forced labour in the supply chain and trafficking victims in the workforce (Green Climate Fund, 2019). Neither tackle the
A recent review of the Green Climate Fund's Environmental and Social Safeguards similarly identifies the risks of forced labour in the supply chain and trafficking victims in the workforce (Green Climate Fund, 2019). Neither tackle the
potential for portfolio companies to create TIP risk through their own commercial activities, though other GCF documents do.

The initial challenge is to make the link between commercially driven environmental harm and TIP risk more visible. For example, while companies are expected to compensate people displaced by their projects, the displaced persons' integration — and potential exploitation — at destination are not routinely considered. This may mean that social protection mechanisms, local authorities and local law enforcement at destination are unfairly burdened without compensation[42].

40 For example, in the Sundarbans, much land-based processing is completely unmonitored. Jackson, Bethany, Doreen S. Boyd, Christopher D. Ives, Jessica L. Decker Sparks, Giles M. Foody, Stuart Marsh, and Kevin Bales. "Remote Sensing of Fish-Processing in the Sundarbans Reserve Forest, Bangladesh: An Insight into the Modern Slavery-Environment Nexus in the Coastal Fringe." Maritime Studies 19, no. 1) 4 December 44–429 :(2020. https://doi.org/10.1007/s7-00199-020-40152.

41 Except a requirement not to employ trafficked persons.

Martin Reeve-UNODC

The business case for more ethical practice faces challenges

Compelling commercial arguments for responsible practices and compliance with international standards (the "business case")[43] can complement regulations, human rights-based imperatives, and investor-driven standards. Businesses may be concerned about reputational damage caused by negative media exposure of human rights abuses. Conversely, businesses and supply chains that pay attention to worker welfare can reap commercial benefits in the form of productivity, staff retention, and more lucrative contracts from ESG-conscious buyers (Ethical Trade Initiative, n.d.; IFC, n.d.; ILO, n.d. b). Market dynamics can blunt the persuasiveness of the business case, especially among smaller business owners operating in sectors with tight margins. Depletion of fish stocks in Thai fishing[44] has placed downward pressure on working conditions as business owners try to survive in an increasingly competitive industry. Likewise, companies struggling to compete in the global construction sector may reduce working conditions and costs to compensate for the rising costs of raw material (Seefar, 2020). Global Warming will exacerbate this, as the costs of maintaining essential infrastructure such as buildings, transportation and energy increase, resulting in higher demand for cheap labour (IPCC, 2022).

42 More commonly, law enforcement would receive funds to maintain security at production sites.

43 Where companies view sustainable practice not (just) as the right thing to do but actually as profitable.

44 14 per cent of what they were 50 years ago. Brown, David, Doreen S Boyd, Katherine Brickell, Christopher D Ives, Nithya Natarajan, and Laurie Parsons. "Modern Slavery, Environmental Degradation and Climate Change: Fisheries, Field, Forests and Factories." Environment and Planning E: Nature and Space 4, no. 2 (1 June 2021): 191–207. https://doi.org/10.1177/2514848619887156.

Part 3. Legal, policy, and criminal justice responses

Climate policies rarely integrate criminal justice perspectives

While the Intergovernmental Panel on Climate Change (IPCC) noted the links between climate change and migration as early as 1990 (Milan, 2014), migration has only been seriously considered in climate policy since the 2010 Cancun Adaptation Framework (IOM, 2022), and even then, without a clear link to its gendered dimensions (Gender Climate Tracker, 2016). Despite acceptance that the adverse effects of climate change affect women and men differently, most analysis of climate-related migration remained gender-neutral well into the 2010s (IOM, n.d. b).

The Nansen Initiative is probably the most advanced in highlighting the increased risks to unsafe migration and trafficking of people affected by climate change and disasters (Nansen Initiative, 2016). The IPCC notes that extreme weather and climate impacts increase violence against women and girls, including through TIP (IPCC, 2022). In 2022, OHCHR's Special Rapporteur on the promotion and protection of human rights in the context of climate change (OHCHR, 2022) noted the vulnerability to exploitation of those without legal status (OHCHR, n.d. b). Despite this, TIP-climate links are rarely made explicit. Submissions to the Special Rapporteur on trafficking in persons, especially women, and children, in the context of her report to the General Assembly in 2022 focusing on TIP and climate change (OHCHR, n.d. c), in many instances recognise that climate-related risk factors, such as poverty, coincide with TIP- and SOM-related risks.

For example, while "Tropical Cyclone Yasa and Tropical Cyclone Ana, which hit Fiji in December 2020 and January 2021, respectively, destroyed entire villages and crops, forcibly displacing people, and putting them at risk of trafficking;" attention to the climate change-trafficking nexus is notably absent[45]. At the multilateral level, the 2015 Paris Agreement makes passing reference to migrant rights (UNFCCC, 2015). The Global Compact on Migration aims to both eradicate trafficking in persons and support climate-related migration (UN, 2018) but does not link the two. The Sendai Framework for Disaster Risk Reduction (UNDRR, n.d.) notes the need for shelter and food to displaced persons and alternate livelihoods but does not consider TIP explicitly.

Regional and international agreements and dialogues tend not to make explicit the links between environmental harm and TIP/SOM-related vulnerabilities. They include the Paris Agreement, which emphasises gender equality and the empowerment of women, The African Union Climate Change and Resilient Development Strategy and Action Plan (2022-2032) (African Union, 2022), which is strong on migration, and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) General Recommendation No. 37 on gender-related dimensions of disaster risk reduction in the context of climate change, which specifically links climate change as a women's human rights issue to conflict, migration, and displacement (CEDAW, n.d.). The United Nations Security Council Resolution 1325 (UNSCR 1325) on Women, Peace and Security recognises the disproportionate impact of conflict on women and girls but those displaced do not enjoy the same policy attention as those still present in conflict.

Frameworks that do integrate a TIP and SOM perspective usually adopt a risk-reduction lens, placing emphasis on the agency of populations experiencing vulnerability to adapt. The Nansen Initiative, for example, analyses human rights law but not transnational organised crime frameworks, as would UNTOC. Opening the adaptation policy debate to criminal justice perspectives may both increase the effectiveness of adaptation strategies and reduce the burden on people in vulnerable situations.

45 See Commonwealth Human Rights Initiative's submissions to the OHCHR call for inputs Trafficking of persons in the context of climate change. https://owncloud.unog.ch/s/kFQa8RmZP4mSGn9.

Climate financing could meaningfully tackle TIP/ SOM vulnerability

"Few migration-focused activities are financed by global climate and environmental financing instruments" (IOM, 2020) but the alternative livelihood components of major financing instruments[46] tackle common risk factors. Securing land tenure and supporting sustainable livelihoods is a central aim of the $12 billion Forests Fund (UN Climate Change Conference UK 2021, 2021). Under its 'Livelihoods of people and communities' results area, the Green Climate Fund will support the financial resilience of populations experiencing vulnerability[47].

There is scope to link livelihoods activity more explicitly to TIP and SOM risk. A second synergy is where climate financing tools aim to tackle environmental crime. Such crimes often contribute to or exacerbate the effects of slow onset climate and environmental damage. More robust measures to tackle marine pollution, for example, will both support climate goals and temper ocean acidification, which is reducing the viability of fishing as a livelihood and in certain places driving people to situations of exploitation.

Asif Iqbal Hridoy

46 Including the Global Environment Facility, Green Climate Fund, Adaptation Fund, Special Climate Change Fund, and Least Developed Countries Fund. Drawn from UN Framework Convention on Climate Change. "UNFCCC Topics." Accessed 26 June 2022. https://unfccc.int/topics#:11565fd6-dd29-4d61-8085-27dba428982f:997d8988-ae1e-434f-9035-3f2725e48eac. Also the Forests Fund. UN Climate Change Conference UK 2021. "The Global Forest Finance Pledge." UN Climate Change Conference (COP26) at the SEC – Glasgow 2021, 2 November 2021. https://ukcop26.org/the-global-forest-finance-pledge/.

47 Green Climate Fund. "Livelihoods of People and Communities." Text. Green Climate Fund. Green Climate Fund, 27 May 2021. https://www.greenclimate.fund/results/livelihoods-people-communities. The Green Climate Fund released a Gender and Social Inclusion Manual in 2018. Although it does not explicitly mention migration, TIP or SOM, it makes mandatory initial social assessments that "determine how the project/programme can respond to the needs of women and men in view of the specific climate change issue to be addressed", among other direction. Green Climate Fund. "GCF Gender Equality and Social Inclusion Policy and Action Plan 2018–2020," 2018. https://www.greenclimate.fund/sites/default/files/document/gcf-b19-25.pdf.

Emergency responses are more sophisticated than slow onset

Slow-onset processes get less attention from governments and international agencies concerned with the trafficking risk of high-profile sudden-onset disasters[48]. The response to the trafficking risk in emergency contexts has been well established over the last two decades, with the aftermath of the 2004 Tsunami in South Asia.

2006 | Protecting Persons Affected by Natural Disasters: IASC Operational Guidelines on Human Rights and Natural Disasters[49]

2008 | UNODC published its Toolkit to Combat Trafficking in Persons, which included IOM's counter-trafficking practices in post-tsunami Indonesia (UNODC, 2008)

2009 | IOM initiatives following Cyclone Aila in Bangladesh

2010 | IOM helped set up rapid response teams comprising national and international immigration officers, police, and customs officers in Haiti to respond to border emergencies after the 2010 earthquake (IOM, 2015)

2010 | UNHCR's response to 2010 floods in Pakistan

2011 | IASC published Operational Guidelines on the Protection of Persons in Natural Disasters with additional references to counter-trafficking efforts in an emergency response[50]

2013,15,16 | IOM's response to Typhoon Haiyan in the Philippines in 2013 and landslides in Myanmar in 2015, and Hurricane Matthew in Haiti in 2016

2015 | IOM, UNICEF, and AWO International worked with local NGOs in Nepal to run prevention campaigns on trafficking and unsafe migration. UNICEF and the Nepal Police established checkpoints in earthquake-affected districts to intercept child trafficking victims (UN, 2015).

While the risk of trafficking in humanitarian emergencies is severe, the scale is greater outside of emergency contexts, where established recruitment patterns and irregular migration routes intersect with worsening conditions to create a more ready supply of potential victims (Bhardawaj, 2022). Moreover, the focus on emergency contexts can mean that "those most affected are positioned only as victims, with limited opportunities to participate in the design of policies" affecting them (OHCHR, 2022).

Climate change will stretch the capacity to protect and prosecute

With an increase in the unlawful exploitation of both climatic and non-climatic sudden and slow environmental impacts, the rule of law and role of litigation in preventing crime and protecting its victims is increasingly important. Where climate change litigation has been comparatively rare, greater public consciousness may be making it more common (Burianski, 2021). As one example among many is the lawsuit brought by civil society organisations against the governments of Tanzania and Uganda before the East African Court of Justice seeking an injunction to stop the East African Crude Oil Pipeline, alleging improper environmental, social, human rights and climate assessments (Global Climate Change Litigation Database, n.d.).

Yet the scale and fast-changing nature of the challenge threatens to overwhelm limited capacity. In many contexts, law enforcement are the first responders to climate-related disasters as well as the consequences of slower-onset events, including conflict emanating from tension over scarce resources, youth in vulnerable situations being recruited by armed groups (Carrilho, 2019), and TIP and SOM. Meanwhile, the frequency and severity of extreme events is already overwhelming some governments' capacity to respond, especially those whose economies have been hard hit by COVID-19, such as the Pacific Island States (Maebiru, 2021).

48 Although despite progress, humanitarian responses have typically been less concerned with TIP aspects and assign it fewer resources. Mirjam, van Reisen, Mawere Munyaradzi, Stokmans Mia, and Gebre-Egziabher Abraha Kinfe. Roaming Africa: Migration, Resilience and Social Protection. Langaa RPCIG, 2019.

49 Inter-Agency Standing Committee (2006). "Protecting Persons Affected by Natural Disasters: Operational Guidelines on Human Rights and Natural Disasters".

50 Inter-Agency Standing Committee (2011). "Operational Guidelines on the Protections of Persons in Natural Disasters".

Antoine Pluss

Part 4. Environment and vulnerability in Bangladesh

Introduction[51]

This case study explores the links between environmental change and trafficking in women and girls between south Bangladesh and major cities in India. Evidence is drawn from interviews with 25 representatives of government, private, civil society, and criminal justice sectors, and survivors of human trafficking conducted in August 2022 during a field visit to four districts in Bangladesh's Khulna Division: Bagerhat, Jashore, Khulna, and Satkhira.

Climate-related impacts will intensify over the coming decades

Bangladesh is the seventh most climate-vulnerable country in the world (Eckstein et al, 2019). Sudden- and slow- onset climate change events have caused loss to life, property, and productive assets nationwide[52].
Over the next 30 years, average temperature, sea level, and precipitation increases could make cyclones more intense and expand flood-affected areas by 20 percent (Asian Development Bank, n.d.)[53]. In some places, industrial development has reduced the dependability of water, air, and other natural resources, even as it has created jobs that may benefit those displaced by extreme weather and other events.

Migration and mobility will remain important

Migration has been an important response to climate change, among other risks and opportunities. At least 7.8 million Bangladeshis live abroad (UNDESA, 2022) and remittances doubled between 2010 and 2020 (before halving again in a single year, 2022) (BMET, 2020). Rates of internal migration – voluntary internal migration to forcible displacement – are even greater[54].
Bagerhat, Jashore, Khulna, and Satkhira districts contain key points of origin, transit, and destination. Before the opening of Padma bridge these districts were 5-7 hours' drive from Dhaka, where many women from the region work in households, the garment sector, and prostitution. There has been chain migration[55] of mostly men from some villages now referred to as "mini-Malaysia" and "mini-Kuwait".

51 This case study has been developed in the framework of GLO.ACT – Bangladesh, a joint initiative by the EU and UNODC being implemented in partnership with IOM, led by the Government of Bangladesh. Through targeted, innovative, and demand-driven interventions, the project aims to support the Government of Bangladesh and civil society organizations to more effectively fight the crimes of human trafficking and migrant smuggling across the country. The project works on developing evidence-based information on trafficking and smuggling patterns and trends, legislative review and harmonization, capability development of criminal justice actors, and international cooperation. The project also provides direct assistance to victims of human trafficking and migrants in vulnerable situations through the strengthening of identification, referral, and protection mechanisms.

52 Around a third of the Bangladesh resident population lives in coastal districts exposed to extreme weather. Bangladesh averages 4.1 tropical cyclones per year, of which 1.7 are 'intensive', affecting 45 million people and causing $9 billion in damages in the last 30 years. International Union for Conservation of Nature, Tropical Cyclones: Impact on Coastal Livelihoods, Accessed 21 July 2022, https://www.iucn.org/sites/default/files/import/downloads/iucn_tropical_cyclones_bangladesh.pdf and EM-DAT – The International Disaster Database (D. Guha-Sapir), CRED, UCLouvain, Brussels, Belgium, available at: https://www.emdat.be/.

53 Among other impacts.

54 Urbanisation in the 2000s was the fastest in South Asia. Floods and storms displaced over 8 million between 2019 and 2021 alone and climate IDPs may number 20 million by 2050. Alam, Md. Zakiul, and Abdullah Al Mamun. "Dynamics of Internal Migration in Bangladesh: Trends, Patterns, Determinants, and Causes." PLoS ONE 17, no. 2 (14 February 2022): e0263878. https://doi.org/10.1371/journal.pone.0263878.

55 Chain migration refers to the process in which migrants to a particular destination inspire or help others from their place of origin to follow them. Ethnic or family ties or recruitment practices may all play a role. Often "primary wage earners migrate first, followed by secondary or non-wage earners." European Commission. Accessed August 22, 2022. https://home-affairs.ec.europa.eu/pages/glossary/chain-migration_en

TIP trends take place against a backdrop of Foreign and domestic investment and job creation in Bangladesh is also creating jobs. Mongla Sea Port is both a transit point for (irregular) travellers to Malaysia and heralded as a growing destination for internal climate migrants (Alam, n.d. .). And though long-seen by TIP analysts as critical nodal points for TIP ,Jashore and Khulna cities have become destinations for small scale traders and relocating farmers, many of whom are relatively prosperous.
Migration and remittances have come to play an important role in household and national finances, as well as providing social and other benefits, but for many, come with a heavy cost. Though comprehensive data on trafficking in persons and smuggling of migrants does not exist, the evidence shows that human trafficking persist in the country . For example, in 2018, Bangladesh documented 355 rescues of internal TIP victims, 1,400 border interceptions, and 119 repatriations from India alone (Government of the People's Republic of Bangladesh, 2018), figures that are unlikely reflect the full scale .
In interviews, it was reported that women and girls were trafficked in the past 1-2 years and sexually exploited in Maharashtra and West Bengal and there was an increasing trend of traffickers leveraging promises of stardom via Tik Tok and other social media. Internal trafficking, even within the district, may be common but largely undocumented. In the past, villages in Khulna provided boys, trafficked for camel racing.

Shuvro Mojumder

56 A National Study on Trafficking in Persons in Bangladesh is being finalized by the Government of Bangladesh with the support of UNODC, and with the financial support of the European Union in the framework of GLO.ACT- Bangladesh (forthcoming).

57 Globally, TIP's clandestine nature means that the number of detected cases is almost definitely below the actual number of cases. UNODC. "Multiple Systems Estimation for Estimating the Number of Victims of Human Trafficking across the World," June 3, 2016. https://www.unodc.org/documents/data-and-analysis/tip/TiPMSE.pdf.

58 Ibid.

Disaster and slower degradation are mostly making lives harder

Sudden-onset events such as Cyclone Amphan and monsoon ‘super floods’ in 2020 are just two examples of increasingly frequent events that cause loss to life, land, livestock, and homes. A survey showed that storm risks were most widespread in Satkhira (96 percent of households) and Bagerhat (85 percent) and flooding risk significant in Bagerhat (33 percent) . Another survey showed waterlogging, a latent effect of Cyclone Amphan combined with heavy rainfall, affected the most households in Satkhira (Start Network Bangladesh, 2020). Separately, humanitarian responses repeatedly highlight the trafficking risk to affected women and girls where protection responses are inadequate (UN RC Bangladesh, 2020).

Slow-onset processes can devastate livelihoods, though their impact is more difficult to quantify. Across the region, affected communities have made changes to adapt, many switching from subsistence activities in farming, fishing, and forestry activity to paid work in the same or new and emerging sectors. Initially, widescale rice farming gave way for land-based fish farming, particularly shrimp. The farmers who remain must contend with erratic, unreliable seasons. Farmers must often adapt multiple times: some farmers who took loans in 2021 to diversify their crops in response to changing weather patterns have begun defaulting as reduced rainfall in 2022 has meant a poor return on investment .

Alongside cyclones and sea level rises, human interference — from dams designed to hold back floodwaters to intentional saltwater flooding — have made freshwater ponds and rivers more saline . Salinity intrusion makes it harder for saline intolerant crops, trees, and fish to grow, as well as reducing the availability of fresh drinking water for humans and livestock alike. It triggered the rapid rise in land-based fish farming and now programmes exist to support the growth of saline- resistant crops and trees, the latter part of well-established reforestation and afforestation programmes.

The struggle for centuries old Sundari trees to survive in saline waters , as well as illegal logging, undermines the area’s natural defences against extreme weather. As subsequent floods and cyclones reach further inland, freshwaters become more brackish, killing more trees. The result is a vicious cycle between sudden- and slow-onset impacts, exacerbated by lawful and unlawful natural resource exploitation.

The consequences for local people are more devastating extreme weather events without the protective cover of the trees. This leads to increased losses, driving financial precarity and potentially the fallback on negative coping mechanisms, including TIP.

Martin Reeve UNODC

59 Note the survey employed a stratified sampling approach with measures to include districts affected and unaffected by recent cyclones and floods. See Eskander, Shaikh, Paul Steele, Mamunur Rashid, Nuzhat Imam, and Sirazoom Munira. “How Poor Rural Women in Bangladesh Are Paying Most for Climate Risks,” May 2022. https://pubs.iied.org/sites/default/files/pdfs/2022-05/20851iied.pdf

60 Disruption to Bangladesh’s six seasons (sadartu) is making it harder for farmers to know when to plant and harvest, affecting yield.

61 The natural tilt of the Bengal Basin approximately 1,000 years ago predisposed the Sundarbans to higher than average levels of salinity. Aziz, Abdul, and Ashit Ranjan Paul. “Bangladesh Sundarbans: Present Status of the Environment and Biota.” Diversity 7, no. 3 (September 2015): 242–69. https://doi.org/10.3390/d7030242.

62 Bangladesh Forest Department. “Bangladesh Forestry Master Plan 2017-2036.”

Climate-related losses can increase risk exposure to trafficking

Traffickers still favour those in financial difficult and ‘ordinary’ people sometimes turn to trafficking when they face financial difficulty themselves. Environmental disasters can tip people in financial difficulty over the edge, making job offers that may have come across as dubious seem timely and relevant. As one survivor shared, “during floods, I used to live in complete poverty with in sufficient food… when someone promised me a high income [through work abroad] … I thought she was just thinking about my family”[63].

In the Sundarbans, where poverty and forced labour are documented but less visible, “the situation is so desperate that women are catching cow dung for fuel before it has even fallen to the ground”[64].

The desperation is underlined by the wages on offer in the fake jobs presented, in one case just BDT 10,000 (USD 105), which is just a little higher than she would have received in a shrimp processing factory and less than a school teacher would get[65].

Financial leverage often combines with the convenience of location and the disappearance of family and community protections. People on the move, whether displaced or not, and those living in non-traditional (or “broken”) families, were targeted by traffickers. Survivors described traffickers, mostly known to them and therefore somewhat trusted, travelling with them over the border and effectively delivering them to new employers.

Women and girls face specific financial and cultural challenges

Gender-based violence, especially of female-headed households, perpetuates social norms that are used to justify the exploitation of women[66]. High levels of male labour emigration, driven by limited local opportunity among other factors, makes female-headed households in some areas relatively common.

Divorcees, orphans, step-children — most frequently female — are more likely to be dependent on non-direct family members, who may leverage familial trust to deceive. Other environmental issues can entrench patriarchal norms and make women more vulnerable.

Freshwater shortages contribute to hardship, the desire to migrate, and sexual exploitation.

Women and girls must travel further distances for drinking water, increasing risks of sexual harassment on isolated routes[67]. With proper hygiene impossible, some take contraceptive pills to interrupt menstrual cycles[68].

Women and girls working in land-based fishing face harassment from male owners and workers, especially those “required to dive under the water to catch shrimp fry”. The sighting of saltwater crocodiles, now more comfortable in the brackish waters near farms, adds terror to precarity[69].

When there’s flooding, children cannot go to school, and harassment may increase[70].

63 Interview #31, 12 August.

64 Interview #17, 11 August.

65 In high season, the work of shelling and beheading shrimps can fetch BDT 8,000-10,000, depending on performance. Interview #21, 10 August.

66 Interview #26, 14 August.

67 interview #16, 10 August. Our interview suggested they now had to walk 5-6km which, if true, is nearly double UNDP’s 2021 estimate. UNDP. “Every Drop Counts: Increasing Water Security in Coastal Areas of Bangladesh | United Nations Development Programme.” UNDP. Accessed August 15, 2022. https://www.undp.org/bangladesh/news/every-drop-counts-increasing-water-security-coastal-areas-bangladesh.

68 Interview #30, 14 August.

69 Interview #19, 11 August.

70 Interview #16, 10 August.

The pursuit of alternative livelihoods raises further ecological questions

Decent jobs would be a bulwark against trafficking risk. Yet the three key areas in which local jobs are being created also highlight a keen tension between economy, ecology and poverty:

1. Khulna's Rampal and Orion coal plants are seen as critical to meeting Bangladesh's growing energy demand, perhaps powering the industries that will lift thousands of climate-affected people out of poverty. Yet the waste from the coal mines needed to serve them has seen the loss of fish, crops, and clean water (Farukh, 2022) and locally the extent and implications of water, air, and land pollution is disputed.

2. The Sundarbans mangrove forest is a carbon sink of global ecological and national social and economic importance , and its protection is critical to mitigating the effect of emissions, including from Rampal Power Plant. To allow several fish species to recover during breeding seasons, the government implemented a three-month ban on entry and economic activity. The 180,000 or so people dependent on the forests to make a living are reliant on aid during this time. Even without the ban, most people reliant on the forest are unlicensed and their means of survival unlawful.

3. The earlier flooding of rice paddies with salty water to farm shrimp, crab, and other land- based fish farm saw exports flourish for some time. The shrimp and crab industries are crucial employers in the region. Yet the intensity of farming saw fish-borne viruses flourish, while consolidation in the sector has seen land grabs that have made some landless. On-land fish farming can itself lead to the collapse of fish stocks (and subsistence livelihoods) through fishing for "trash feed" (Jackson, 2020).

The criminal justice system is affected in unpredictable ways

Responses suggest the criminal justice system in Bangladesh is adapting too. Finding the resources and overcoming the stigma to bring cases requires support and so displaced, transient, and foreign victims can find it harder to bring perpetrators to justice. The police and the courts can find it difficult to work with displaced persons with no fixed address. The speed of climate-induced change may be matched only by technological advancements, with the criminal justice system needing to adapt fast to both and digital literacy generally low . Access to justice remains an issue for victims.

71 "Mangrove forests only account for 0.5% of the total coastal ocean area, but are responsible for 14% of carbon sequestration by the global ocean." A study found that factory emissions in Kolkata were 98% sequestered by the Sundarbans. Connecticut College. "Carbon Sequestration – Life in the Sundarbans Mangrove Forest." Accessed August 15, 2022. http://uddin.digital.conncoll.edu/sundarbans/global/carbon/.

72 Perhaps 10 million people across Bangladesh make a living from forest-dependent business overall. Bangladesh Forest Department. "Climate Resilient Participatory Afforestation and Reforestation Project: Bangladesh Forestry Master Plan 2017-2036," 2016. https://pubdocs.worldbank.org/en/848671521827530395/FMP-Full-report-final.pdf.

Martin Reeve UNODC

Box 3.1. Onima

We didn't have any wage-earning brother, so we sisters used to grow spinach and other vegetables to sell in the market, not far from the border with India. During storms and floods, it was impossible to grow crops and so we used to live in complete poverty. There was a woman who had been coming to our village for months. She was a trader and would regularly come by to try and sell her goods, often striking up conversation with the family when she did. At the time we were in crisis, she said she could help. She claimed that as a domestic helper abroad, I could earn 7,000-8,000 BDT (73-84 USD) each month, which was about ten times what I had been earning at the market. Given our situation, it was difficult to say no. And anyway, we were quite familiar with her by that point, and assumed she was just trying to help.

After a few days, we rode a motorbike together to the border, then walked to the other side. We went to the train station, where we met another man and the woman left me. Eventually we reached Mumbai, where I worked in a brothel. One day, the brothel owner took me and others in the brothel to the market, to show me off. I ran away and found a police officer, who rescued me. Now I'm back in Bangladesh and being supported by an NGO.

**** Onima' is a pseudonym and some details have been merged or changed to protect anonymity.***

Part 5. Framing the response

Environmental degradation triggers events and processes that make it difficult or impossible for some people to make a living. The options available to affected populations are often severely limited, especially among those with fewer assets, education and social capital living in societies that discriminate against them. Women, ethnic minorities, Indigenous peoples, people living with disabilities are among those who more often fall into these categories. To cope with the situation, affected people may engage in coping strategies that expose them to further risks, including SOM and TIP. Existing interventions span alternative livelihoods, land rights, social and behaviour change communications, and efforts to increase civil litigation in the environmental sphere[74]. Opportunities exist to scale, target, and integrate interventions that work. Effective responses that integrate a human rights perspective must fulfil key criteria:

1. Realistic - the scale and complexity of TIP, SOM and environmental crime is likely to continue to exceed the capacity of states to prevent and prosecute it (Gerrard, 2021). As extreme weather events and other issues increase in frequency and severity, law enforcement agencies will be increasingly stretched, tasked with emergency response in addition to their primary law enforcement duties. Climate often competes for attention from policymakers dealing with the current urgent economic and health fallout from the COVID-19 pandemic.

2. Holistic - crime prevention must be accompanied by efforts to tackle the socioeconomic root causes that make people experience vulnerability, equip them with the knowledge and options to manage risks, address structural issues in the community and wider society, and make all stakeholders — from potential victims to law enforcement — aware of the modus operandi of smugglers and traffickers.

3. Sensitive to gendered and other inequalities - the exclusion of women from decision-making in developing TIP and SOM risk mitigation measures makes those measures less likely to be effective. From a climate adaptation perspective, the absence of women from innovation processes, such as the development of climate change mitigation technology, slows innovation, diffusion and uptake (Loarne-Lemaire, 2021).

There are similar challenges with the systematic exclusion of minority groups[75] from the development of strategies and measures, though the importance of Indigenous Knowledge in climate adaptation is increasingly acknowledged (IPCCC, 2022).

Adaptation strategies also risk placing disproportionate pressure on those least able to adapt, often women, rather than those with the resources and influence to effectively mitigate harm. Additionally, focus on criminal justice responses must not obscure the limitations of adaptation, where the speed of environmental change and frequency of extreme events can render obsolete even well-executed and -financed adaptation[76].

74 See upcoming paper from UNODC's Global Programme for Combating Wildlife and Forest Crime and Global Maritime Crime Programme on the nexus between climate change, illegal exploitation of natural resources, marine pollution and UNODC mandate

75 Among which women and girls in some countries and context

76 Expert in climate change and gender, Dhaka. Interview #1, 21 June 2022.

Furthermore, Indigenous peoples may be more vulnerable to irregular migration such as trafficking and smuggling due to sudden displacement by a climactic event, limited legal migration options and limited opportunities to make informed choices[77].

4. Politically sensitive - internal and international migration are sometimes the most viable adaptation strategy (IOM, 2022) but legal and managed migration options remain rare, increasing risk exposure to unsafe irregular migration and TIP[78]. Similarly, border management is an integral part of a comprehensive migration policy but can create new crises and opportunities for TIP and SOM where human rights concerns are not effectively operationalised. The formal and globally consistent recognition of climate-related drivers of (irregular) migration could expand the protection space by providing access to legal status, residence rights, and aid (Sheu, 2021) — but could be double-edged, with the unintended effect of prompting policies to reduce the perceived burden on destination states. For example, further restrictions on legal pathways to reduce arrivals (Sheu, 2021).

5. Sensitive to existing efforts to address climate change, biodiversity loss and its impacts - sustainable practices to address climate change and its resultant effects must account for and seek to integrate traditional knowledge systems, and adaptation strategies to "mainstream biodiversity and catalyse collective action to address the drivers of biodiversity loss [and] restore ecosystems" (UNSCEB, n.d. a). For example, Indigenous Knowledge on resource governance, land rights, mitigation of climate change impact on their environment and resilience-building through the use of their traditional knowledge can make visible and help to counter harmful business practices (UNSCEB, n.d. b).

6. Data-driven - the technology exists to vastly improve insights into the evolving trends of SOM and TIP, especially as perpetrators' modus operandi moves increasingly online. However, government willingness and/ or capacity to share data is often limited (UNODC, 2020). While data sharing would probably improve investigations, it also exposes the prevalence of the problem.

7. Coherent - some responses designed to help people adapt to environmental change or reduce migration-related risks may result in new risks (IPCC, 2022). Adaptation and mitigation strategies can have unintended consequences. Fish farms with the potential to relieve pressure on dwindling fish stocks may cause more harm by creating demand for 'trash feed' (Jackson, 2020). Renewable energy sources are essential in transitioning to net zero but have the same social risks of any other infrastructure megaproject. Migration may initially offer a viable adaptation strategy but can introduce new risks, if socioeconomic integration at destination is unsuccessful (Jackson, 2020), both socially and environmentally, as new arrivals may rely on environmentally harmful coping strategies.

77 Ibid; ILO, 'Implementing the ILO Indigenous and Tribal Peoples Convention No. 169: Towards an Inclusive, Sustainable and Just Future'. https://www.ilo.org/global/publications/books/WCMS_735607/lang--en/index.htm.

78 Additionally, the "state-led Platform for Disaster Displacement, (PDD), has highlighted the absence of international legal provisions to protect displaced persons in the context of disasters and the adverse effects of climate change" but does not advocate for new legally-binding standards on admissions and return, perhaps because of their "likely failure". UN. "Addressing the Gender Dimensions of Trafficking in Persons in the Context of Climate Change, Displacement, and Disaster Risk Reduction: Report of the Special Rapporteur on Trafficking in Persons, Especially Women and Children, Siobhán Mullally," 2022.

Recommendations

Strategies, Policies and Research

1. Consistently integrate an intersectional approach to gender equality and mobility perspectives into climate adaptation strategies. While strategies consistently consider climate-mobility and climate-gender linkages, there is scope to more systematically consider the three together. Taking this intersectional perspective into account to recognize interrelated identity factors can help stakeholders to dismantle the layers of inequality and discrimination, which disproportionately affects women and girls, and may hamper response to trafficking in persons and smuggling of migrants.

2. (Continue to) shift attention and resources to slow-onset processes. Disasters with high mortality and property destruction will consume more attention and resources as they increase in intensity and severity. Yet slow-onset events are readily identifiable and may contribute to a greater scale of unsafe migration, exploitation through trafficking, public health, and gender-based violence.

3. Integrate human rights and gender transformative criminal justice perspectives into climate adaptation research and programming. Crimes that affect the environment often compound the effects of climate change, undermining livelihoods and the ability to withstand economic shocks from climate-related and other events. Crime prevention strategies will be key pillar in the effectiveness of adaptation and mitigation.

4. Incorporate the Women, Peace, and Security (WPS) Agenda in climate adaptation talks and decision-making. It is essential to recognize the critical role of women in addressing security threats, including climate change, which drives insecurity both through direct negative impacts on environmental systems and through secondary risks such as political instability, population displacements, poverty, and hunger. Using the WPS Agenda to mainstream the disproportionate impacts of climate change on women and the security threats they pose and ensuring women's meaningful participation in climate interventions will strengthen the response to climate change across the board (Chiu, 2022).

5. Advocate for the private sector, especially the responsible business and responsible investor communities, to contribute to the costs of adaptation and crime prevention. While standards for responsible investing in climate-vulnerable countries include robust mechanisms for assessing the social impact and risk (and more regulation is on the way), they are often limited to addressing immediate impacts. The longer-term risks of exploitation, for example the trafficking risk to communities resettled to make way for an infrastructure project, are often out of scope, despite the additional pressure this may place on law enforcement.

6. Invest in criminal justice-aware climate research. While research into climate and migration and mobility is common, crime prevention is less often considered, despite the threat posed. More evidence is needed of the extent to which crime is already limiting the effectiveness of some climate mitigation approaches, especially where perpetrators represent industries involved in exploitative and illegal labour practices.

7. Explore the potential of big data to augment crime detection and investigation capacity. Tools to track illicit financial flows, flag suspicious transactions, track advertisements and conversations on social media platforms used for recruitment, and recognise the faces of missing persons are already supporting law enforcement, even as ethical issues are debated (UNODC, 2012). Although the relevance and acceptability of machine learning models in crime prevention and investigation is contested and possibilities are limited by the availability of data, there may be opportunities to more efficiently analyse data on known risk factors, including environmental harm, as it becomes more known and quantified.

Legislation

8. Recognize environmental degradation as a factor in unsafe migration. Laws and policies on internal displacement and migration should recognise climate change as a factor and explicitly address the needs of affected victims, for example by ascribing basic rights, social protections and compensation (OHCHR, 2022). Emergency relocations will need to continue and expand, taking gender-specific needs into account, alongside longer-term relocation solutions, such as those pursued by Small Island Developing States.

9. Hold private businesses to account for environmental crimes that directly affect livelihoods and incomes. Compensation mechanisms and legal assistance to help affected populations bringing civil cases where environmental harm undermines livelihoods leading to displacement and exploitation. Strategic litigation could more firmly link climate, aggravated forms of smuggling, and TIP in judicial and broader public consciousness.

Capacity Building

10. Fund law enforcement adaptation in climate-vulnerable countries. In many climate-vulnerable countries, law enforcement are first responders to disaster as well as to TIP, SOM and environmental crime. This further stretches institutions at the forefront of the climate crisis. Priorities should be outlined by states, for example in National Adaptation Plans, but could include: speeding the recruitment of women in disaster-prone areas, and TIP training for disaster first responders.

11. Promote knowledge of displacement and exploitation stemming from environmental among law enforcement. Even where legislation is sensitive to the evolving ways in which smugglers and traffickers are operating, law enforcement is often less aware of the complexities involved in migration decision-making, the manipulation of trafficking victims, and the broader dynamics of coercion and control. Training modules could be evolved to integrate more case studies of climate-related displacement, gender considerations, unsafe migration, and exploitation.

12. Establish capacity within law enforcement agencies to liaise with the agencies and personnel responsible for tackling environmental crime. Environmental crimes may be a civil matter, with civilian agencies mandated with monitoring and prevention. Investing in police capacity to assist these agencies could make investigations faster and more effective.

Adaptation

13. Increase financial resilience of people affected by slow-onset processes. Less attention is given to the role of slow-onset processes in increasing poverty among people less protected by social or financial systems (OHCHR, 2022), despite the association of financial hardship with a range of negative coping mechanisms, including those which undermine climate mitigation and adaptation efforts, and increasing the risks of exploitation and unsafe migration. Measures to increase resilience and reduce risk exposure include alternative livelihoods (UNODC, 2020), improved awareness of the need for climate-affected populations to access social protection mechanisms, and innovative forms of insurance suitable to mobile populations with multiple vulnerabilities.

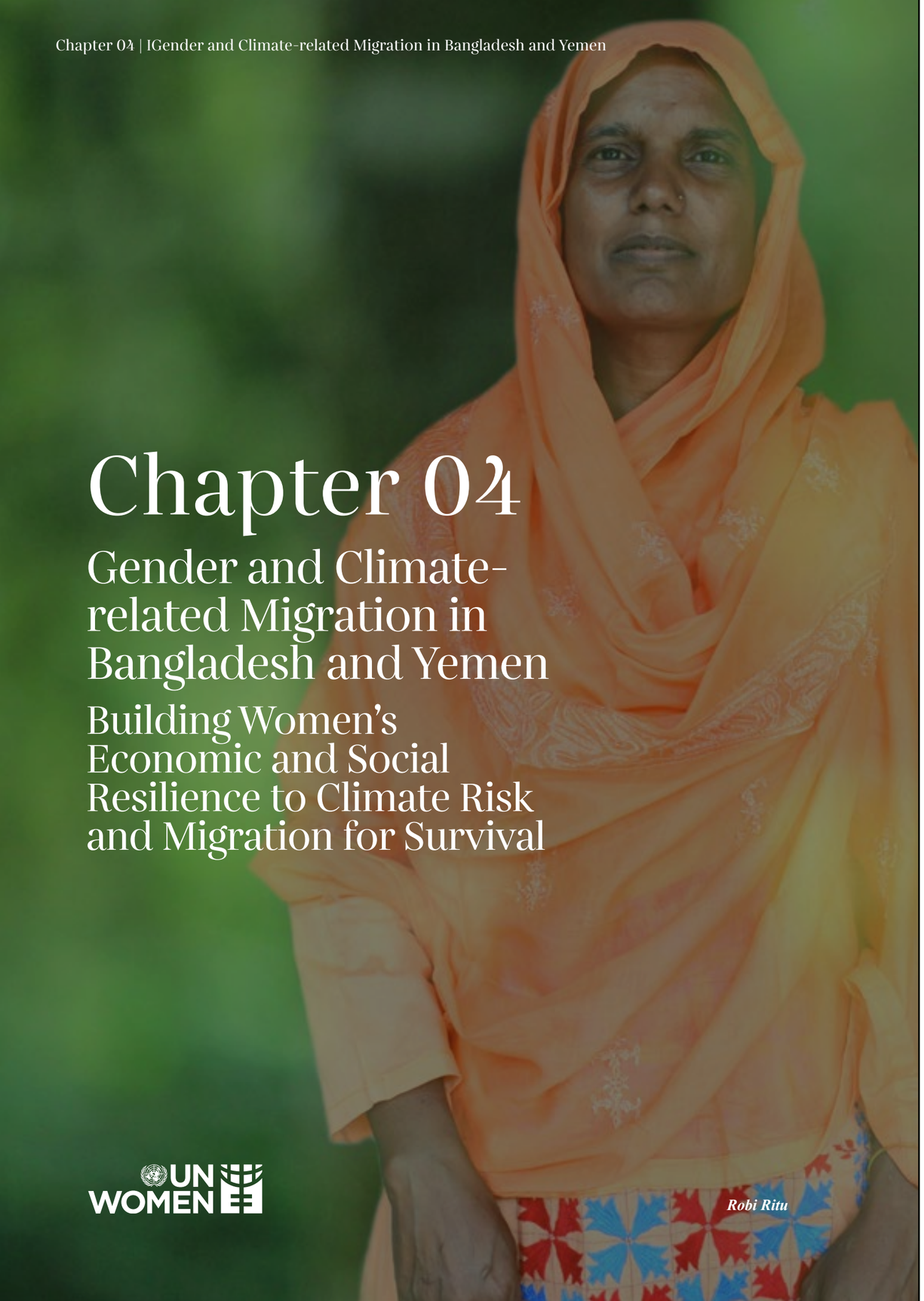
14. Promote coherent and mutually reinforcing adaptation and anti-TIP programming. Common factors are often associated with increased TIP and climate-related risks in the same affected communities. While there may be opportunities for synergetic joint programming, the first step should be to avoid programming in either area creating unintended consequences in the other. An expert-led “joint social-ecological approach” could ensure that both issues are treated evenly (University of Nottingham Rights Lab, 2022).

Dialogue and Cooperation

15. Create space for collaboration between law enforcement, disaster response, environmental regulatory, and climate planning agencies. There is a common challenge across government agencies to anticipate ecological and social harms related to climate change and exacerbated by crime. Better understanding of the relation between each other’s work can streamline referrals and sharing of information.

16. Bring together alternative livelihoods actors, including women, to exchange best practice and improve coherence. Local, national and international public, private and non-profit actors employ livelihoods approaches to support climate adaptation, reduce TIP risk, and more. There is common interest in lessons learned and future, potentially collaborative planning that addresses the threat to natural resource-based livelihoods, gender-specific needs and considerations, and adverse consequences to ensure no one is left behind.

17. Engage the private sector more fully in making social media TIP and SOM free. National authorities will need the support of private companies to create a “trafficking free environment” on social media (University of Nottingham Rights Lab, 2022). Companies such as Meta, which runs Facebook, have taken steps to understand how their platforms are used in diverse contexts. Forums that help technology companies to understand the implication of their products in transnational organised crime could open the way for more direct collaboration with the international community and national criminal justice systems on crime prevention strategies.



Chapter 04

Gender and Climate-related Migration in Bangladesh and Yemen

Building Women's Economic and Social Resilience to Climate Risk and Migration for Survival

UN WOMEN

Robi Ritu

1. Locating climate risk-resilience and the relationship with migration within sustainable development[79]: Centering migrant and non-migrant women

Climate change and extreme events are huge threat multipliers to development. They destroy physical infrastructure, food, land, water, and energy security, livelihoods, human and other life. They are also important drivers of migration, especially among underserved communities.

Anthropogenic discourses on climate change and vulnerability-resilience paradigms on disasters assert that planetary crises stem from unsustainable models of development that threaten sustainable development (Commission on Climate Change and Development, 2009), as they prioritize production, consumption and distribution of goods and services for immediate economic gain over equitable distribution of resources, social and environmental sustainability and health/ well-being (Adams & Luchsinger, 2009). This causes inequality, multi-dimensional poverty (OECD, 2015) and ecosystem depletion - vulnerabilities to climate risk that further sharpens them. A key impact of skewed development and climate risks is migration. The Inter-governmental Panel on Climate Change (IPCC, 1990) noted that, 'the gravest effects of climate change may be those on human migration as millions are displaced by shoreline erosion, coastal flooding and severe drought (IOM, 2008). Since 2008, an average of 21.2 million people has been forced to move yearly by extreme weather events, the equivalent of 58,000 people daily, or 41 people per minute. These numbers exclude forced movement by slow on-set threats. (Trent, 2022).

These discourses concur that sustainable development and climate-resilience are best secured through governance and accountability that combines growth with equality, and holistic development that builds socio-economic-environmental system resilience synergistically. This is achievable through action on mitigation and adaptation, sustainable financing, technology transfer, capacity-building, economic diversification, sustainable production, consumption and natural resource management (UNGA, 2015; United Nations, 2015). It is also achieved by prioritizing the concerns of vulnerable people; by using local resources and practices that preserve ecosystems, and by enhancing community engagement and resilience (United Nations, 2015).

The structural drivers of vulnerability to climate risks, hazards and impacts, including migration are mediated by gender, among other variables. Unequal gender relations privilege men in most countries, rendering 'the climate risk and migration experience' different for women and men, with disproportionate adverse impacts on women. But gender also interacts with women's other forms of marginalization based on age, economic, ethnic, racial, and migration status, health and well-being and geographical location to disproportionately impact women in relation to men, but to also differentiate unequally between women. These intersecting inequalities must be addressed. Moreover, women constitute about half the human population (United Nations, n.d.) and contribute significantly to crisis response, recovery, and development. Addressing their priorities on climate risk and its impacts, including migration is not only aligned with key international and national human rights frameworks on these issues, but also helps achieve sustainable development.

79 This section is used and adapted from a chapter written by this author in UNDRR. (2021). Regional Assessment Report on Disaster Risk Reduction in the Arab Region 2021 Chapter 4 Vulnerabilities to and Capacities in Disaster Risk Reduction: Addressing Structural Drivers, Impacts on and Empowerment of Affected Populations

Anchored in the sustainable development paradigm, this chapter focuses on building women's economic and social resilience to the gendered structural drivers of vulnerability (and capacity) linked to climate risks, hazards and impacts, including migration induced by climate and related development deficits. Based on secondary data, it focuses on climate hotspots Bangladesh and Yemen[80], as case studies. It addresses underserved migrant and non-migrant Bangladeshi and Yemeni women nationals, including stay-behind women from Bangladeshi and Yemeni migrant households, also taking account of their intersecting vulnerabilities[81].

In exploring the relationship between climate risk and migration, it addresses the discourse on whether migration, is primarily climate-induced or driven by broader development factors; adaptative or survival-oriented; and whether voluntary and safe return to climate-affected home sites is a durable solution. Drawing on existing good practice in these sites, the chapter suggests immediate and long-term structural measures to build the economic and social resilience of the affected women to climate risks and impacts, including migration for survival. The recommendations address the links between these issues across disciplines and policy fields and integrate the affected women's climate, migration and development priorities into climate mitigation/adaptation, migration and development policies and programs. This demands a whole of government and a whole of society approach that widens the stakeholder base across these themes to ensure coherence and amplified impact.

Although both sites have multiple hazards, the focus is on water-related hazards in agriculture, given their import and impact on the sector. Agriculture is pivotal to these sites, highly reliant on natural elements and so most exposed and vulnerable to climate change. Women contribute hugely to agriculture in both sites, albeit at lower ends of value chains and are hence more vulnerable than men to climate risks and impacts including migration and its impacts. But they deploy their local knowledge, practices, attributes, networks and leadership to respond to crises and recover. Addressing their priorities is a moral imperative but also achieves sustainable development.

Saikat Mojumder | UN Women

80 Both countries are members of the Organization of Islam Cooperation (OIC) and the Women Development Organization (WDO), the women's development entity in the OIC

81 Hereafter referred to the affected women

Nishaan Ahmed

2. Climate change and hazard trends in the two sites: topography and climate as drivers

Bangladesh and Yemen are among the most vulnerable countries globally to climate hazards, especially floods, cyclones and drought. Rising temperatures, melting Himalayan snow that negatively affects Bangladesh, sea level rise (SLR), unpredictable rain, desertification, and topography, together with socio-economic-political processes, have been augmenting vulnerability to hazards with rising frequency, magnitude, severity and adverse societal impacts. Bangladesh (South Asia) is a flat, low-lying, riverine country with a coastline of 580 km along the Bay of Bengal (BoB), a humid climate and heavy rainfall. Temperatures average 26°C, ranging between 15-34°C, likely breaching the 2°C threshold by 2100 under most Representative Concentration Pathways (RCPs) (World Bank, 2021b). Relative SLR rise in the Ganges Delta could be about 5–10 mm/year (Nicholls et al., 2021). The 2019 Inform Risk Index[82] ranks Bangladesh 22nd out of 191 countries overall, 1st, 19th, and 47th on floods, tropical cyclones and droughts, respectively (European Commission, 2019). Higher magnitude flood frequency rose since 1974, especially between 2015-2020 (Ahmed, 2020). Of 131 BoB tropical cyclones (TCs) from 1978-2016, Bangladesh was hit by 33 (25 percent) (Chowdhury, 2018)

Yemen (Southeast tip of Arabian Peninsula) is the poorest, most water-scarce site in Middle East and North Africa (MENA), with a semi-arid tropical climate. Mean temperatures in the highlands below 15°C in winter to 25°C in summer and in coastal lowlands from 22.5°C in winter to 35°C in summer (World Bank & GFDRR, 2011) could rise by 1.2-3.3°C by 2060, with more warming inland than on the coast (USAID, 2017). Rain varies in the highlands and coast and is scarce in the center. The INFORM Global Risk Index ranks Yemen 7.2 out of 10 in the last 15 states on climate vulnerability/readiness (GFDRR, 2015). Heavy rains cause flash floods, followed by long drought, desertification and land degradation. SLR would cause more coastal floods (World Bank & GFDRR, 2011). It also has the world's worst ranking in the Fragile States Index (Horwood, 2020)

82 This Index identifies specific risks in a country to support its overall risk management (European Commission, 2019)

3. The socio-economic and political drivers of climate hazards in the selected sites

Development processes in these sites converge with topography and climate that exposes them to hazards and increases vulnerability to climate risks. Key vulnerabilities include high population growth and density that strains scarce existing resources, multi-dimensional inequality and poverty, unsustainable rural and urban development and reliance on climate-sensitive agriculture.

Bangladesh with 167,885,689 people, growing at 1 percent yearly is the 8th most populous country globally (World Population Review, 2022a). From its current 31,154,867 people, Yemen's population will peak at 55.08 million in 2080, before declining. Population growth rates in both sites have however dropped over the last 60 and 30 years respectively (World Population Review, 2022a, 2022c). Per Table 4.1, Bangladesh has low (32.4) and Yemen moderate (36.8) levels of economic inequality. Consistent with a widely noted pattern, by 2022 Bangladesh is poised to be among the three fastest-growing economies globally but shows growing divergence in income and wealth disparities. The income share of the lowest 40 percent of people is 21 percent of total income, in sharp contrast to the richest 10 percent who hold 27 percent of the total income (Hussain, 2021).

Table 4.1: The Gini Index

Country	Most Recent Year	Most Recent Value
Bangladesh	2016	32.4
Yemen	2014	36.7

Source: Adapted from © World Bank. (2022f).

Per Table 4.2, the HDI values and ranking for Bangladesh (129th) and Yemen (183rd) out of 191 countries on the 2021 Human Development Index (HDI), classifies Bangladesh as having medium human development levels. Yemen has low levels of human development. (UNDP, 2022). Low HD levels caused by a lack of sustainable development and governance issues create greater vulnerability to climate risks which further accentuate them.

Table 4.2: Human Development Index (HDI) by Country 2021

Country	HDI Value	HDI Rank
Bangladesh	0.661	129
Yemen	0.455	183

Source: Adapted from © UNDP (2022).

Most of the poor live in the climate-sensitive rural sector, that is vital to employment and GDPs. Agriculture in Bangladesh made up 38 percent (in 2019) of total employment (World Bank, 2021 c) and 12.6 percent of the GDP in 2020 (World Bank, 2021a). 70 percent of Yemenis rely on agricultural incomes (Al-Eryani, 2021). Agriculture and allied activities contribute 13 percent to the GDP, oil production is the major contributor to Yemen's GDP. (Horwood, 2020). Agricultural strategies in both sites have not ensured redistribution of assets/benefits, productivity growth, good natural resource management and resilience to climate risk.

Investments to improve research, infrastructure, production technologies, inputs, marketing systems, soil/land/water/energy management practices, human capacities and resource access are inadequate. Poverty, knowledge and governance gaps lead to maladaptive practices that erode ecosystems, natural resource and economic security, thus increasing climate risk and vulnerability (Rahman, 2017; FAO, 2014). The role of the State in agriculture in Yemen is also diminishing (FAO, 2014).

For instance, despite Bangladesh's 1971 land reforms, land distribution is very skewed. Some 52 percent of the rural people are landless or hold less than .5 acres of land (USAID, 2010). Much arable land in Bangladesh is lost (Mondal, 2010). Yemen's total forest area is 1 percent of its total land area. (USAID, 2017). Desertification of agricultural land ranges from 3-5 percent yearly. Some 12 million and 3.8 million hectares have deteriorated partly due to soil erosion and salinity respectively (Republic of Yemen, 2016). Land in Yemen has been diverted from food to Qat production (addictive cash crop), driving huge food imports. Traditional labour-intensive mountain terrace cultivation has been neglected causing soil erosion.

WDO | Yemen

4. The climate risk-migration-development link: evidence and analysis in the two sites

The yearly average urban population growth rate as a proportion of the total population (2021) in Bangladesh and Yemen is 3 percent and 3.9 percent respectively (World Bank, 2022i). Dhaka with 36,941 people per sq.km is the most densely populated city globally (Statistica, 2022). Structural changes in economic sectors such as the growth of services and industry in Bangladesh and oil and construction in Yemen, poor rural development, climate hazards and conflict have driven rural-urban migration, rapid urban population growth and urbanization in these sites (Alam & Al-Mamun, 2022; Republic of Yemen, 2016). Many migrate abroad for better work that is locally scarce and further eroded by ecosystem depletion, climate hazards or Yemen's conflicts. In the last decade, disasters displaced about 700,000 Bangladesh is, on average, yearly with a world record of 4.1 million newly displaced in 2019 (Smith & Henly-Shepard, 2021). A 2018 US government report says that 90 million and 53 million Bangladeshis live in 'high and very high' climate-sensitive areas, respectively and one in seven people will likely be climate-displaced by 2050 (Rojas, 2021). Even in 'calmer' times people migrate as SLR, erosion, salinity, soil/water degradation, crop failures, repeat inundation make coastal life untenable. Most move internally, temporarily or permanently to urban slums, mainly in Dhaka that receives about 400,000 low-income migrants yearly (Mcdonnel, 2019), or to Chittagong and Ghazipur (Al Amin, 2022). About 50 percent of urban slum dwellers may have migrated to urban sites due to riverbank flooding in rural areas (Rojas, 2021). Many people migrate for seasonal work to other rural areas. Others migrate abroad – about half a million yearly from 2012-14, mainly to India, UAE, Kuwait, Saudi Arabia, Oman, Malaysia, Singapore. Costs and poor links to recruitment/job placement networks deter the very poor from moving (Helvetas & Okup, 2021). The climate-affected in Bangladesh prefer to stay behind, cope by changing livelihoods or accepting a poorer quality of life till they must migrate, often to small nearby towns, then to larger distant cities (Flavell et al., 2020). They move if they have the resources, or else they stay behind in crisis (Helvetas & Okup, 2021; IOM, 2009; IOM, 2013).

Yemen has a more complex picture on mobility: large economic migration to the Gulf States in the 1970s-80s into the male-oriented oil sector (Adra, 2013); movement driven by environmental stressors and climate hazards, and large conflict-related displacement. In Yemen climate events from 2008-2021 pushed some 518,167 people to move, in addition to 4.7 million people already displaced by conflict (IDMC, 2021). Hazards included frequent high magnitude cyclones, floods and droughts when 'normally' the country does not have more than one cyclone or major event a year (Lackner, 2021). Much of this movement is internal. Sana'a City, Aden, Al- Hodeidah, Al-Mahrah, Al- Jawf, Hadramout are key migrant destinations with job prospects in oil and related sectors. (Republic of Yemen, 2016). Of some 200,000 people who fled conflict in Yemen since 2015, only 64,000 were nationals dispersed in Oman, Saudi Arabia, Djibouti, Ethiopia, Somalia, Sudan (2017 data). Many refused to register as refugees. In 2018 about 700,000 Yemenis worked irregularly in Saudi Arabia (Horwood, 2020). Yemen is also a transit site to the Gulf or Europe and a destination site for migrants from the Horn of Africa fleeing poverty, conflict and climate hazards.

Rural-urban migration, urban population growth/density, poor urban planning in these sites alter lifestyles and resource use, widen gaps in food production-demand-consumption and strain socio-economic infrastructure/services. There is rising urban poverty, poor access to decent work and basic services, land reclamation, encroachment on agricultural land and natural habitats, squatting, slum growth and evictions. Slum residents pay high rents without stronger shelters, clean water and sanitation and waste collection facilities. Both sites have heavy traffic, water and air pollution from vehicles using fossil fuels and toxic discharge from industry (Zaman et al., 2010; Republic of Yemen, 2016). All this poses sharp health risks, degrades ecosystems and hikes climate risk, but migrants living on the fringes in urban host sites continue to remain there.

The fore-going evidence returns us to debates on whether such migration is primarily driven by climate or larger development factors; is adaptative or survival-based; and whether voluntary, safe return to climate-hit home sites is a durable solution. These issues beg context-specific empirical research in each specific case. Overall, in Bangladesh the link between sudden onset hazards, chronic environmental conditions and migration is somewhat more discernible. In Yemen where prior arid conditions, now palpable climate variations/hazards, protracted conflict and low levels of human development are closely interwoven, identifying climate risk as a key driver of migration is untenable. Noting the links in both sites between unsustainable development and its impacts, (including climate risks/impacts), the moot point is not whether climate is the primary driver of migration. Rather, it is essential to identify and build resilience to multiple, inter-related structural drivers of rural-urban vulnerability to climate risks/impacts including migration and its impacts, as well as conflict, as integral to sustainable development. This would also limit humanitarian crises.

The fore-going evidence also shows that sudden or planned decisions to migrate or to stay behind in crisis were mediated by varying degrees of progressively increasing force, desperation and poor options on a continuum, and often 'negative' coping. A more accurate descriptor for this is 'migration to survive.' Return to climate-hit home sites as a durable solution begs context-specific consultations with affected communities. It would be difficult to see return to climate-affected home sites as a durable solution, where evidence shows acute, protracted, frequent, cascading climate hazards and conflict, with recurrent damage and loss to pastoral and agricultural assets, soil and water, household assets and businesses; where rising prices combined with poor capacity to adapt or recover, makes living and working untenable; and where the scale of investment in climate-resilience building and readiness to improve it is low. Moreover, despite pervasive poverty and insecurity in urban host sites most people continue to remain there. This begs clarity on what governments and development partners must concretely do in urban/rural sites to address this.

Where evidence-based examples in these sites show acute, protracted, frequent, cascading climate hazards, and conflict with recurrent damage and loss to pastoral and agricultural assets, soil and water, household assets and businesses; where also with rising prices there is poor capacity to adapt or recover, making living and working untenable; and where as long as the level and scale of investment in climate-resilience building and readiness to improve it is low, as shown on climate risk indexes - it would be difficult to see return to climate- affected home sites as a durable solution. Moreover, despite pervasive poverty and insecurity in urban host sites most people continue to remain there. This begs understanding and clarity on what governments and development partners must concretely do in urban/rural sites to address this.

Thula, Yemen, May 5 2007

5. Gender-based structural drivers of vulnerability to climate risks and impacts, including migration

Per Table 4.3, women are almost 50 percent of the population in both sites. Addressing the gendered differences in their climate and migration priorities is crucial to achieving inclusive development.
Yemen ranks 155th out of 156 countries covered on the Global Gender Gap Index (GGGI) for 2021 while Bangladesh ranks 65th (World Economic Forum, 2021). The 2021 Gender Inequality Index (GII), ranks Bangladesh, and Yemen 131st and 170th out of 191 countries, respectively, with GII values of 0.898 (Bangladesh) and 0.820 (Yemen) (UNDP, 2022). Gender also interacts with other socio-economic-political inequalities resulting in inequalities not just between different groups of men and women, boys and girls. Poor rural/urban women especially female-household heads, pregnant/nursing women, older women, women with disabilities, low-skilled migrant women, indigenous women, women in hard-to-reach sites are among the most excluded and worst hit by climate crises.

Table 4.3: Proportion of Females and Males in Total Population in 2022

Country	Total Population	Female	Male
Bangladesh	167,828,800	83,436,953 (49.4%)	85,476,987 (50.6%)
Yemen	31,464,841	15,629,657 (49.7%)	15,835,186 (50.3%)

Source: Adapted from © Countrymeters Bangladesh. (2022a) and © Countrymeters Yemen (2022b).

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Gendered Structural Drivers Of Mortality/Casualties For Women and Children In Disasters

Available data shows that more women and children have died in major disasters. In 1970, before early warning systems and storm tracking by satellite, cyclone Bhola claimed about 300,000 lives in Bangladesh. Women victims outnumbered men 14:1 (Bhuiyan, 2013). The 1991 cyclone killed about 138,000 people, 90 percent of who were women and children (Ahmad, 2011). Cyclone Sidr, 37 years after Bhola was as potent, but claimed about 3,500 lives. The female-male death ratio fell to 5:1 mainly due to government investment in gender-inclusive cyclone preparedness which included early warnings, evacuations (Bhuiyan, 2013), and the construction, management and use of shelters. Sex- disaggregated data on deaths/injuries and hardship in Yemen's potent storms, cyclones and yearly floods is not accessible, but women and children have been affected (Government of Yemen, 2009). Hazards converge with conflict in Yemen to worsen their situation (Holleis, 2022). Several factors inhibit women's survival. In the 1970 and 1991 cyclones in Bangladesh, most women who were home-based, responsible for unpaid care and socially isolated, died because they did not receive warning information, did not hear it in the inclement weather, or ignored it as cyclones landing after 1970 had not been so bad. Given ingrained cultural norms, many would not evacuate without male family escorts. Many died as they had to fend for their little children, older people and themselves, especially if male relatives were away. Some remained to protect meagre assets, including animals. Women remained indoors because they feared the dark, turbulent weather, theft, sexual abuse or because shelters were far off, not women-friendly, or non-existent. They drowned with children and others in the 'refuge' of homes. Women's dress, the sari became a death trap causing entanglement and preventing quick movement. It was hard to swim in the surge, negotiate high wind speed and slush with children (Bhuiyan, 2013; D'Cunha, 1997). In Yemen's 2008 tropical storm, government relayed warnings via local/national media about the storm but did not predict the intensity and extent of flash floods. There was no other formal early warning/evacuation mechanism in communities. Many sites did not receive timely warning (Government of Yemen, 2009), badly affecting women and men.
In general, early warning systems also tend to exclude the needs of older women (and men), and those with disabilities. Warnings are often relayed as audio-video or televised messages without sign language, or captions or audio descriptions making them inaccessible to those with hearing, visual or other disabilities. Evacuation planning rarely identifies these groups, or arranges suitable transport or support to carry their aids, service animals, and medicines (Center for Disaster Philanthropy, n.d; Help Age International, 2000). Help Age International, 2019)

Good Practices On Inclusive Cyclone Preparedness

After the devastating 1970 cyclone, the Government of Bangladesh established the Cyclone Preparedness Program (CPP) in 1972 with the Bangladesh Red Crescent Society (BDRCS) and the International Federation of Red Cross and Red Crescent Societies (IFRC). This model community-based program has 203 employees and some 76,020 male and female volunteers in coastal Bangladesh, in 7 zones, 13 districts, 42 upazillas (sub-districts), 3801 village units. The Bangladesh Meteorological Department (BMD) issues warning signals on approaching cyclones to volunteers who relay this down these levels via radio (BDRS, 2022). Unit team leaders, male and female volunteers disseminate door-to-door cyclone warning using megaphones, hand sirens, and public address systems. They help in evacuation to shelters and rescues, and provide first aid, relief (Shahed, 2009).

The CPP helped significantly in saving lives, especially of women and children in cyclones Sidr (2007) and Aila (2009) which were as potent as the 1970 and 1991 cyclones (Islam, 2017) The huge participation of women as CPP team leaders and volunteers and women CPP volunteers working with women in the community has empowered women. It has ensured warning reach to women, raised their awareness on household and community preparedness: packing and carrying critical documents and belongings in plastic to shelters, burying food and valuables under-ground, timely evacuation to shelters with volunteers who assist with children and the elderly (D'Cunha, 1997; Islam, 2017). However, the CPP could enhance its gender-responsiveness in post-disaster assistance and transforming gender relations (Islam, 2017)

Gendered Economic Drivers Of Vulnerability To Climate Risks And Impacts

Bangladesh and Yemen have a sharp gender division of labor that accords men public sphere roles in the state, market and community and relegates women to private domesticity. Despite the primacy of women's domestic roles, household headship and decision-making rest with men. Gender roles can be more flexible than they seem, especially in female headed households or when migrant women return more empowered or when women exercise agency in crises. But changing gender roles could mean increased workloads and its implications for women, the risk of community and domestic violence as men feel threatened. Sustaining these changes begs sustained social norm change and a range of quality support services, to realize real gender equality (D'Cunha, 2019)

Overall, the traditional gender division of labor largely underscores gender gaps in the totality of women's paid and unpaid work in the state, markets, communities and households in both sites.It underpins their labour force participation and unemployment rates, work conditions, access to economic assets and benefits and economic and related decision-making (Concern Worldwide, 2022; Charmes, 2019; Ferrant et al., 2014; Harb, 2019).

Per Table 4.4, labour force participation rates are much lower for women than men in both sites, but very low in Yemen at 6 percent (men: 68 percent). Unemployment rates are higher for women, but over twice more for Yemeni women than men, while this gap is very small in Bangladesh.

Table 4.4: Labour force participation rates, female and male (% of female and male populations respectively ages 15+, modelled ILO estimate) and unemployment, female and male (% of female and male labour force respectively, modelled ILO estimate. International Labour Organization, ILOSTAT database

Country	LFPR (Most Recent Year: 2021)		Unemployment (Most Recent Year: 2021)	
	F	M	F	M
Bangladesh	35%	79%	7.9%	4.1%
Yemen	6%	68%	26.3%	12.4%

Sources: Adapted from © World Bank. (2022d) & ©World Bank. (2022e); ©World Bank. (2022g) & © World Bank. (2022h).

Per table 4.5, women dominate employment in the climate-sensitive agricultural sector as a proportion of female employment and in relation to men's employment, with the difference weighted in favour of women at 28 percent in Bangladesh and 15 percent in Yemen.

Table 4.5: Employment in agriculture for females (% of female employment) and males (% of male employment).

Country	Female (2019)	Male (2019)
Bangladesh	58%	30%
Yemen	0.455%	27%

Source: Adapted from © World Bank. (2022b) & © World Bank. (2022c).

Consequent to the gender-based division of labour in agriculture in both sites, women are not considered farmers, as men are. Women's agricultural work is deemed an extension of their unpaid care work in homes. Both forms of work are hidden and unaccounted for in household and national incomes (FAO 2005). Gendered occupational segregation and gender gaps in ownership and access to agricultural assets, resources and benefits weigh against women. Most rural women in both sites are managers and conservers of natural resources, small-scale low-emission subsistence farmers, small livestock raisers, and unpaid care-workers. They ensure food, water and health security for families and communities and maintain adequate productivity levels among the rural work force (FAO 2005; FAO et al., 2010; IFAD & FAO 2007). In Bangladesh, women in agriculture contribute heftily to crop production, horticulture, dairy farming, and aquaculture (FAO, 2016). They produce food staples, vegetables and fruits in kitchen gardens for household consumption and local sales. Men also produce food crops like rice but also cash crops for export. Women do some 17 of the 23 tasks in rice production from sowing to transporting paddy home (Manusher Jonno Foundation, 2020). Ploughing and land preparation is a male task. Women own and raise small animals and ruminants and take care of large-animal systems: provide feed/water, maintain sheds, milk animals, slaughter smaller animals for meat. Overall, men own especially the large animals. Beyond basic livestock farming, women have limited access to market roles: trading or processing, providing livestock services, or managing livestock-related enterprises, including feed retailers and animal health shops (Government of USA, 2020). Women do aquaculture, but fishing is largely male terrain. Women prepare fish feed, sort fingerlings, process, clean, cut, dry, salt fish, make/repair fishing nets and other fishing gear. In some areas women catch, transport and market fish on a smaller scale (Halim & Ahmed, 2006). Although Bangladeshi women are about twice as engaged as men (Ahmad, 2020), only 13 percent have sole or joint ownership of agricultural land versus 70 percent of men (Kotikula and Solotaroff, 2019). Most women are unpaid contributing family workers on small family farm holdings, or work on small self-owned farms, and/or are wage laborers on other farms. Limited land rights limit women's access to capital, inputs, technology and extension services. This reduces their productivity with costs to themselves, families, communities and economies. 65.4 percent of women are in vulnerable rural/urban employment versus 49 percent men (World Bank, 2022a). Only 15 percent of women earn wages in the sector. Women agricultural workers earn about 60 percent of men's wages for the same tasks (Ahmad, 2020). They also do casual daily wage work in construction etc (Chowdhury, 2022). Only 15 percent of women earn wages in the sector. Women agricultural workers earn about 60 percent of men's wages for the same tasks (Ahmad, 2020). They also do casual daily wage work in construction etc. Some 18 percent of women are unpaid and contribute as family labour on family farms (Chowdhury, 2022). Women own only 439,000 (7.5 percent) of 5.8 million rural enterprises in Bangladesh, concentrated in tailoring, textiles, bamboo and cane products. They are typically small, low growth enterprises. Women-owned enterprises in rural Bangladesh have 0.84 paid full-time employees versus men's at 1.55, that is almost double. 64 percent of women's enterprises have

no full-time employees, reflecting their small informal nature. (Chowdhury, 2022). Over 60 percent of women have no access to finance due to socio-economic and institutional barriers such as not meeting criteria to open bank accounts or access loans, limited experience in transactions and/or credit services through financial institutions, high costs of getting a loan and exploitation by middlemen (UN Women, 2020). Poor rural women also run home-based micro-enterprises producing handicrafts and tools from local forest/farm resources, medicines from local plants/herbs for local sales. They also vend plant and animal products such as fruits, vegetables, meat, eggs, milk, and process crops, vegetables, animal products and fish into new value-added products for sale locally.

In Yemen, women do 60 percent of farm labour, 90 percent of livestock rearing and 10 percent of wage labour. They own less than 1 percent of agricultural land and earn 50 percent less than men for comparable jobs (FAO, 2018). Women's role in producing food staples has reduced with the diversion to Qat production, a profitable cash crop produced by men (Adra, 2013). Women work long hours, engaged mainly in labour-intensive activities. About 75 percent of women in agriculture are unpaid (FAO, 2005). Most are contributing family workers, own-account workers or employers and members of producers' cooperatives (ILO, 2009). 60.7 percent of women versus 47.1 percent men are in vulnerable rural/urban employment (World Bank, 2022k). Women are generally excluded from economic transactions in local markets. Agricultural extension and other services, including training are not provided or limited for rural women (FAO, 2018).

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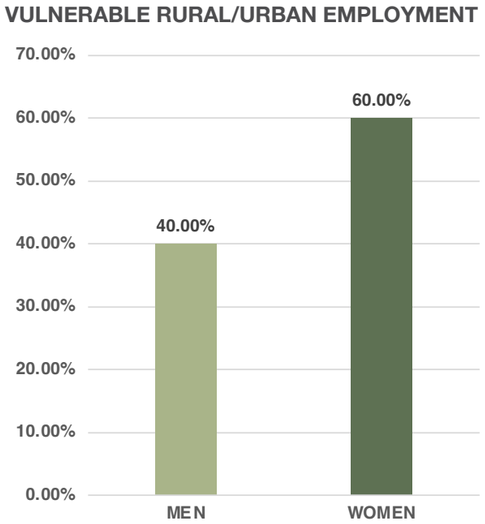
In line with the gendered assumption that care work is women's work, women in both sites, almost entirely bear the responsibility for 'unpaid, unrecognized care work,' that ensures family well-being and labor productivity and serves as a social safety net in the absence of public service provisions. In Bangladesh women spend 6.3 hours versus men's 1.1 hours on unpaid care work daily, out of 15.3 total work hours. This is 41.4 percent of women's and just 7 percent of men's total work hours (Raghavan, 2017). Longer hours of women's unpaid care work combined with paid work increases their workloads, affects their health and well-being, reduces leisure time, adversely impacts women's labor force participation, wages and job quality.

Women contribute less than men to ecosystem depletion, greenhouse gas (GHG) emissions, and human-created disasters in their pivotal agricultural roles and as consumers of less-emission intensive goods/services. But they are less resilient to climate risks/impacts, including migration for survival than men, as they are located at the lower ends of value chains in farm/non-farm work, are marginalized from access to assets, benefits, leadership/decision-making, are poorer and have lower levels of human development (D'Cunha, 2019). Poor investment in sustainable climate- resilient agriculture enhances the sectors and rural women's vulnerability to climate risks/impacts.

Super cyclone Sidr that struck the south-west coast of Bangladesh in November 2007, 30 underdeveloped districts where poverty affected about 35 to over 50 percent of the population - about the highest rates nationally. Sidr also followed pervasive flooding earlier in the year that affected 10 million people and reduced crop output by about 13 percent. Women from poor landless households, small land-owning households with few sources of sustainable income, and female-headed households that were 10 percent of the households, many with several very young children, were the worst hit. They lost their cereal crops, fruits, vegetables, livestock, dairy products as the cyclone washed away 1 million hectares of cropland, killed 80 percent of the animals and 76 percent of the birds in the four worst-hit districts. Women and children with small returns from fishing, lost nets, ponds and incomes. Women also lost agricultural inputs and infrastructure such as stocked seeds, fertilizers, animal feed, fodder, poultry sheds, domestic equipment, utensils and fuel. Some



27,000 self-employed workers without a fixed establishment and/or working from home lost raw materials, tools, goods and finished products ready for sale, and other assets. Many of these were poor women engaged in small non-farm livelihoods like kitchen gardening, food and fish processing, collection and preparation of poultry and dairy products, basket weaving, making coir/coir handicrafts for domestic use and local sale. Women from poor landless households lost paid work in construction, earthwork and farm-based agriculture (Government of Bangladesh, 2008). Besides lost livelihoods and food sources, the loss of meagre assets, prolonged waterlogging, salinity, rising food and other prices disproportionately threatened women's quick recovery and graduation from poverty.

In Yemen's 2008 tropical storm, women lost crops, land, animals and daily wage jobs, as 22,902 acres of cultivated farmland and 51,455 acres of uncultivated land were damaged and some 3,413 camels, 54,988 sheep, goats, cattle and 309,000 beehive cells were lost in the floods. The largest damage (80% of the total to the livestock sub-sector) was to honey beehive cells and on honey production, exports and honey producers' incomes (6000 households). Women-headed households, small and landless women farmers whose livestock-rearing compensated poor land-based returns, suffered disproportionate impacts including loss of food, milk, meat and incomes. Women with meagre earnings from fishing, lost nets, boats and incomes. Those engaged in small non-farm work like henna decoration, knitting, food processing, kitchen gardening, basket

UN Women - Yemen

weaving lost raw materials, equipment, finished products, stocked seeds, animal feed, fertilizers and other agricultural inputs in the damage to homes and storage sites. This hiked production costs in the next season. The floods pushed rural poverty over 40 percent, especially in the hard-hit Hadramout and Al-Mahara Governorates with starker impacts on women (Government of Yemen et al., 2009).

Women's unpaid care workloads further increased in both sites in the hardship of climate crises. This included: building makeshift shelters above water levels to keep children and families from snake and insect bites and other safety risks in Bangladesh (D'Cunha, 1997); travelling longer distances for food, water and fuel for families in Yemen's drought, thus risking accidents and sexual abuse and forcing girls to drop out of schools (Assad, 2010; IRIN, 2009; World Bank, 2011) Job searches and any paid work that women got, further compounded workload increases.

Women in these sites adopted varied coping strategies: using savings, borrowing, selling personal items, jewellery, household effects, distress sales of productive assets (land and livestock), reduced meal consumption or changing normal diets (Siddiqui et al., 2018). Child labor and child marriages increased. Dowries were seen as income and marriage a way to reduce family burdens, or as protection for girls in crisis. Families pooled resources and communities shared food, clothing, shelter with the needier. Some who were inadequately integrated in villages were excluded from support (Government of Yemen et al., 2009). Remittances from family, migration to urban sites or abroad were common coping means (Alam & Al Mamun, 2022; Republic of Yemen, 2016), as was reliance on relief from governments, NGOs, Islamic charities, and the UN. Women without jobs were driven to begging and the worst forms of earning (Government of Yemen et al., 2009).

Gendered Structural Drivers of Mortality/Casualties for Women and Children in Disasters

Available data shows that more women and children have died in major disasters. In 1970, before early warning systems and storm tracking by satellite, cyclone Bhola claimed about 300,000 lives in Bangladesh. Women victims outnumbered men 14:1 (Bhuiyan, 2013). The 1991 cyclone killed about 138,000 people, 90 percent of who were women and children (Ahmad, 2011). Cyclone Sidr, 37 years after Bhola was as potent, but claimed about 3,500 lives. The female-male death ratio fell to 5:1 mainly due to government investment in gender-inclusive cyclone preparedness which included early warnings, evacuations (Bhuiyan, 2013), and the construction, management and use of shelters. Sex- disaggregated data on deaths/ injuries and hardship in Yemen's potent storms, cyclones and yearly floods is not accessible, but women and children have been affected (Government of Yemen, 2009). Hazards converge with conflict in Yemen to worsen their situation (Holleis, 2022).

Gendered Drivers And Impacts Of Women's Migration In 'Normal' Times And In Climate Crises

Women nationals from both sites migrate within and out of the country, although patterns differ. Sex-disaggregated national data on international migration is available in these sites, given greater focus on the same. But such data is not easily accessible for internal migration. Per table 5, while a sizeable number of women nationals from both sites migrate abroad, the absolute numbers for Bangladeshi women are much higher than for Yemeni women, and in both cases much less than men - 33 vs 67 percent (Bangladesh) and 34.8 vs 65.1 percent (Yemen). Cultural norms in both sites and legal restrictions in Bangladesh have limited women's out-migration (Blanchet & Biswas, 2021; Herbert, 1984). Also, these figures represent documented migrants and would be much higher if undocumented migrant men and women were considered.

Table 4.5, Number and percentage of female and male emigrants out of total emigrants, mid- year 2020. International Migrant Stock 2020.

Country	Total Emigrants	Female (2019)	Male (2019)
Bangladesh	7,401,763	2,429,833 (33%)	4,971,930 (67%)
Yemen	1,301,166	453,864 (34.8%)	453,864 (34.8%)

Source UNDESA. (2020)

Md Akil Khan

Women from poor households in both sites migrate internally and abroad mainly for better jobs and incomes (Asfar, 1994; Blanchet & Biswas, 2021), to survive the gendered impacts of climate crises (Rabbani et al., 2015), conflict in Yemen, and violence (Gressman, 2016; UNHCR 2015). While poor Bangladeshi women do migrate singly for jobs, this seems less so for Yemeni women (Asfar, 1994; Blanchet & Biswas, 2021; Herbert, 1984).

Available data on climate crises in these sites and on conflict in Yemen suggest that women move temporarily/permanently, internally/abroad, with male family members, the entire family, singly, or as female household heads with children. Many women remain behind with children and other family members, while male relatives migrate (Hamoud, 2016; Herbert, 1984; Mohammed, 2022; Rabbani et al., 2015; UNHCR, 2015). Decisions on women's migration are usually family decisions, except where female household-heads can make them (Herbert, 1984; Rabbani et al., 2015). Decisions triggered by slow onset hazards that degrade ecosystems, slowly destroy livelihoods and make life untenable, may be made over time (Mcdonnel, 2019; Mohammed, 2022). Acute sudden onset hazards drive quick, unplanned movement. Movement may be phased or straight to destination sites. (Flavell et al., 2020). Women's migration patterns (or staying behind) in each site depend on the hazard type, its magnitude, severity and frequency; damage/loss levels; ability to survive/recover; access to information; links with recruitment/job placement agencies and social networks that enable migration; resources to move; concerns in moving with many children, risks en route and in host sites; care responsibilities; the felt need to stay and protect surviving assets; age, ill-health, disability; cultural ties with land and livestock, kinship and village bonds, restrictions on women's independent mobility and relationships (Bhuiyan, 2013; D'Cunha, 2019 & 1997; Flavell et al., 2020; Helvetas & Okup, 2021; Rabbani et al., 2015;UNHCR, 2015). Whether internal or international, migration outcomes for poor migrant women, stay-behind women and families of migrant households depend on the gender-responsiveness of migration governance, accountability of duty-bearers; labor-market discrimination; gendered social norms at sites of origin and destination; support services and women's agency.

O. Headon | IOM, Yemen

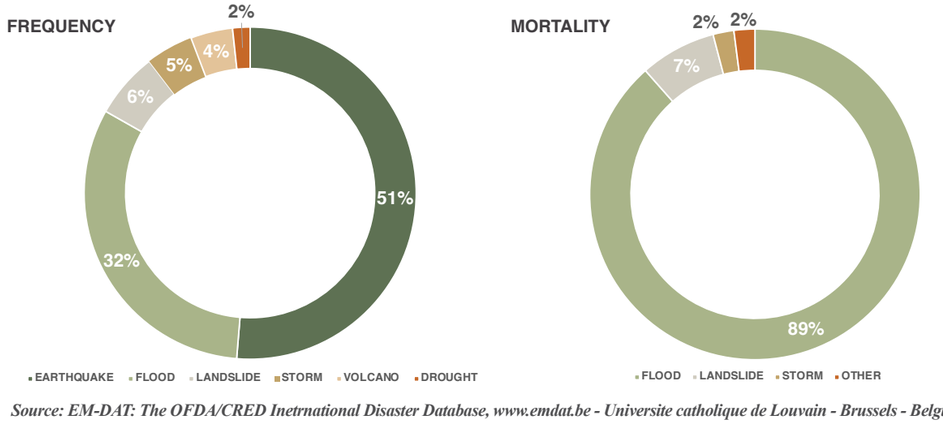
Women's Planned Internal or International Migration:

Many Bangladeshi women move from rural to urban Dhaka or Ghazipur into garment production. They live in slums/informal settlements that are very vulnerable to air/water pollution, storms, floods, mudslides and climate hazards. They lack labor rights, workplace safety and bear the responsibility of unpaid care work (Pross et al., 2020). Many migrate to Jordan into the garment sector on better terms or to the Gulf states as domestic workers whose key concerns are lack of access to information and pre-departure trainings, abuse/exploitation by recruiters and traffickers who also scour climate-sensitive migrant sites of origin for recruits. Many low skilled migrant women workers, especially domestic workers are badly impacted by the vulnerability of irregular status, debt/debt-bondage, gender wage gaps, withheld or lost wages, poor access to healthcare, and violence, (D'Cunha, 2021). In cyclone-prone Khulna district in Bangladesh, where livelihoods are repeatedly destroyed, women migrate to India, mainly as domestic workers. Their concerns include risky travel, increased stress, fatigue, ill-heath, bribes to officials, separation from children and the latter's well-being (Rabbani et al., 2015). Proximity to India, simpler processes, lower migration costs and accessible agents, fuel this (Helvetas & Okup, 2021).

Women in Large Scale Unplanned Movement to Peri-Urban Areas, Large Cities and Their Outskirts:

Yemen has dynamic internal displacement due to frequent hazards and protracted conflict. About 73 percent of the over 4 million conflict-displaced are women and children. Some 30 percent of displaced households are women-headed (UNFPA, 2021). Cyclones Chapala and Megh in 2015 and flash floods in 2016 caused huge displacement. Over half of those displaced were women. 87 percent of the displaced population were in Al Maharah, Shabwah, Al Dhale'e, Al Bayda and Dhamar (TFPM, 2016). Food, shelter, water, sanitation and income were key needs, especially for women and children (TFPM, 2016), in a country with 2.2 million children and 1.3 million pregnant women and nursing mothers who are acutely malnourished (FAO, et al., 2022). Women left flooded, damaged homes with children and/or family to live in makeshift tents in informal urban/rural settlements, or with relatives and others, or in rental houses or public facilities: schools, health or religious centers (TFPM, 2016). They suffered reduced privacy, the stress of burdening host families, housing insecurity, and threats of evictions as squatters. Women struggled to provide for families, often with limited or no prior experience in paid public work (UNFPA, 2021).

Work increased as they nursed family members with water-borne diseases, cleaned latrines, fetched and treated unclean water, risking exposure to contagious diseases. With only half of all health facilities in Yemen functioning, females of all ages especially pregnant women and babies were at high risk. Violence was rife. Protection needs were higher for displaced women/girls especially those with disabilities and female headed households. According to data in three governorates, child marriage was highest in displaced populations with one in ten girls losing the baby in childbirth. Poor shelter, collapse in protection systems, and service deficits were causes (UNFPA, 2021).



Source: EM-DAT: The OFDA/CRED Inetrnational Disaster Database, www.emdat.be - Universite catholique de Louvain - Brussels - Belgium

Conditions Of Stay-Behind Women From Migrant Households

Stay-behind women from migrant households endure several problems. In Bangladesh, 90 percent of 190 women interviewed in 10 drought, flood and cyclone-prone districts by UN Women said that sustenance was a big concern, as men often did not remit money. 13 percent of women who affirmed money transfers said it was inadequate. Women became household heads and often the sole breadwinners and were forced to find diverse sources of income and food for families – domestic work in rich households, vegetable gathering from farms, fishing in fresh-water bodies, poultry rearing. This was difficult with recurring climate hazards. Some communities made it hard for women to take paid public work after husbands migrated. Poor incomes, food and nutrition caused malnutrition and stunting in children. Doing paid work and unpaid care work alone in hardship contexts further increased women's work, stress and ill-health, more so for women with young children who were left alone at home and suffered accidents. Children were withdrawn from school to help at home and earn. Sexual abuse of women collecting fuel and water late after work and of girls and young women seen to have no 'male protection,' was pervasive. Community support in response was poor. Girls stayed indoors and withdrew from school. Long spousal separation led to non-communication, adultery, abandonment and divorce of wives, with women stigmatized and abandoned by communities and families. Women in 60 percent of the districts reported increased theft or fear of it after husbands migrated and spent sleepless nights in fear (Rabbani, al., 2015).

In Lajh district, Aden, Yemen, where 80 percent of women and men farmed, drought has forced land sales and migration. Women who have remained behind, farm the land and are becoming the sole family breadwinners, working hard to survive. Some are members of Conflict Resolution Committees that raise awareness on environmental sustainability and mitigate tensions owing to displacement and competition over resources like water (Mohammed, 2022).

Good Practices That Protect Migrant Women's Rights

Gender-responsive migration governance and sustainable development can enhance the resilience of migrant women workers and stay-behind women from migrant households. The Government of Bangladesh, for instance, has from the year 2003 progressively lifted restrictions on women's out- migration for work, thus addressing a key driver of irregular migration and trafficking. The 2015 bilateral agreement between the Government of Bangladesh and the Kingdom of Saudi Arabia (KSA) enabled women to migrate with protections, although there were age limits that did not apply to men. It committed to send 200,000 Bangladeshi women to KSA as domestic workers for two years. Although criticized in the national media, the agreement also lowered migration costs and hiked wages for domestic workers (Blanchet & Biswas, 2021). Over a decade and a half, many Arab governments have introduced various protections for migrant women workers, many of who are from Bangladesh. These include policies, laws, decrees, instructions, reforms in labour laws and codes, contracts for domestic workers; some reforms to the employer sponsorship system, regulations for recruiting agencies; initiatives such as public-private partnerships in e-recruitment, pre-and-post arrival information dissemination, job competency standards for domestic workers, online remittance transfers (D'Cunha, 2021). These beg robust implementation.

In climate and conflict affected Yemen, the UNDP-led and EU-funded, UN Joint Program, entitled 'Enhanced Rural Resilience in Yemen,' (2018-22), helped women set up and run solar microgrids and sell renewable energy. This was in the rural district of Abs that hosted some some 3 million migrants and displaced persons. It trained women on micro grid models, establishing and running the micro grid and business skills and finance. The project provides clean energy at 80 percent less than diesel-generated power costs and is expected to have reduced over five tons of carbon dioxide making the air cleaner. It has improved the incomes and family well-being of women energy entrepreneurs and has enhanced community, migrant, and IDP livelihoods. It has most importantly contributed to changing gender relations as women are seen as 'energy entrepreneurs' in the paid public 'male' energy space. The project creates new role models for aspiring women; has increased women's confidence, sense of social contribution and male-female interaction. The project will be expanded to remote sites to electrify schools and hospitals, to help change waste into energy and for desalination (UNDP, 2019a).

Gendered Drivers And Impacts Of Governance And Leadership In Normal Times And In Climate Crisis

Discriminatory gender stereotypes and skewed gender relations exclude women from leadership and decision-making to varying degrees, at various administrative levels and in communities and households in both sites. Women rarely hold formal senior decision-making positions on economic, environment, migration portfolios which are perceived as the province of male engagement. Bangladesh's Deputy Cabinet Minister for Environment, Forest and Climate Change, and its State Minister for Labor and Employment are women, but men head Cabinet Ministries for Agriculture; Environment, Forests and Climate Change; Planning; Industries; State Ministries of Expatriates' Welfare and Overseas Employment; and Disaster Management and Relief (Raju, 2019). In Yemen men head all Cabinet Ministries including Agriculture and Irrigation, Water and Environment, Planning and International Co-operation, Oil and Minerals, Social Affairs and Labor and Expatriate Affairs (Government of Yemen, 2019). Per 2020 data, women are 21 and 0.3 percent of Bangladesh's and Yemen's national Parliaments, respectively (World Bank, 2022a; World Bank, 2022k).

National data on household decision-making is difficult to access. Factors mediating such decision-making include family/kinship systems, gender-based headship, economic/education levels, geographical location, cultural norms, and the significance of issues on which decisions are made. In Bangladesh, 59.4 percent of women (15-49 years) participate in decision-making on three issues: own health, major household purchases and visiting family (World Bank, 2022j). But in male-centred sex-segregated contexts with functioning male household heads, men dominate major decision-making in households in these sites, especially in rural areas.

Decisions about women's paid public work or migration including in climate crises are often made by male family members. The extent of 'real' decision-making by women household heads in rural areas in both sites is not clear cut. In Bangladesh, research on such decision-making in climate-sensitive sites shows family and community pressure on female household heads (Rabbani et al., 2015). In Yemen when husbands migrate, male relatives back home may make decisions (Herbert, 1984).

The Paris Agreement on Climate Change requires countries to submit new/updated national climate action plans viz. Nationally Determined Contributions (NDCs) every five years. Bangladesh was not ranked in the progressive (first) or advanced (second) categories on CARE's Climate NDC and Gender Report Scorecard for 2020 and Yemen did not feature on it. Bangladesh with only 1 out of 6 green indicators on this scorecard was placed in the fourth or last category, categorized as the laggard category (countries with 0-1 out of 6 green indicators). There was no reference to gender or women in the context section of the NDC or how women were positioned in it under the scorecard's governance indicator. Nor was there evidence of women's participation in NDC planning processes or of gender responsive budgeting under its implementation indicator (CARE, 2020). Migrant women affected by climate change and hazards also do not appear to have been consulted in this process. This excludes their climate-related priorities too from climate strategies, and budgets.

The governments of Bangladesh and Yemen with international support have undertaken rapid post disaster needs and recovery assessments e.g., cyclone Sidr in 2007 and Yemen's 2008 tropical storm. This demands wide consultation with women. These assessments are important tools that inform recovery and reconstruction plans and programs that are costed and are used to generate international development assistance. Lack of active consultation with different groups of affected women and lack of women's influential representation on recovery/ reconstruction planning, programming, finance and budgetary mechanisms at national/local levels, in camps/urban sites to which they have moved, excludes their priorities from being addressed.

Recommendations For Action

Against this background, governments and other relevant stakeholders need to ensure that the climate, migration and development priorities of affected women must be integrated synergistically into climate mitigation/adaptation, labor migration, development and humanitarian policies and programs. This demands a whole of government and society approach that widens the stakeholder base across these thematic fields to ensure coherence and amplified impact. This includes practitioners on gender and development, climate adaptation and mitigation, DRR, agricultural and urban development, and humanitarian response. Women from these stakeholder groups and affected groups of women must be effectively represented in policy, planning, program design and implementation processes, so that their priorities are well addressed in every one of these policies, strategies and programs. These must have robust targets, indicators, budgets, monitoring/evaluation and accountability mechanisms. Investments must be made in:

Rafael Idrovo Espinoza

1. Gender-responsive impact reviews of climate crises, post-disaster needs assessments, response/recovery packages, plans, and programs to guide investment priorities at scale for affected women, taking account of intersecting inequalities.

2. Greater investment in gender-responsive budgeting for women affected by climate risk, to ensure that fiscal policies advance gender equality in immediate response and long-term recovery. This needs to be integrated into law fiscal policy design, budgetary, and financial management processes. Climate financing mechanisms, including private sector mechanisms must have gender benchmarks.

3. Building women's resilience in agriculture & climate migration for survival gender-responsive climate and agricultural policies, in line with relevant international human rights frameworks (CEDAW, SDGS, UNFCCC, the Paris Agreement, SFDRR, and the GCM), and national priorities and initiatives, governments should mainstream the priorities of the affected women into National Development Plans, and sectoral frameworks: climate and related agricultural development policies and strategies.

Analyze the structural drivers and impacts of climate risks in agriculture including migration for survival on non-migrant and migrant women including returnees, and stay behind women from migrant households, especially the most vulnerable women in these groups;

Enhance women's productivity, wages, climate-resilience in agriculture via improved access to:

- Asset Ownership (independent/joint ownership of land/livestock) and ensure social norm change and good legal and programmatic reform.
- climate-smart information (climate variations, hazard warnings, household/community preparedness that ensures reach to older women and those with disabilities etc).
- climate-resilient infrastructure, production technologies, inputs (drought/flood resistant seeds, changes in crops/cropping patterns and livestock, renewable energy-driven agriculture, robust embankments, stilt-housing, mangrove plantations etc.), sustainable soil, water, energy management practices and extension services.
- innovative finance for poor women and access to marketing.

Enhance women's businesses in the green economy (e.g., non-traditional water resources and renewal clean energy), through feasibility studies, improved education and business skills tailored to identified sectors, access to capital, technology, inputs and laws responsive to women's businesses;

Support women to invest savings and remittances in climate-resilient agriculture and entrepreneurship in the green economy;

Reduce women's care work in normal times and in climate crises, including via access to time, labor-saving, renewable energy-driven domestic and agricultural technology and child-care infrastructure;

Ensure inclusive risk assessment, evacuation planning and assistance, construction of flood and cyclone shelters responsive to children, women, especially pregnant women, older women, women with chronic ailments and disabilities;

Ensure these women's participation in household, community (e.g.,water and land committees), local government decision-making in 'normal' times and in climate-crisis response and recovery;

Enhance women's and girls' access to education, healthcare and services to prevent and protect them from violence, access to effective formal and formal justice mechanisms, including via social norm change.

4. Empowering women in planned international migration via migration policies in normal times and in climate crisis

Generate labor market data and analysis for national and migrant women (men) by sector, occupation, education, skill and wage level, disaggregated by sex, age, nationality at minimum;

Provide pre-departure, post-arrival, on-return information to migrant women workers on labor market demand and employability; policies, mechanisms, and services on recruitment, entry, work, residence, and return and the use of these services; protection entitlements, available remedies and access to them; protection measures in climate crises in host sites, in source sites and on return. Tailor content to women's work sectors in migration corridors in accessible communication formats and provide this in sites that women frequent and at appropriate times;

Decent green jobs governed by labor laws in line with ILO and CEDAW standards, including for domestic workers, with strong wage, social security, enforcement, and accountability provisions;

Ensure job skills matching and mobility via co-ordination between sites of origin and destination, and ethical, accountable recruitment for all, especially low-skilled migrant women workers;

Promote legal migration for poor migrant women by liberalizing emigration and immigration policies;

Enhance social protection (pensions, health insurance, etc) for poor migrant and local women in the informal economy and out of the labor market and child-care and support services also for children left behind, including in climate crises;

Include all migrant women in anti-violence laws, and access to comprehensive services on violence;

Change gendered, racist social norms and behavior and provide long-term alternatives to detention viz. regularization, safe, non-custodial community housing and safe, paid, dignified return in case of deportation;

Ensure woman-friendly socio-economic, legal, psychological reintegration to returnees in normal times and on return from climate-crisis in host countries.

5. Protect migrant women in climate crisis in host countries via migration policies

Generate and share data on impacts of climate crises on migrant women in host sites;

Identify and include them and their priorities in preparedness and response plans, based on non-discriminatory protection and humanitarian assistance. This should include timely information and warnings on crisis risks, evacuation, entitlement to assistance and access to basic needs such as food, healthcare, shelter, links to consular services;

Provide extended time to renew expired documents or apply for duplicates if lost, status regularization and redress mechanisms;

Facilitate job protection and mobility in host sites; safe, paid voluntary return home; support to claim outstanding wages and assets left in destination sites; and re-employment and safe remigration options to destination countries.

6. Empowering women in planned/unplanned internal movement to urban sites via urban policies

Protracted large unplanned movement to new sites is fraught with risk, as is much planned urban migration where women (men) migrants live in poverty and insecurity in slums. However, many often prefer to remain in these sites. Governments and partners must provide durable solutions;

Consult with women (and men) who have moved in unplanned/planned ways into urban slums, spontaneous settlements on urban outskirts so as to grasp their future plans; and ensure that women in new sites and in host communities participate in planning and implementing durable solutions;

Support local integration through national and local policies, strategies and laws with strong enforcement, that include formal and informal settlements in green urban development plans; provide secure land and housing to women residents in slums, and urban outskirts, aligned with UN Guidelines on Internal Displacement/Forced Evictions, in ways that benefit host and migrant communities;

Provide decent green jobs and develop women's businesses via public-private partnerships; improve access to education, essential public good and services, and care services for low-income women;

Enact and amend anti-violence laws with strong enforcement and comprehensive services for all women and girls including access to justice in new sites.

7. Engendering humanitarian response to women's large scale unplanned movement & to 'stayers' in affected home sites in line with Sphere and Core Humanitarian Standards on Quality and Accountability. National, local governments and humanitarian actors must provide safer conditions for aid distribution in the following ways:

Inform women of rules governing spontaneous settlements/camps, aid distribution modalities, help in safe aid access and facilitate equitable intra-household resource-sharing;

Ensure parity in the proportion of women enumerators, analysts, aid distributors, service providers, decision-makers in government and humanitarian organizations working in partnership with women's organizations;

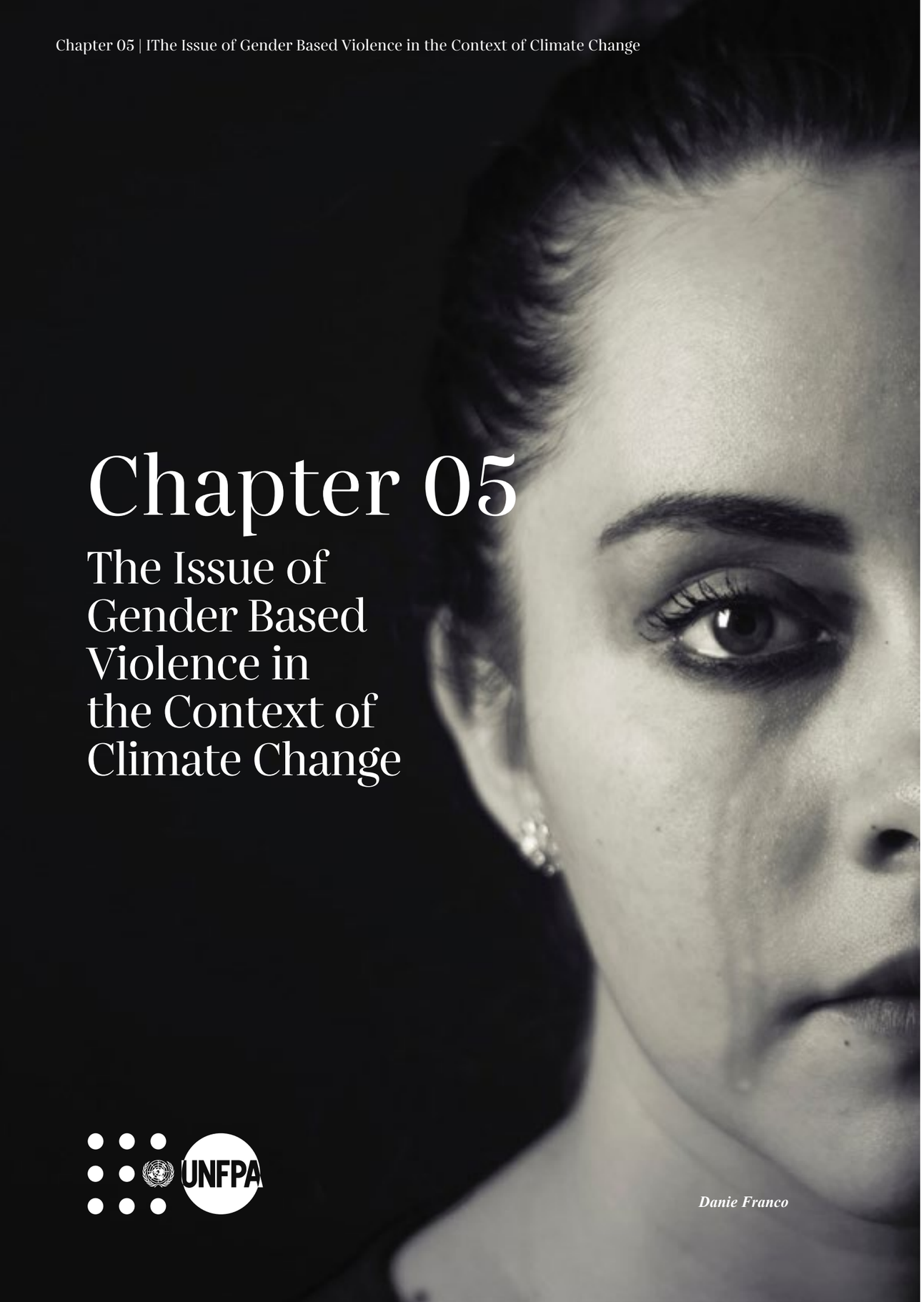
Ensure that aid items suit women's and girls' needs, and provide cash and decent work for women;

Improve women-sensitive site security: proximal, well-lit, secure, sex-segregated toilets/baths, waterpoints, and shelter;

Strengthen services for women and children: general health, sexual/reproductive and maternal health and responses to violence against women and children through service mapping, awareness-raising, safe referrals, better medical services, trauma counselling, and legal services;

Engage men and boys in community dialogue to respond to their challenges, and engage them in preventing gender-based violence, including through informal justice mechanisms;

Ensure women's representation in management and decision-making in new settlements and affected homesites. Support women leaders to identify the most vulnerable women's and girls' priorities, to link them to relevant services and to catalyze community mitigation measures.



Chapter 05

The Issue of Gender Based Violence in the Context of Climate Change

UNFPA

Danie Franco

Background

Climate change has been acknowledged repeatedly by global institutions and leaders as the greatest threat to security and human development (CEDAW, 2018; Pörtner et al., 2022; IPCC, 2018; Thurston, et al. 2021). It affects economic, food and housing security, the availability of water, a range of health conditions, agricultural productivity and natural ecosystems (Pörtner et al., 2022; IPCC., 2018; King & Harrington, 2018; Thurston et al., 2021). There is recognition that the climate crisis will affect men, women and children differently, and will serve to exacerbate existing intersectional vulnerabilities among those most reliant on natural resources (Carney, et al, 2020). Due to gendered power inequalities, harmful social norms and social vulnerabilities, in many settings, women are more likely than men to experience increases in violence or die during and in the aftermath of extreme weather events or climate-related disasters (Sanson, Van Hoorn, & Burke, 2019; Thurston et al., 2021). Research highlights how the intersections between gender, ethnicity, age, disability, power dynamics, socio-economic structures, and gender-discriminatory societal norms harshen impacts of climate change among women and compared to men and other vulnerable people and communities including increasing violence (Le Masson, 2022).

Gender-based violence (GBV) refers to harmful acts directed at an individual or a group of individuals based on their gender, and its roots are based in systemic gender inequality, the abuse of power and unequal social norms (Carney et al., 2020). Everyone can be affected by GBV, but there is overwhelming evidence that women and girls constitute the primary targets (Le Masson, 2022). For this reason, this chapter focuses on violence against women and girls[83]. Occurring at all stages of life and across countries, GBV encompasses many different expressions of domestic violence, including physical, sexual, and emotional violence by a spouse and other forms of violence, such as sexual harassment, rape, sexual exploitation, human trafficking, and harmful practices, such as child marriage and female genital mutilation (FGM) (Heise, 1998).

Globally, one in three women experiences violence from intimate partner such as husband/spouse in their lifetime (WHO 2021). This violence starts at a young age: one in four young women between the ages 15-24 years old have experienced violence by an individual, such as a spouse (WHO, 2021). Abuse is associated with increased risk of injuries, depression, anxiety disorders, unplanned pregnancies, sexually transmitted infections, and various other health problems (Bacchus, et al, 2018; Jewkes, 2010) Evidence indicates that GBV also affects whole societies comes with tremendous costs, including effects on national budgets and overall development (Jewkes, 2002).

External shocks, such as pandemics, wars, or climate-related extreme events affect multiple aspects of people's well-being, not just their immediate physical conditions, but also their mental health as well as their interactions and relations within their family and community (Le Masson, 2022). While the linkages between conflict and GBV are well-established with evidence that demonstrates an escalation in the experiences of GBV after a conflict (Human Security Research Group, 2012), there is less consideration of how the impacts of climate change affect women's experiences of different forms of violence and sexual exploitation. With the COVID-19 pandemic, there is evidence on the prevalence and increase of domestic violence inside the household as a result of lockdown measures (Peterman & Donnell, 2020) and the need for gender-responsive disaster responses (Gavrilovic, et al, 2022). Further, while addressing gender inequalities and securing environmental sustainability are each global priorities in international legal commitments (the 2030 Agenda for Sustainable Development, the Paris Agreement[84] to the United Nations Framework Convention on

83 This chapter focuses on violence against women and girls, but UNFPA's mandate focuses broadly on GBV in humanitarian, peacebuilding and development contexts in over 150 countries and territories around the world. In 2020 alone, UNFPA invested over $223 million in eliminating GBV and harmful practices.

84 Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104

Climate Change (UNFCCC[85]), the Gender Action Plan and Lima Work Programme on Gender) only recently has there been recognition of the need to address climate change and GBV both to protect and safeguard women and vulnerable populations, but also for violence prevention. More specifically, the Committee on the Elimination of Discrimination against Women (CEDAW Committee), in its general recommendation no 37 (2018) specifically raised the need for "policies and programmes to address risk factors for GBV within the context of climate change and disaster risk reduction". Most recently in 2022, the conclusions of the Commission on the Status of Women (CSW66) recognised the urgency of eliminating GBV in the context of climate change, disasters, and environmental damage (CSW, 2022). However, the gendered components of climate change law and policy have been vastly addressed in the adaptation space and not mitigation.

This chapter started by providing definitional clarity on VAWG and GBV and the rationale for linking it with climate change impacts. The second section that follows, is an evidence desk review of the linkages between climate change impacts and GBV with global examples, followed by specific examples from the Organisation of Islamic Cooperation (OIC) Member States. The final section outlines research gaps and programmatic measures that OIC Member States need to consider to ensure that GBV response and prevention take climate change into account.

Global systematic review evidence and pathways between climate change and gender-based violence

In the academic literature, two recent global mixed-methods systematic reviews examined the evidence on extreme weather events (van Daalen et al., 2022) and climate-related disasters (Thurston et al., 2021), and GBV. A review by van Daalen and others (2022)[86] on extreme weather events and GBV explored several types of extreme events (i.e., storms, floods, droughts, heatwaves, and wildfires) and different types of GBV experiences (van Daalen et al., 2022). The studies represented more than 40 countries, with primary representation from studies on Hurricane Katrina in the United States of America (USA), droughts in India, and floods in Bangladesh[87]. Most quantitative studies were cross-sectional or ecological in design and rated as poor quality. In comparison, the qualitative studies were rated to be of reasonable quality. The overarching finding was despite limitations in the data, there is evidence that extreme weather events (floods, droughts, hurricanes, cyclones, heatwaves, typhoons, and wildfires) are associated with increases in different types of GBV, particularly spousal violence. The limitations are geographic gaps, methodological gaps (limited before and after studies, and cohort studies to establish causality between the weather event and GBV) and climate change affects GBV differently across different settings (Pörtner et al., 2022). These risks link not only to the type of climate event and the stressors they create but also to pre-existing social and gender norms, traditions, vulnerability, exposure available, reporting mechanisms, and practices around women's rights and GBV (van Daalen et al., 2022). This has implications for policies and programmes that protect women and girls from violence and climate risks.

Another review by Thurston and (2021)[88] on climate-related hazards, disasters, and violence against women and girls included 37 studies that explored several types of disasters caused by natural hazards (climatological, geophysical, hydrolo,gical and meteorological) and different forms of VAWG. Eleven out of the 20 quantitative studies found a positive association with disaster exposure and at least one type of violence, particularly spousal violence (Thurston et al., 2021). This review also emphasized a lack of good quality quantitative studies, specifically around study designs and the measurement of variables. They also highlighted limited geographic scope revealing a gap in the evidence from OIC Member States. The qualitative evidence in the review appears to be of reasonable quality (Le Masson, 2022).

85 UN General Assembly, United Nations Framework Convention on Climate Change: resolution / adopted by the General Assembly, 20 January 1994, A/RES/48/18.

86 This review was based on 41 studies (20 quantitative, 14 qualitative, 5 mixed methods and 2 reports)

87 There were six studies from the United States of America (USA), five from droughts in India, and five from floods in Bangladesh.

88 The review was based on 37 studies (20 quantitative, 16 qualitative and one mixed-methods study).

Drawing on the qualitative studies from the review, Thurston and others offered the following hypothesised pathways to frame our conceptual understanding around how climate change impacts drive GBV. These are:

1. An increase in economic and psychological stressors that can increase GBV, such as trauma and poor mental health due to poverty, loss of housing and livelihoods and lack of social support. The chronic or acute stress that results from economic insecurity (alongside the use of alcohol) can trigger conflict and arguments resulting in increases in violence;

2. An increase in 'enabling' environments for GBV, may occur when extreme weather events, such as floods or hurricanes resulting in the absence of policing and law enforcement, as well as the inaccessibility of health and social services. This may lead to impunity for the commissioning of violence perpetuating harmful social and gendered norms that serve to normalize GBV. Decreased access to services will also reduce women and girls' ability to mitigate the risks of violence. It may also lead to increased exposure of women and girls to unsafe and risky settings, including exposure to sexual violence and harassment during procurement of basic goods, including food or water (Busza, et al, 2014; Stoebenau, et al, 2016; Wamoyi, et al, 2010);

3. Worsening of existing drivers of VAWG, such as gender and social inequalities, unequal power relations, and harmful social and gendered norms. This manifests in reduced female representation, participation, and inclusion in climate adaptation and mitigation policies and programmes. In particular, the low status and agency of women and girls, combined with the effects of post-disaster poverty can facilitate an increase in forced early marriage of girls, and women may engage in transactional sex for survival to support themselves and those in their care resulting in sexually exploitative situations.

For men, climate change may fuel a sense of powerlessness, particularly through its impact on the provider and protector roles due to economic insecurity and loss of livelihoods, and this may drive violence in a relationship (Thurston et al., 2021). This coupled with community norms around the acceptability of violence, and women's financial dependence can also lead to greater acceptance of violence by individuals and the community. These pathways are yet to be tested empirically, but some examples are provided below.

2.1. Specific global examples of GBV in the context of climate change

As demonstrated by the two systematic reviews and a rapid literature review conducted for this chapter, quantitative studies that provide evidence of linkages and examine pathways between climate change impacts and GBV are primarily from non-OIC countries. This reveals a gap in the evidence base from OIC Member States. Nevertheless, the empirical studies below from non-OIC countries have been included here to show the types of climate events that are associated with different typologies of GBV using quantitative methods and datasets are:

2.1.1. Droughts and Heatwaves

In Sub-Saharan Africa, based on an analysis of 19 Demographic Health Survey (DHS) data89, drought was associated with reporting a controlling partner and experiencing physical and sexual violence, with stronger associations among adolescent girls and unemployed women. Drought was not associated with reported emotional violence. There was heterogeneity in findings across countries; drought was protective for at least one type of violence in Uganda, Namibia, and Tanzania (Epstein et al., 2020). In Spain, there was strong statistical evidence as indicated by the p-value that heat waves between 2008-2016 were associated with increased risk of spousal violence (relative risk (RR)=1.02; p<0.001)90 and intimate partner

89 19 Demographic and Health Surveys from Sub-Saharan Africa from 2011 to 2018 with publicly available historical rainfall data. The countries included in the analysis are: Sierra Leone, Togo, Benin, Côte d'Ivoire, Cameroon, Gabon, Chad, Democratic Republic of the Congo (DRC), Rwanda, Burundi, Uganda, Kenya, Tanzania, Malawi, Mozambique, Zimbabwe, Zambia, Angola, Namibia.

90 Relative risk (RR) is the ratio of the risks for an event for the exposure group to the risks for the non-exposure group. A p-value, or probability value, is a number describing how likely it is that your data would have occurred by random chance (i.e., that the null hypothesis is true). A p-value less than 0.05 (typically ≤ 0.05) is statistically significant. It indicates strong evidence against the null hypothesis and shows that the research hypothesis can be accepted.

femicide (RR=1.40; p=0.048), one to three days after the extreme heat event (Sanz-Barbero et al., 2018).
In Australia, there was some evidence of increased domestic violence during severe drought years. According to service providers, financial pressures associated with the drought were partly the cause of an increase in alcohol and drug consumption by men as a coping mechanism, which resulted in increased violence against women. The research noted that the violence – mainly emotional abuse, financial control, physical abuse, and isolation of women – was first reported by service providers instead of being directly mentioned by the women (Whittenbury, 2013).

2.1.2. Hurricanes, Tsunamis, and Cyclones

In the USA, in 2008, exposure to Hurricane Ike was significantly associated with increasing the odds of boys physically (odds ratio (OR)91=3.19; p<0.01) or sexually assaulting (OR=3.73; p<0.01) dating partners (Temple. Et al., 2011) However, exposure to Hurricane Katrina had no effect on the risk of non-partner sexual violence among girls (aged 12–18) and female university students (Fagen, et al, 2011; Madkour, et al, 2011). In India, there was strong evidence that the odds of spousal violence were much higher among women living in states severely (OR=1.98; p<0.001) and moderately (OR=1.85; p<0.001) affected by tsunamis compared with those living in an unaffected state (Rao, 2020). In Vanuatu in 2011, there was a 300 per cent increase in new domestic violence cases after two tropical cyclones (Carney et al., 2020).
There is also qualitative literature from research conducted by non-governmental organizations (NGOs) that complement the academic literature. This research documents forms of non-partner violence, such as sexual exploitation, sexual harassment, sexual assault, and rape that may occur due to the climate-related events. For instance, in South Asia, post-2004 tsunami, sexual harassment against women, rapes, and domestic abuse were reported (Felten-Biermann, 2006; Fisher, 2010). In Kenya, similarly, the drought forced many girls to engage in transactional sex or to be forced into early marriages (IFRC, 2015). In Nepal, sexual harassment and exploitation were used as a tool to intimidate women and prevent them from engaging in ecosystem restoration activities (Carney et al., 2020).
In the global examples above, the risk for increased violence was the decrease in police protection and the lack of enforcement of laws regarding domestic disputes. Thus, the risk of violence might not solely be triggered by direct adverse impacts of extreme weather events or disasters on people's mental health and families' well-being and economic security, but also by the failure of safeguarding and protective systems, as shown by the hypothesised pathways to GBV risk, described above (Le Masson, 2022).

NASA

91 An odds ratio (OR) is a measure of the association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure.

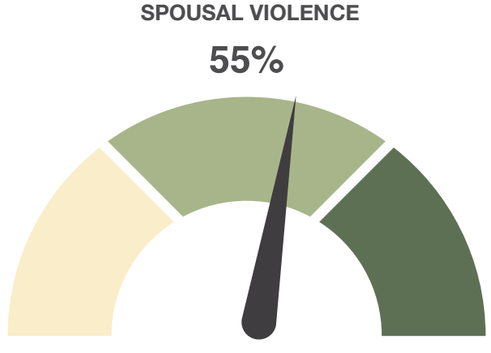
2.2. Specific examples of GBV in the context of climate change in OIC Member States

As acknowledged earlier, there are limited large-scale representative datasets on the intersection between climate change impacts and GBV globally, but particularly in OIC Member States. However, there are some local qualitative studies with small samples in OIC Member States that provide some evidence of the pathways and relationship between climate change and different forms of GBV. The following examples from OIC countries are from both stable, development settings and humanitarian contexts that also have the compounding risks of conflict and political instability. But all examples below show qualitative evidence of increases in different forms of GBV post-extreme weather events. In particular, these studies describe lived experiences of those women and girls who are facing multiple risks of climate change and GBV. And in some contexts, particularly in humanitarian settings other compounding risks, thus providing qualitative evidence as a good basis to inform interventions and programmes.

In development contexts, for instance, in Bangladesh, after Cyclone Sidr in 2007, criminal networks forced some women and girls into prostitution along the Indian border. Child marriages also increased after Cyclone Sidr, as a means of reducing families' financial burdens (Jha, 2017). Another study from Bangladesh that used qualitative data after Cyclone Roanu indicated direct and indirect associations to forced marriage and trafficking immediately before, during, and after the cyclones (Rezwana & Pain, 2021). Again, in Bangladesh, two studies showed that women and girls faced sexual harassment during and post-floods, which occurred when going to the latrines at night or inside cyclone shelters. This was attributed to men loitering around more than usual because their work was interrupted and because girls did not get the privacy that they needed when they bathed, or to access toilets in flood shelters or camps. Sexual violence also particularly affected adolescent girls (both married and unmarried), as well as women with disability during floods (Nasreen M, 2010; Rashid & Michaud, 2000).

In Uganda, due to the failure of income crops caused by prolonged dry seasons, men were prompted to try to sell the crops grown by women for household consumption. Tensions led to men beating their wives to exercise control over the land, while there were also cases in which women beat men (Carney et al., 2020).

In humanitarian contexts, an individual's risk of experiencing GBV due to extreme weather or disaster is compounded by other risks driven by conflict and other factors that make it complex to disentangle the drivers. Nevertheless, the interaction of different factors makes the need for programmes to focus on integrated services that offer protection to women, alongside access to health and social services. For instance, the Sahel region has been identified by the latest Intergovernmental Panel on Climate Change (IPCC) report as a "climate change hot spot" region. That means that in countries where human security is threatened due to climate change impacts (ICRC, 2020). Spousal violence represents 55% of reported GBV cases among Internally Displaced Persons (IDPs), refugees, and host community members, while rape and sexual assaults represent 21% of cases. (UNFPA, 2020). Further, the scale of GBV incidents among crisis-affected people (children, adults and displaced) is very high due to a complex humanitarian situation: terrorism, mixed-migration, drought, epidemics, IDPs, and refugees (UNFPA, 2020).



Reported GBV cases among internally displaced Persons (IDPs)

Other examples include, for instance, in Syria, in early 2009, a multi-year drought caused the migration of over a million people from rural areas to semi-urban and urban areas. As men were primarily those leaving to find alternative sources of income, many women were forced to become heads of household, leaving many malnourished, without land in their names, exposed to GBV, and this resulted in girls being taken out of school (Verner, 2012). In Somalia, in 2019, drought and flood conditions caused the internal displacement of 2.6 million people, heightening women and girls' vulnerability to GBV as they were forced to reside in camp facilities with weak protection mechanisms. Through qualitative interviews, there appeared to be indications that domestic violence, sexual violence, and FGM reportedly increased in this setting (UNFPA Somalia Country Office, 2020).

In the Lake Chad Basin, as drought makes water more scarce, women and girls are forced to walk longer distances to obtain potable water, increasing their exposure to sexual harassment and assault far from home (Masson et al., 2016).

Due to male out-migration, women and girls left behind often lack the capacity to provide for their families, exposing women and girls to sexual violence and sexual exploitation. Child marriage is reportedly widespread in response to these added burdens (UNFPA, 2020). Finally, the Social Institutions and Gender Index (SIGI) research has also qualitatively indicated that women in Chad, Mali, Mauritania, and Niger experience high levels of discrimination based on marriage rights and family code, violence against women, and access to resources (Bouchama et al, 2018).

UNFPA Somalia

UNFPA Somalia

2.3. Rapid review of Nationally Determined Contributions (NDC)[92] from OIC countries

To inform this chapter, we also conducted a rapid search of the NDC Registry[93] using the following terms 'gender-based violence', or 'violence'. Our review shows that most of the 57 OIC countries have submitted NDCs in the official language of the State: English, French, Arabic, or Russian. We restricted the search to the 18 of the 57 OIC countries that had submitted their NDC reports in English[94]. As part of this process, of the 18 OIC countries that submitted reports in English, only two OIC countries, Albania and Somalia, have recognised GBV as an important impact faced by vulnerable populations, particularly women and girls, and have outlined plans to address it in this context. Albania has signed a number of international binding and non-binding commitments with regards to addressing gender equality – one being the Council of Europe's 2011 Convention on Preventing and Combating Violence against Women and Domestic Violence ("The Istanbul Convention"). Somalia recognizes the dual and compounding effects of conflict and climate change on GBV (Government of Albania, 2021; The Federal Republic of Somalia, 2021) and recognised that the promotion of gender equality is critical for effective climate adaptation and mitigation in Somalia.

93 NDCs by countries outline future efforts to reduce emissions and include information on national plans for adaptation to the effects of climate change

93 https://unfccc.int/NDCREG

94 Due to short review time for this chapter focus was on English

Many OIC countries have also provided a framework for gender-responsive action on climate change in their NDCs, but do not refer to GBV. These countries are: Jordan, Lebanon, Malaysia, Maldives, Mauritania, Mozambique, Pakistan, Sierra Leone, South Sudan, Suriname, Syria, Togo, Tunisia, and Uganda. Finally, some OIC countries (Iran, Côte d'Ivoire, Libya, Palestine / West Bank, Yemen) have not submitted first or second NDCs. While we recognise that this was a rapid search with limitations, UNFPA in partnership with Queen Mary University, London (QMUL) is conducting an in-depth gender analysis of NDC contributions with a regional focus and have a section on GBV. This 2022 UNFPA and QMUL report reviewed 15 NDC documents for countries in the Arab region that were submitted in or after 2020.

The 2022 UNFPA and QMUL report for the Arab Region found that a majority of documents (11/15) made some reference to gender. Seven NDCs describe women as a group vulnerable to the impacts of climate change, and most of the NDCs (10/14) reference gender-mainstreaming or gender-responsiveness as a means to engage with this and ensure the representation of women in NDCs. Of the 15 reviewed NDCs, five made specific reference to GBV.

The Somalia NDC states that 70-80% of internally displaced persons and camp-based refugees are women who are exposed to GBV[95]. Both Jordan and Tunisia include a measure to support women exposed to GBV as a health-related adaptation pillar[96]. In the context of the OIC countries in the Arab region, water scarcity represents a key intersection between health and gender issues and is recognized as a real and growing issue in the Arab region. Water scarcity affects health by limiting access to safe water for drinking and hygiene practices and increases the threat of contracting water borne diseases such as cholera. Women and children are most vulnerable to the impacts of water scarcity since they are often the ones responsible for collecting it, and when they have to travel further to find safe water, this requires more time and exposes them to GBV risks.

UNFPA | Yemen

95 Somalia NDC, 2021:p12

96 Jordan NDC, 2021: p54; Tunisia NDC, 2021: p66

2.4. UNFPA case studies from Jordan and Syria

Finally, as elaborated below, the 2021-2022 qualitative research conducted by UNFPA in Jordan and Syria shows the increased vulnerability of women and girls to climate events, such as water scarcity and heavy snowfalls.

UNFPA Jordan's research showed that women experiencing multiple vulnerabilities in Jordan (such as refugees or those living in non-urban areas) may be more affected by challenges specifically related to the effects of climate change, such as water scarcity. For instance, in Jordan, particularly in certain refugee camps, water scarcity appears to have increased incidences of various forms of GBV, including spousal violence, and sexual harassment. This is because refugee women have the task of fetching and collecting water and often have to walk long distances to collect water. This places them at risk for verbal abuse and sexual harassment (UNFPA Jordan, 2022). It is worth noting that discriminatory gender and social norms impact the roles and responsibilities of men and women in Jordan, their access to resources and decision-making power, and in turn diminishes women and girls' abilities to adapt to and recover from climate-related events (UNFPA Jordan, 2022).

UNFPA Syria's research showed that during the extreme weather conditions and heavy snowfall in northwest Syria in January 2022, there was a reported spike in GBV reported incidents among affected households. This was reported as a result of losing tents, husbands' increased psychological distress and unemployment that prevented them from providing basic needs for their households. Female heads of households were also exposed to sexual exploitation and abuse when attempting to meet basic needs such as securing new tents, furniture, heating supplies, and/or food for their households (UNFPA Syria, 2021).

The NDC commitments from Jordan and Syria indicate a strategy that aims to be gender-responsive. Both acknowledge that climate change has impacted women and identify components of gender-responsive action including participation of women and a focus on increased resilience of women, communities, and systems to ensure increased capacity to adapt. Furthermore, Jordan was the first country in the Arab Region to recognise the importance of and integrate a gender equality perspective in its National Climate Change Policy[97]. One of the good practices included in the Policy is the development of a Road Map for Gender Equality and Climate Change that was designed to support the government, particularly the National Committee on Climate Change, to advance its work on mainstreaming gender equality and women empowerment through adopting gender-climate just solutions that help realize the NDCs.

This road map, developed by UNDP as part of their gender analysis report for 2021, includes several actions and ways forward:

1. Strengthen the capacity of climate change and gender equality experts
2. Build a strong evidence-based discourse about gender equality and climate change, with age and gender-disaggregated data
3. Engage women and men, girls and boys in the response and mitigation process, especially those most affected to its impact such as rural women
4. Ensure the participation of women's organizations in designing and reviewing climate change policies, strategic plans and action plans.

An important point to note though is that mapping relates to gender and, within gender, the issue of GBV is not well articulated, understood, or addressed. So, while we have some best practices, we need to see this recognised both nationally and globally as a key strategy in reducing risk of GBV as a result of both climate change and climate change adaptation and mitigation policies.

97 The Jordan National Climate Change Policy (2013-2030) (JNCCP), the National Adaptation Plan (NAP) and Jordan's Third National Communication on Climate Change

Current Policies and Initiatives

Climate change poses major threats to the vision of human-centred sustainable development outlined in the International Conference on Population and Development (ICPD) Programme of Action, and reinforced by the 2030 Agenda for Sustainable Development, with significant impacts on gender equality including reproductive health and rights across the development peace and humanitarian and peace nexus settings. Gender-based violence (GBV) and child marriage are known to increase in times of stress and scarcity and following extreme weather events and disasters (McLoed, Barr & Rall, 2019). GBV can limit women's ability to build resilience to climate change, impeding the capacity of survivors and their dependents to proactively and positively respond to and manage ongoing challenges and crises (Le Masson, 2019).

UNFPA has committed to three transformative results by 2030: ending preventable maternal mortality, ending unmet need for family planning, and ending gender-based violence and harmful practices. The rapid pace of climate change over this decade will make each of these transformative results more difficult to achieve. In order to scale up action on this issue, in 2019 UNFPA organised an International Symposium on SRHR, Gender, and Climate Change Resilience to share knowledge and identify programmes to reduce the impacts of climate change and build the resilience of communities in vulnerable settings.

The resulting Future Africa Call to Action outlines both the impacts of climate change on the achievement of universal access to sexual and reproductive health and reproductive rights and the contributions that the ICPD community can make to building climate resilience. These consultations supported the work to develop a programmatic action to support UNFPA operational work and in December 2020, UNFPA launched its value proposition on climate change, outlining four pillars of programmatic work connecting the promise of the ICPD and climate change adaptation and resilience, to achieve gender-sensitive responses for women, girls, young people, and vulnerable communities.

Noaa - Unsplash

Adrien Taylor

These programmatic areas of work outline a multi-pronged approach that addresses gaps in programming to ensure action toward climate change at various levels:

Ensure a healthy empowered population including women, girls, and young people whose sexual and reproductive health and rights are addressed and fulfilled we address climate change's impact on sexual and reproductive health and reproductive rights.
Ensure risk reduction, enhanced preparedness, and strengthened emergency response. Strengthening health and protection systems that respond to climate impacts including ensuring the continuity of services for sexual and reproductive health and reproductive rights "SRHRR"98 and stronger protection services for GBV responses.
Ensure risk reduction, enhanced preparedness, and strengthened emergency response. Through our humanitarian and development nexus approach UNFPA is working to ensure better preparedness and response in emergency and to meet the sexual and reproductive health and reproductive rights needs of those impacted, displaced, and at risk of climate crises.
Strengthen data systems for climate vulnerability and adaptive capacity. We are also working on supporting stronger data systems for climate vulnerability. Climate-related vulnerability assessments and actions must be informed by disaggregated population, health, and gender data to reflect the multiple and differentiated impacts of the climate crisis, including assessment of the impact on sexual and reproductive health and reproductive rights.

In addition, UNFPA has developed a Climate Strategy that is anchored around three pillars that aim to support the achievement of our three transformative results:

The Climate Change Value Proposition ('what' we propose to deliver in our programmes),

UNFPA Social and Environmental Standards ('how we strengthen and mainstream social and environmental sustainability and accountability in programmes, and UNFPA's Environmental Efficiency Strategy ('how' we make our operation greener).

In order to achieve its goals, UNFPA supports governments in the design of climate solutions to ensure national climate policies incorporate sexual and reproductive health and reproductive rights issues, with young people at the heart of developing innovative solutions to improve the adaptive capacities of their communities. At the core of empowering young people and women to fulfil their potential, is ensuring access to accurate, human rights-based sexual and reproductive health services and information.

98 As defined in the 2030 Agenda for Sustainable Development: https://sdgs.un.org/2030agenda As defined in the 2030 Agenda for Sustainable Development: https://sdgs.un.org/2030agenda

Research and Programming Recommendations

4.1. Research gaps

In order to strengthen gender-responsive climate action and uphold international commitments to ending GBV and to addressing climate change, there is an urgent need to strengthen national comparable data highlighting the gendered impact of climate change, more specifically on the prevalence of GBV, including harmful practices in OIC countries. We also need to identify best practices and generate evidence on interventions and programmes that have mutual co-benefits in being climate-resilient and gender transformative. Specific recommendations are:

1. Generate longitudinal evidence on the linkages between climate change impacts and GBV in the OIC regions to inform programming. As noted in this review and other evidence reviews that have been conducted, there is a range of localised small surveys and qualitative research that have demonstrated associations between climate change impacts and different forms of GBV in the OIC Member States. But these cannot be used to support a global evidence base, as they do not use standardized methodologies, and the quantitative studies, in particular need to be better representative of the population (van Daalen et al., 2022). Promoting data and evidence-generation on the links between different climate hazards and GBV serves multiple purposes. GBV stakeholders can use the data for advocacy efforts to raise the importance of addressing GBV in climate change action and also utilize the data to design appropriate interventions before a disaster or slow-onset climate event has fully struck.

Design large, ethnographically diverse cohorts that use both quantitative and qualitative methods to further explore the mechanisms and underlying driving factors of GBV in the context of climate change. This could be the inclusion of modules capturing self-reported experiences of climate change within large, scale violence prevalence surveys[99] that exist in different countries.

Conduct OIC country case studies on GBV and environment/climate indicators to strengthen national statistics capacity and identify entry points.

Conducting assessments of norms and practices that inform women and girls' violence risks related to climate-induced disasters (both acute and slow-onset); mapping services; mapping particularly at-risk or 'marginalised' groups of women in order to develop strategies to support their specific needs related to climate change; etc.

2. Establish the evidence on the linkages between climate change and different forms of GBV, including harmful practices, such as child marriage, FGM, sexual harassment, and sexual exploitation. There is a need to further understand how climate change impacts different forms of GBV to ensure targeted and effective GBV programming. There is an urgent need for research to contextualise the nature and consequences of violence and quantify the scale of these problems to examine potential solutions, in particular, because sexual harassment and exploitation and harmful practices are exacerbated by the impacts of climate change.

3. Identify promising best practices globally and strengthen South-South knowledge sharing on effective programmes and interventions for tackling GBV in the context of climate change. Locally-led community-based programmes that are climate-resilient (e.g., alternative livelihoods) offer a good basis for co-designing a gender-transformative programme that can tackle unequal gender norms. Such programmes offer mutual benefits for both sustainable development and GBV prevention.

4. Include a 'power' analysis in any data collection efforts. Given that gender inequalities are driven by imbalances in power, in addition to researching whether GBV increases during and after a climate event (either acute event or slow onset climate change), there is a need to interrogate if changes triggered by an extreme event or slow onset climate change affect people's interactions, their privileges (or lack of), income, and power; if any changes in roles or power dynamics are short term or long-lasting; how coping mechanisms influence the occurrence of violence; and the role of relief programs in protecting (or not) climate change affected individuals and GBV survivors.

5. Map national and regional policies, laws and frameworks, and governance mechanisms that serve to support them systematically. This is to support the integration of gender-responsive climate action into systems and structures. This mapping will enable the identification of the mechanisms through which the highest level of influence may be leveraged to give effect to the data and research to advocate for gender-responsive climate action in laws and policies. It will also serve to support countries in ensuring the cross-sectoral learning and considerations across climate, humanitarian and development, and gender sectors of Government.

99 To support this evidence generation, there are now a range of programmes, data and evidence available on collecting and conducting violence research. These are the What Works to Prevent Violence research programme, the kNOwVAWdata initiative which support increased availability and access to quality violence against women prevalence data, and other tools, ***including the UNFPA Intimate Partner Violence (IPV) geospatial dashboard.***

Grace Kaley

4.2. Programme Recommendations

Design inclusive programmes that address GBV and climate change impacts by building adaptive livelihoods and including local women at the centre of the strategy. Climate change adaptation and mitigation programmes and strategies need to integrate local stakeholders' and women's perspectives. Programmes need to be designed for safeguarding women, and they should effectively respond to the needs and priorities of women and girls and overcome multiple and intersecting forms of discrimination, harmful gender norms and systemic power imbalances for gender-transformative outcomes, including addressing GBV. This includes, for example, building adaptive livelihoods for promoting resilience to climate shocks or adding complementary 'plus' components to existing cash transfer programmes. Finally, promoting adaptation and resilience requires a significantly greater investment in building out women's organizations and groups to be part of the solution.

Promote strategic cross-sectoral OIC and South-South partnerships and cooperation at global, regional, national, and local levels. Cultivate partnerships between climate policymakers, international organizations, programmers and women's ministers or gender equality machineries, ensuring participation, agency, and leadership of women's civil society organizations with expertise on ending GBV in all climate change processes across the climate change and ending GBV sector.

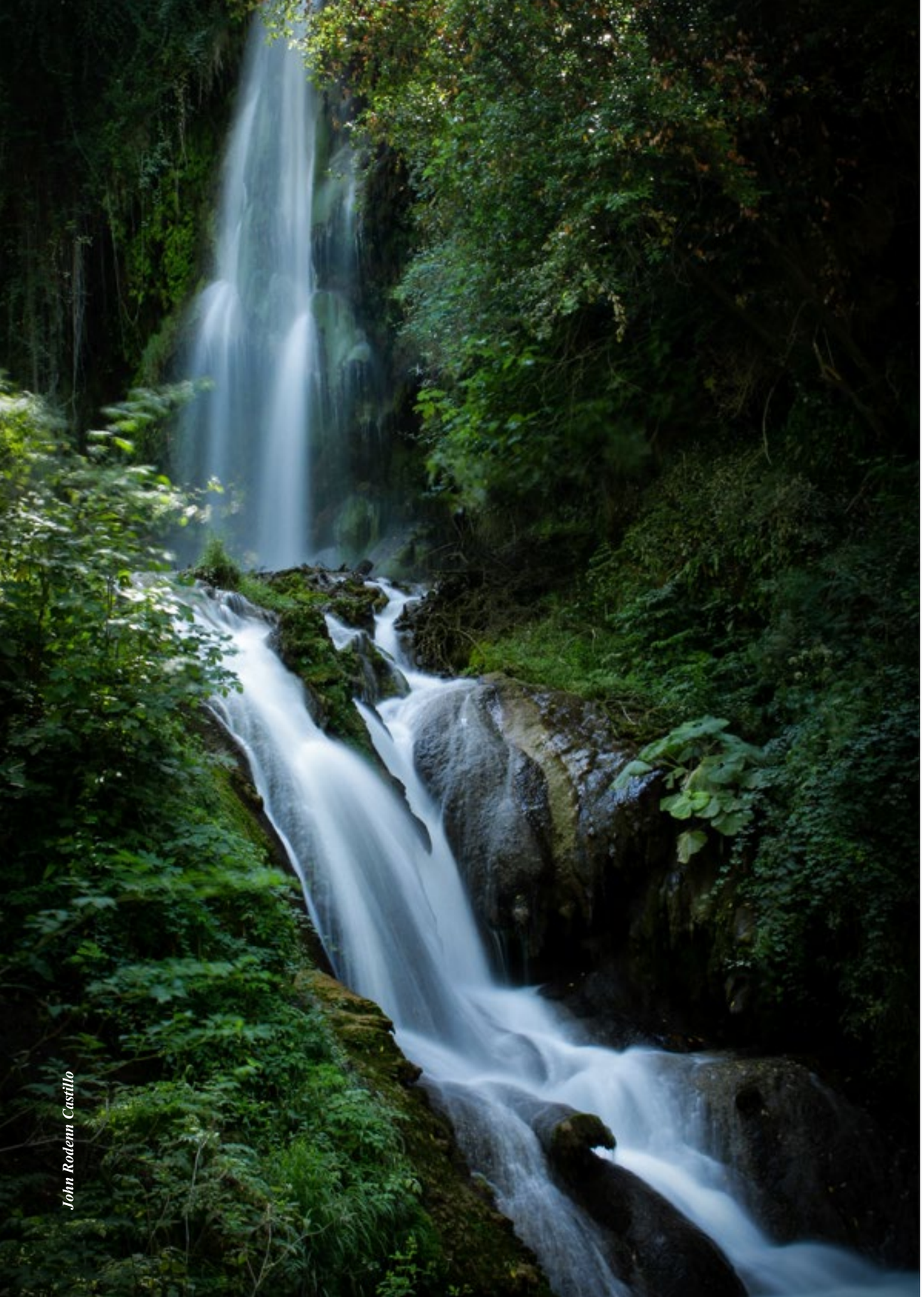
Integrating GBV actors in government ministries and decision-making. The GBV community must build their understanding of the global, regional, and national systems, policies and funding streams related to climate change. Because these systems are often included within and guided by development processes, this means that GBV actors working in humanitarian crises will need to link to development action. GBV actors can build out the capacity of relevant government partners, such as the ministries related to gender and environment, to understand and get involved in climate change action at national level. This includes influencing climate change policies, NDCs, disaster risk preparedness and management, and understanding how to access climate change funds to support GBV prevention and response.

Better integration of GBV across all frameworks and responses. There is still a gap in standardized integration of attention to GBV in disaster risk reduction (DRR) including preparedness and contingency planning. Efforts have to be taken to both prevent GBV and to ensure comprehensive and safe services are available to survivors affected by either slow-onset or acute climate-related emergencies.

Chapter 5 Conclusion

Addressing GBV is a fundamental part of achieving a healthy, sustainable future for all. While there has been increased international attention over the last decade in understanding and addressing gender-climate issues in policies and programmes, the intersections between climate change and GBV have received much less focus. Cross-sectoral South-South action is urgently required to ensure comprehensive, integrated approaches to address GBV across the humanitarian-development-peace-and climate continuum. While a single project will not end GBV, concerted efforts from across sectors, at all levels, can contribute to its powerful progress.

Anete Lusina



The Conclusion

Just like the impacts of climate change are uneven between countries and societies, it is not gender neutral and its impacts are felt unevenly by men and women. that said, the disproportionate impact on women and girls is not questionable, as they have a very close relationship with and dependence on natural ecosystems, biodiversity, land, and food security. This amplifies the fragility of women and girls around the globe by posing unique threats to their livelihoods, well-being, health stability, social safety, security, and overall development.

The purpose of the different parts of this report was to contribute to advancing understanding of vulnerability-resilience dynamics by providing a better grasp of gendered experiences of different impacts of climate change-related hazards and begin to lay the groundwork for a more evidence-based approach to the assistance and protection of women and girls in these contexts within the OIC.

Based on the crosscutting analysis conveyed by the different chapters, findings suggest that there exists a multitude of intersectional factors and dynamics that need to be considered to considerably advance the global climate agenda. It also suggests that considering the gendered dimension of climate change and acknowledging women's specific struggles and vulnerabilities is not only key to allowing for the crafting and implementation of more adequately tailored policies and programs in light of other factors of climate change vulnerability, such as migration patterns, sexual violence and conflict, and gender inequality in social, economic and political arenas. But also, will be a fertile ground for weaving together local experiences with global thought partners.

Also, orienting climate policy initiatives towards benefitting women and girls in particular, will enhance their ability to adapt to climate change. As demonstrated in the different case studies in this report, women have the ability to effectuate positive adaptation and collective resilience strategies amidst climate change especially in building sustainable alternative economic livelihoods, gaining leadership and community decision-making powers in certain areas and utilizing their experiences in environmental and land management, food and mitigating water scarcity, thus making them effective actors and agents of change in relation to both mitigation and adaptation.

Despite the existence of a multitude of impacts of climate change on women, they are not standalone and, in most cases, intersect and nourish each other. The reason why, some of them need urgent consideration from member states such as water scarcity which represents a huge threat with far-reaching impacts on the entire socio-economic and political empowerment of women and girls in the areas of (Health, education, agricultural production/household food security, inflation, GBV, unemployment, induced migration, exploitation, etc.), thus perpetuating the cycle of disempowerment.

Therefore, overcoming the climate crisis and achieving long-lasting and sustainable climate solutions, needs gender equality, and more inclusive and participatory climate governance at all levels and all stakeholders need to create more spaces and opportunities for women, to help them make more valuable contributions.

Key Crosscutting Recommendations

1. Due to lack of data especially in rural and marginalized communities, some of the gendered impacts, correlations, and nuances of these multiple and sometimes competing dynamics are still unclear and unestablished, to have a better grasp of differentiated gendered experiences of climate change on women and girls in the OIC countries, there is a need for the establishment of a robust and highly effective up-to-date data generating and analysis mechanisms as well as more mixed methods of studies which integrate and utilize sex-disaggregated data and other indicators. This mechanism will not only help raise awareness, and support empirically informed policy and program/projects designs but also will provide solutions that value and promote the perspectives and leadership capacities of women and communities.

2. It is crucial to lobby and build the capacities of media outlets to play a significant role in covering and reporting the issues of climate change through a gender-balanced approach and portraying women's role in climate change as active and effective agents.

3. Addressing the powerful intersection between climate change and violence against women /GBV is a fundamental part of understanding the gendered dimension of climate change, which requires comprehensive, integrated approaches that may be tackled by:

- Making Nationally Determined Contributions "NDCs" in OIC countries more comprehensive and attentive to women's needs by holistically tackling GBV (VAWG) in the dimension of gender-responsive actions through extensive work that addresses violence against women, and girls, at different levels of society.
- Designing inclusive programmes and policies that address violence against women/GBV and climate change impacts by building adaptive livelihoods and including local women at the centre of this approach.
- Cultivating strategic partnerships between climate policymakers, international organizations, programmers, women's civil society organizations, and women's ministers or gender equality machineries, to share expertise and design collective guidelines, tools, and policies on ending violence against women/GBV in all climate change events.

4. Climate change-related events have exacerbated the migration crisis across the globe and by extension smuggling and trafficking of persons. Women and girls are caught at the centre of this crisis either as migrants themselves or stay behind victims. In this light, Countries/governments and international partners/agencies should:

- Pay more attention and resources to slow-onset events/processes which are readily identifiable and may contribute to a greater scale of unsafe migration, exploitation through trafficking, public health, and forms of violence. This will play a great role in equipping women with the knowledge and options to manage risks, address structural issues in their communities and wider society as well as participate in designing more innovative and sustainable policies on climate-related events that affect their daily lives.
- Adopt a holistic and comprehensive gender-responsive mechanism of integrating non-migrant and migrant women's priorities into climate and migration policies/programs by engaging different and relevant stakeholders on gender and development, climate adaptation/mitigation, Disaster Risk Reduction "DRR", agricultural/urban development, and humanitarian response to achieve an amplified impact.
- Develop laws and policies on internal displacement and migration that recognize climate change "environmental degradation" as a factor and explicitly address the needs of affected victims in terms of social protections, and compensation, taking gender-specific needs into account.
- Support promoting knowledge of displacement and exploitation stemming from environmental issues among law enforcement agencies through designing training modules and capacity building, to integrate more case studies of climate-related displacement, gender considerations, unsafe migration, and exploitation as well as encourage the recruitment of women in disaster-prone areas, and TIP training for disaster first responders.
- Invest in criminal justice-aware research to collect more evidence on the extent to which crime is already limiting the effectiveness of some climate mitigation approaches.
- Promoting Gender-responsive migration governance and sustainable development to enhance the Economic and Social resilience of migrant women workers and stay-behind women from migrant households.

5. Governments and other stakeholders should take strategic explicit investments in climate mitigation and adaptation strategies that address the specific gender needs, roles and perspectives in the areas of climate-friendly/smart technologies, climate financing mechanisms, water resource management, and food security, which will permit women and girls to take bold steps and actions in securing, health, nutrition, wellbeing and education of their families and generations to come.

Glossary & References

Melissa Bradley

Key Terms/Glossary

Adaptation: In human systems, the process of adjustment to actual or expected climate and its effects, to moderate harm or exploit beneficial opportunities. In natural systems, the process of adjustment to actual climate and its effects; human intervention may facilitate adjustment to expected climate (IPCC, 2012).

Climate Change: A change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forcings, or to persistent anthropogenic changes in the composition of the atmosphere or in land use (IPCC, 2012).

Climate change adaptation and resilience: refers to the capacity of individuals and communities to reduce the destructive impact of a disaster, as well as slow-onset environmental degradation.

Climate-related event: An umbrella term for adverse events that may be attributed directly or indirectly to changes in the climate or human-driven forms of environmental degradation.

Disaster: Severe alterations in the normal functioning of a community or a society due to hazardous physical events interacting with vulnerable social conditions, leading to widespread adverse human, material, economic, or environmental effects that require an immediate emergency response to satisfy critical human needs and that may require external support for recovery (IPCC, 2012).

Environmental Crimes: Can be broadly defined as illegal acts which directly harm the environment. They include illegal trade in wildlife; smuggling of ozone-depleting substances; illicit trade in hazardous waste; illegal, unregulated, and unreported fishing; and illegal logging and the associated trade in stolen timber (UNODC, 2008a).

Ecological Vulnerability: is widely considered to be the inverse of resilience, a concept that has been most developed in ecological systems and which Holling S.C (1973) defines as “the ability of systems to absorb changes of state variables, driving variables, and parameters, and still persist”.

Facilitator: The use of traffickers that act as brokers between other traffickers, that facilitate the buying and selling of victims, is reported in multiple cases, and shows the level of complexities of some human trafficking markets. To illustrate, Austrian authorities reported a group that specialized solely on brokering women for sexual exploitation. The role of the group was to facilitate the distribution of victims among procurers operating in different European countries. Authorities reported the group did not make use of violence but used their good reputation to relate with business partners and intimidation to relate with victims. In these schemes, victims are sold by the recruiting group to the exploiting group with brokers also profiting from negotiations over the victims’ price (UNODC, 2021).

Gender Gap Index: examines the gap between men and women in four fundamental categories (subindexes): Economic Participation and Opportunity, Educational Attainment, Health and Survival and Political Empowerment and 14 different related indicators that compose them. The Index considers recent data available for a minimum of 12 indicators out of the 14 that comprise the index (WEF, 2021).

Gini Index: measures the extent to which income or consumption distribution among individuals/ households in an economy deviates from a perfectly equal distribution. The coefficient ranges from 0 (0%) to 1 (100%), with 0 and 1 representing perfect equality and inequality, respectively. A higher Gini index shows greater inequality, with high-income individuals receiving much larger percentages of total income of the population (Hayes, 2022).

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Gender-based violence (GBV) and violence against women and girls (VAWG): in the context of the OIC member states, Gender-based violence and violence against women and girls (VAWG) are used interchangeably meaning: any act of gender-based violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.»

Gender Inequality Index: is a composite metric of gender inequality using three dimensions: reproductive health, empowerment, and the labour market. A low GII value indicates low inequality between women and men, and vice-versa. A maximum of 1 denotes complete inequality (UNDP, 2022).

Human Development Index: The HDI value is determined by combining a country’s scores in a vast and wide-ranging assortment of indicators including life expectancy, literacy rate, rural populations’ access to electricity, GDP per capita, exports/imports, homicide rate, multidimensional poverty index, income inequality, internet availability etc. These indicators are compiled into a single number between 0 and 1.0. 1.0 is the highest possible human development. HDI is divided into four tiers: very high HD (0.8-1.0), high HD (0.7-0.79), medium HD (0.55-.70), and low HD (below 0.55) (World Population Review, 2022).

Human Mobility: a generic term covering all the different forms of movements of persons (IOM, 2019).

Intersectionality: in the context of the OIC member states, the concept of intersectionality describes the ways in which systems of inequality based on gender, race, ethnicity, disability, class, and other forms of discrimination “intersect” to create unique dynamics and effects.

Intimate partner violence (IPV): IPV in the context of the OIC member states, refers to any form of violence against women and includes physical, sexual, and emotional abuse and controlling behaviours by the spouse.

Migrant: An umbrella term, not defined under international law, reflecting the common lay understanding of a person who moves away from their place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons (IOM, n.d. a).

Migrant Worker: The International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families, 1990 defines «migrant worker» as a person who is to be engaged, is engaged, or has been engaged in a remunerated activity in a State of which he or she is not a national.

Migration: There is no universally accepted definition of migration. The chapter defines "migration" as "movement away from one's place of usual residence, whether within a country or across national borders, temporarily or permanently, and for a variety of reasons. The term includes several well-defined legal categories of people, such as migrant workers; persons whose types of movements are legally defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students." (IOM, n.d. b)

Mitigation (of disaster risk and disaster): The lessening of the potential adverse impacts of physical hazards (including those that are human-induced) through actions that reduce hazard, exposure, and vulnerability (IPCC, 2012).

Mitigation (of climate change): A human intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC, 2012).

National Adaptation Plan: The national adaptation plan process was established under the Cancun Adaptation Framework. It enables Parties to formulate and implement national adaptation plans as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs. It is a continuous, progressive, and iterative process that follows a country-driven, gender-sensitive, participatory, and fully transparent approach (UNFCCC, n.d. a).

Paris Agreement: The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015, and entered into force on 4 November 2016 (UNFCCC, n.d. b).

Rapid/Sudden Onset Events: A rapid onset event may be a single, discrete event that occurs in a matter of days or even hours (UNFCCC, 2012).

Refugee: Someone who is unable or unwilling to return to their country of origin owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion (UNHCR, 1951).

Resilience: The ability of a system and its component parts to anticipate, absorb, accommodate, or recover from the effects of a hazardous event in a timely and efficient manner, including through ensuring the preservation, restoration, or improvement of its essential basic structures and functions (IPCC, 2012).

Slow Onset Events: Slow onset events evolve gradually from incremental changes occurring over many years or from an increased frequency or intensity of recurring events. Its initially introduced by the Cancun Agreement (COP16), refer to the risks and impacts associated with increasing temperatures; desertification; loss of biodiversity; land and forest degradation; glacial retreat and related impacts; ocean acidification; sea level rise; and salinization (UNFCCC, n.d. c).

Smuggling of Migrants: The facilitation, for financial or other material gains, of irregular entry into a country where the migrant is not a national or resident. The criminals behind this highly profitable business seize the opportunity created by the need or desire of people to escape not just poverty and lack of employment opportunities but also natural disaster, conflict, or persecution (UNODC, n.d.).

Vulnerability: A condition resulting from how individuals negatively experience the complex interaction of social, cultural, economic, political, and environmental factors that create the context for their communities (UNODC, 2008b).

Trafficking in Persons: The recruitment, transportation, transfer, harbouring, or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery, or practices similar to slavery, servitude or the removal of organs (OHCHR, 2000).

Trapped populations: People "who do not migrate, yet are situated in areas under threat, […] at risk of becoming 'trapped' or having to stay behind, where they will be more vulnerable to environmental shocks and impoverishment" (IOM, 2019).

Glossary References

Hayes, A. (2022, August 5). Gini index explained and Gini co-efficients around the world. Investopedia. Retrieved 2022, from https://www.investopedia.com/terms/g/gini-index.asp

IOM. (2019). Glossary on Migration. International Organization for Migration. Retrieved 2022, from https://publications.iom.int/system/files/pdf/iml_34_glossary.pdf

IOM. (n.d.)a. Key Migration Terms. International Organization for Migration. Retrieved July 20, 2022, from https://www.iom.int/key-migration-terms

IOM. (n.d.)b. About Migration. International Organization for Migration. Retrieved 2022, from https://www.iom.int/about-migration

IPCC, 2012: Glossary of terms. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 555-564.

OHCHR. (2000). Protocol to prevent, Suppress and Punish Trafficking in Persons Especially Women and children, supplementing the United Nations Convention against Transnational Organized Crime. Office of the United Nations High Commissioner for Human Rights. Retrieved 2022, from https://www.ohchr.org/en/instruments-mechanisms/instruments/protocol-prevent-suppress-and-punish-trafficking-persons

UNDP. (2022). Gender Inequality Index. United Nations Human Development Reports. Retrieved 2022, from https://hdr.undp.org/data-center/thematic-composite-indices/gender-inequality-index#/indicies/GII

UNFCCC. (2012, November 26). Slow Onset Events Technical Paper. United Nations Framework Convention on Climate Change. Retrieved July 20, 2022, from https://unfccc.int/resource/docs/2012/tp/07.pdf

UNFCCC. (n.d.)a. National Adaption Plans. United Nations Framework Convention on Climate Change. Retrieved July 20, 2022, from https://unfccc.int/topics/adaptation-and-resilience/workstreams/national-adaptation-plans

UNFCCC. (n.d.)b. The Paris Agreement. United Nations Framework Convention on Climate Change. Retrieved July 20, 2022, from https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

UNFCCC. (n.d.)c. Slow Onset Events. United Nations Framework Convention on Climate Change. Retrieved July 20, 2022, from https://unfccc.int/wim-excom/areas-of-work/slow-onset-events

UNHCR. (1951). The Refugee Convention, 1951. United Nations High Commissioner for Refugees. Retrieved 2022, from https://www.unhcr.org/4ca34be29.pdf

UNODC. (2008a). Environmental Crime, A Threat to Our Future. United Nations Office on Drugs and Crime. Retrieved July 20, 2022, from https://www.unodc.org/documents/NGO/EIA_Ecocrime_report_0908_final_draft_low.pdf

UNODC. (2008b). An Introduction to Human Trafficking: Vulnerability, Impact and Action. United Nations Office on Drugs and Crime. Retrieved 2022, from https://www.unodc.org/documents/human-trafficking/An_Introduction_to_Human_Trafficking_-_Background_Paper.pdf

UNODC. (2021, January). Global Report on Trafficking in Persons 2020. United Nations Office on Drugs and Crime. Retrieved July 26, 2022.

UNODC. (n.d.). Migrant Smuggling. United Nations Office on Drugs and Crime . Retrieved July 20, 2022, from https://www.unodc.org/unodc/en/human-trafficking/migrant-smuggling/migrant-smuggling.html

WEF. (2021). Global Gender Gap Report 2021. World Economic Forum. Retrieved 2022, from https://www3.weforum.org/docs/WEF_GGGR_2021.pdf

World Population Review. (2022). Human Development Index (HDI) by Country 2022. World Population Review. Retrieved 2022, from https://worldpopulationreview.com/country-rankings/hdi-by-country

Introduction References

Elgousi, H. (2016). Women's Rights in Authoritarian Egypt: Negotiating Between Islam and Politics. London: I.B. Tauris.

Philippine Statistics Authority . (n.d.). How are the sustainable development goals different from mdgs? Philippine Statistics Authority . Retrieved from https://psa.gov.ph/content/how-are-sustainable-development-goals-different-mdgs

Statistical, Economic and Social Research and Training Centre for Islamic Countries. (2019). OIC Health Report. Retrieved from https://www.sesric.org/publications-detail.php?id=491

Statistical, Economic and Social Research and Training Centre for Islamic Countries. (2021). OIC Women and Development Report. Retrieved from https://www.sesric.org/publications-detail.php?id=518

UN Women. (2022). Calling for an End to Violence Against Women in Politics: News Retrieved from https://www.unwomen.org/en/news-stories/news/2022/03/calling-for-an-end-to- violence-against-women-in-politics

United Nation Treaty Collections. (1953). Convention on the Political Rights of Women (Official Document). Retrieved from https://treaties.un.org/doc/Treaties/1954/07/19540707%2000- 40%20AM/Ch_XVI_1p.pdf

US Department of State. (2022). Women's Economic Empowerment Retrieved from https://www.state.gov/womens-economic-empowerment-3

World Health Organisation. (2017). Violence against women. [key facts]. Retrieved from https://www.who.int/en/news-room/fact-sheets/detail/violence-against-women

World Health Organisation. (2022). The Global Health Observatory: Adult Mortality Rate Retrieved from https://www.who.int/data/gho/indicator-metadata-registry/imr- details/64#:~:text=Adult%20mortality%20rate%20%28probability%20of%20dying

%20between,15%20and%2060%20years%20per%201000%20population%29 World Health Organisation. (2022). The Global Health Observatory: Adult mortality rate

(probability of dying between 15 and 60 years per 1000 population) Retrieved from https://www.who.int/data/gho/indicator-metadata-registry/imr-details/64#:~:text=Adult%20mortality%20rate%20%28probability%20of%20dying

%20between,15%20and%2060%20years%20per%201000%20population%29

Chapter 01 References

Aamer, F. (2021). "Water Crisis in the MENA Region." Women, Water, and Migrations.

Stimson Women and Water Security Project.

Al-Dayel, N., Anfinson, A., & Anfinson, G. (2021). Captivity, Migration, and Power in Libya. Journal of Human Trafficking, 0(0), 1–19. https://doi.org/10.1080/23322705.2021.1908032

Arab Water Council, 2019. Geographical Information towards Building Risk Resilience in the Arab Region. Retrieved from https://www.arabwatercouncil.org/images/Technical- Reports/AGIR_Report_Final_30-10-2019.pdf

Baada, J. N., Najjar, D. (2020). A review of the effects of migration on the feminization of agrarian dryland economies. AgriGender, Vol. 05, No. 02, pp. 1–12, doi:10.19268/JGAFS.522020.1

Chindarkar, N (2012). "Gender and climate change-induced migration: proposing a framework for analysis." Environmental Research Letters. Vol. 1:2.

El Ghamari, M., & Gabriela Bartoszewicz, M. (2020). (Un)Sustainable Development of Minors in Libyan Refugee Camps in the Context of Conflict- Induced Migration. Sustainability, Vol. 12(11).

Aamer, F. (2021). "Water Crisis in the MENA Region." Women, Water, and Migrations.

Stimson Women and Water Security Project.

Al-Dayel, N., Anfinson, A., & Anfinson, G. (2021). Captivity, Migration, and Power in Libya. Journal of Human Trafficking, 0(0), 1–19. https://doi.org/10.1080/23322705.2021.1908032

Arab Water Council, 2019. Geographical Information towards Building Risk Resilience in the Arab Region. Retrieved from https://www.arabwatercouncil.org/images/Technical- Reports/AGIR_Report_Final_30-10-2019.pdf

Baada, J. N., Najjar, D. (2020). A review of the effects of migration on the feminization of agrarian dryland economies. AgriGender, Vol. 05, No. 02, pp. 1–12, doi:10.19268/JGAFS.522020.1

Chindarkar, N (2012). "Gender and climate change-induced migration: proposing a framework for analysis." Environmental Research Letters. Vol. 1:2.

El Ghamari, M., & Gabriela Bartoszewicz, M. (2020). (Un)Sustainable Development of Minors in Libyan Refugee Camps in the Context of Conflict- Induced Migration. Sustainability, Vol. 12(11).

FAO Jordan, Gender Assessment, Building resilience to cope with climate change in Jordan through improving water use efficiency in the agriculture sector (BRCCJ), 2021.

GenderCC. (n.d.). Gender and climate change activities @ COP13 - Bali 2007. Gender CC - Women for Climate Justice. Retrieved from https://www.gendercc.net/genderunfccc/unfccc-conferences/bali-2007.html

Hassan et al. (2021). Climate action, Gender and Displacement in the Arab Region: Turning adversity into opportunity. UNDP.

Human Rights Watch, 2019: Retrieved from https://www.hrw.org/news/2019/07/24/egypt-new-ngo-law-renews-draconian-restrictions#

International Labour Organization (ILO), ILOSTAT database. Data as of January 2021. Retrieved from https://data.worldbank.org/indicator/SL.AGR.EMPL.FE.ZS?end=2019&start=1991

IUCN. (n.d.). Disaster And Gender Statistics Fact Sheet. International Union for Conservation of Nature. Retrieved from https://www.unisdr.org/files/48152_disasterandgenderstatistics.pdf

Kagan, S. (2017). Domestic workers and employers in the Arab States: Promising practices and innovative models for a productive working relationship – ILO white paper / International Labour Organization, Regional Office for Arab States. Beirut: ILO, 2017.

Kvinna till Kvinna Foundation. (2022). The Climate, Gender, and Conflict Nexus. Retrieved from https://kvinnatillkvinna.org/wp-content/uploads/2022/04/TheKvinnatillKvinnaFoundation-Position-Paper_The-Climate-Gender-and-Conflict-Nexus.pdf

Lama, P et al. (2021) Gendered dimensions of migration in relation to climate change, Climate and Development, 13:4, 326-336, https://doi.org/10.1080/17565529.2020.1772708

OECD. (2020). COVID-19 crisis in the MENA region: impact on gender equality and policy responses. Retrieved from https://www.oecd.org/coronavirus/policy-responses/covid-19- crisis-in-the-mena-region-impact-on-gender-equality-and-policy-responses- ee4cd4f4/

OECD/ILO/CAWTAR (2020), Changing Laws and Breaking Barriers for Women's Economic Empowerment in Egypt, Jordan, Morocco and Tunisia, Competitiveness and Private Sector Development, OECD Publishing, Paris. https://doi.org/10.1787/ac780735-en.

Najjar, D. et al. (2019). Women, irrigation and social norms in Egypt: 'The more things change, the more they stay the same?' Water Policy, Vol. 21, 291–309.

Putsoa, L. (2022). IOM Women-led Water Management Committee Makes Waves in Jebel Kheir, South Sudan. Retrieved from https://storyteller.iom.int/stories/women-led-water- management-committee-makes-waves- jebel-kheir-south-sudan.

Terry, G. (2009). No climate justice without gender justice: An overview of the issues. Gender & Development, 17(1), 5–18. https://doi.org/10.1080/13552070802696839

UN Women. (2022, February 28). Explainer: How gender inequality and climate change are interconnected. UN Women – Headquarters. Retrieved from https://www.unwomen.org/en/news-stories/explainer/2022/02/explainer-how-gender-inequality-and-climate-change-are-interconnected

UN. (1972). United Nations Conference on the human environment, Stockholm 1972. United Nations. Retrieved from https://www.un.org/en/conferences/environment/stockholm1972#:~:text=The%20Stockholm%20Declaration%2C%20which%20contained,and%20the%20well%2Dbeing%20of

UN. (1992, August 12). Report of the United Nations Conference on Environment and Development, Rio De Janeiro 1992. United Nations. Retrieved from https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf

UN. (2009). WomenWatch: Women, gender equality and climate change. United Nations. Retrieved from https://www.un.org/womenwatch/feature/climate_change/

UN. (2022, March). Commission on the Status of Women Sixty-sixth Session. United Nations. Retrieved from https://documents-dds-ny.un.org/doc/UNDOC/LTD/N22/303/59/PDF/N2230359.pdf?OpenElement

UN. (n.d.). All About the NDCs. United Nations. Retrieved from https://www.un.org/en/climatechange/all-about-ndcs

UNEP. (2018). Water catchment project is expanded to aid peace and economic recovery in North Darfur. Retrieved from https://www.unep.org/news-and-stories/story/water-catchment- project-expanded-aid-peace-and-economic-recovery-north

UNEP. (2019). Promoting Gender Responsive Approaches to Natural Resource Management for Peace in North Kordofan, Sudan.

UNEP. (2020, June 9). Gender, climate & security: Sustaining inclusive peace on the frontlines of Climate Change. United Nations Environment Programme. Retrieved from https://www.unep.org/resources/report/gender-climate-security-sustaining-inclusive-peace-frontlines-climate-change

UNFCCC. (1992). United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/resource/docs/convkp/conveng.pdf

UNFCCC. (2007). Bali Road Map Documents Page. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/process/conferences/pastconferences/bali-climate-change-conference-december-2007/statements-and-resources/Bali-Road-Map-Documents

UNFCCC. (2007, December). Bali Climate Change Conference December 2007. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/conference/bali-climate-change-conference-december-2007

UNFCCC. (2015). Adoption of the Paris Agreement. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/english_paris_agreement.pdf

UNFCCC. (2020). The Gender Action Plan. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/topics/gender/workstreams/the-gender-action-plan

UNFCCC. (2021a, August 20). Conference of the Parties Twenty-sixth Session Glasgow. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/resource/cp2021_04E.pdf

UNFCCC. (2021b, November 6). Gender and Climate Change Draft Conclusions. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/resource/sbi2021_L13E.pdf

UNFCCC. (n.d.). Conference of the Parties (COP). United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/process/bodies/supreme-bodies/conference-of-the-parties-cop

United Nations Economic and Social Commission for Western Asia

United Nations Economic and Social Commission for Western Asia (ESCWA) et al. 2017. Arab Climate Change Assessment Report – Executive Summary. Beirut, E/ESCWA/SDPD/2017/RICCAR/Summary.

United Nations Environment Programme. (2020). Women at the Frontline of Climate Change: Gender Risks and Hopes. UNEP, 2011. Retrieved from https://wedocs.unep.org/xmlui/handle/20.500.11822/7985

World Bank Group. (2021). Regional Action Plan on Gender-Based Violence in the Middle East and North Africa. Retrieved from https://documents1.worldbank.org/curated/en/570421638463485701/pdf/Regional-Action-Plan-on-Gender-Based-Violence-in-the-Middle-East-and-North-Africa.pdf

Yousaf, F. N. (2017). Forced migration, human trafficking, and human security. Current Sociology Monograph, Vol. 66(2) 209–225

Chapter 02 References

AbdElMoniem, A. (2022, June 14). Up-Fuse Plastic Bags Upcycling . OUDA. Retrieved from https://www.ouda.org.eg/sustainable-development-solutions/ssda-solutions-demo/up-fuse-plastic-bags-upcycling/

AFED. (2016). Arab Environment 9 Sustainable Development in a Changing Arab Climate. Arab Forum for Environment and Development. Retrieved from http://www.afedonline.org/uploads/afed_reports/Sustainable-development-in-a-changing-arab-climate-eng.pdf

African Development Bank. (2022). MENA Regional Climate Week 2022. African Development Bank. Retrieved from https://www.afdb.org/sites/default/files/documents/menacw2022_-_gender-responsive_climate_finance_and_financing.pdf

Al-Kamel, M. A. (2016). Impact of leishmaniasis in women: A practical review with an update on my ISD-supported initiative to combat leishmaniasis in Yemen (ELYP). International Journal of Women's Dermatology, 2(3), 93–101. https://doi.org/10.1016/j.ijwd.2016.04.003

Andriamasinoro, L. F. (2021, November 25). Through arts, young people in Senegal speak out about climate change. UNICEF. Retrieved from https://www.unicef.org/senegal/en/stories/through-arts-young-people-senegal-speak-out-about-climate-change

Brookings. (2019, December). Girls' education in climate strategies Opportunities for improved policy and enhanced action in Nationally Determined Contributions. Global Economy and Development . Retrieved from https://www.brookings.edu/wp-content/uploads/2019/12/Girls-ed-in-climate-strategies-working-paper-FINAL.pdf

CIMMYT. (2020, March 5). Four ways of strengthening gender equality in the agricultural sector in the MENA region. CGIAR. Retrieved from https://www.cgiar.org/news-events/news/four-ways-of-strengthening-gender-equality-in-the-agricultural-sector-in-the-mena-region/

Dar Si Hmad. (n.d.). FDSH for Development. Dar Si Hmad. Retrieved from https://darsihmad.org/fog/

El Mahdy, H. (2016).The reform of solid waste management in Cairo: Lessons learned from international models [Master's Thesis, the American University in Cairo]. AUC Knowledge Fountain. https://fount.aucegypt.edu/etds/259

Erman, A., Robbé, S. A. D. V., Thies, S. F., Kabir, K., & Maruo , M. (2021). Gender Dimensions of Disaster Risk and Resilience. World Bank. Retrieved from https://openknowledge.worldbank.org/server/api/core/bitstreams/80f2e78e-f04f-5a59-86a6-9cfe6bcd7b87/content

ESCWA, et al. (2017). Arab Climate Change Assessment Report - Main Report. United Nations Economic and Social Commission for Western Asia. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/riccar_main_report_2017.pdf

FAO. (2014). Aligned National Action Plan (NAP) to Combat Desertification in Jordan 2015-2020. Food and Agriculture Organization of the United Nations. Retrieved from https://www.fao.org/faolex/results/details/en/c/LEX-FAOC165358/

FAO. (2022, November 9). FAO launches a project to enhance climate change adaptation in Jordan. Food and Agriculture Organization of the United Nations . Retrieved from https://www.fao.org/neareast/news/view/en/c/1617877/

GenderCC. (n.d. a). History. gender cc - women for climate justice. Retrieved from https://www.gendercc.net/who-are-we/history.html

GenderCC. (n.d. b). GENDERCC members. gender cc - women for climate justice. Retrieved from https://www.gendercc.net/who-are-we/members.html

Generation Equality Forum. (2021). Feminist Action for Climate Justice Action Coalition. Generation Equality Forum. Retrieved from https://forum.generationequality.org/sites/default/files/2021-10/Feminist%20Action%20for%20Climate%20Justice%20Action%20Coalition%20-%20Collective%20Commitments.pdf

Georgiadis, A., Benny, L., Dornan, P., & Behrman, J. (2021). Maternal undernutrition in adolescence and Child Human Capital Development over the life course: Evidence from an international cohort study. Economica, 88(352), 942–968. https://doi.org/10.1111/ecca.12379

Goodman, E. (2021, August 20). Dual threats: Water scarcity and rising sea levels in Egypt. The Tahrir Institute for Middle East Policy. Retrieved from https://timep.org/explainers/dual-threats-water-scarcity-

and-rising-sea-levels-in-egypt/

Haddad, F. F. (2016, December 12). Perspectives 9 - Assessing Gender Concerns in Climate Change Projects in Arab Countries. Heinrich Boll Stiftung. Retrieved from https://lb.boell.org/en/2016/12/12/perspectives-9-assessing-gender-concerns-climate-change-projects-arab-countries

Hassan, S. Pant, and R. Tarazi. Climate action, gender and displacement in the Arab region: turning adversity into opportunity, 2021.

IASC. (2018, February). Guideline THE GENDER HANDBOOK FOR HUMANITARIAN ACTION 2018 IASC Reference Group on Gender and Humanitarian Action, 2018 Retrieved from https://interagencystandingcommittee.org/system/files/2018-iasc_gender_handbook_for_humanitarian_action_eng_0.pdf

IPCC. (2021). Climate change 2021: The Physical Science Basis. Intergovernmental Panel on Climate Change. Retrieved from https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/

Ismail, A., Ghalwash, S., & El Sebaie, N. (2022). Up-fuse: International growth of an Egyptian eco-friendly social enterprise. Emerald Emerging Markets Case Studies, 12(1), 1–24. https://doi.org/10.1108/eemcs-10-2020-0390

King-Okomu, C., et al. (2016). Balancing water stress and human crises under a changing climate: Integrating international policy agendas in the Bekaa Valley, Lebanon, 2016

Masdar. (n.d.). Wiser. Masdar Clean Energy - Deploying Renewable Clean Energy Worldwide. Retrieved from https://masdar.ae/Strategic-Platforms/WiSER

Molyneux, N. (2018, October). Climate landscape analysis for children in Kazakhstan Final Report 2018. UNICEF. Retrieved from https://www.unicef.org/kazakhstan/en/reports/climate-landscape-analysis-children-kazakhstan

Mung'ala, L. (2022, March 17). Gender equality and women's leadership needed for effective climate action. Hivos. Retrieved from https://hivos.org/opinion/gender-equality-and-womens-leadership-needed-for-effective-climate-action/

Rise2030. (n.d.). RISE2030. Retrieved from https://www.rise2030.com/

Sahara Forest Project. (n.d.). Sahara Forest Project. Retrieved from https://www.saharaforestproject.com/

Sekem. (n.d. a). Sustainable Development Since 1977. SEKEM. Retrieved from https://www.sekem.com/en/index/

Sekem. (n.d. b). SEKEMS gender strategy. SEKEM. Retrieved from https://www.sekem.com/en/societal-life/empowering-women-gender-strategy/

Shreve, C., & Fordham, M. (2018). Child-Centred Risk Reduction Research-into- Action Brief: Gender and Disasters: Considering Children. Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector. Retrieved from https://www.preventionweb.net/files/61526_genderr2abriefeng2018.pdf

Terre de hommes. (2019). Situational Analysis of Child Labor in Jordan. Terre de Hommes. Retrieved from https://www.tdh.ch/sites/default/files/situational_analysis_of_child_labour_in_jordan.pdf

UN Women. (2009). Fact Sheet: Women, Gender Equality and Climate Change. United Nations. Retrieved from https://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf

UN Women . (2019, October). Policy Brief: Gender and Age Inequality of Disaster Risk . UN Women. Retrieved from https://www.unwomen.org/sites/default/files/2021-11/Policy-brief-Gender-and-age-inequality-of-disaster-risk-en.pdf

UN Women. (2020). SDG 13: Take urgent action to combat climate change and its impacts. UN Women – Headquarters. Retrieved from https://www.unwomen.org/en/news/in-focus/women-and-the-sdgs/sdg-13-climate-action

UN Women. (2022, February 28). Explainer: How gender inequality and climate change are interconnected. UN Women – Headquarters. Retrieved from https://www.unwomen.org/en/news-stories/explainer/2022/02/explainer-how-gender-inequality-and-climate-change-are-interconnected

UN. (1992). General recommendation No. 19: Violence against women- Eleventh session for the year. United Nations.

UN. (2009). WomenWatch: Women, gender equality and climate change. United Nations. Retrieved from https://www.un.org/womenwatch/feature/climate_change/

UNDP. (2010). RBAS Climate Change Paper Series: Desk Review and Mapping of Climate Change Issues, Initiatives and Actors in Arab States, 2010.

UNDP. (2018a, July). Climate Change Adaptation in the Arab States. United Nations Development Programme. Retrieved from https://www.undp.org/sites/g/files/zskgke326/files/publications/Arab-States-CCA.pdf

UNDP. (2018b, March). National Adaptation Plans in focus: Lessons from Egypt. United Nations Development Programme . Retrieved from https://www.adaptation-undp.org/sites/default/files/resources/naps_in_focus_lessons_from_egypt.pdf

UNDRR. (2011). The Arab strategy for Disaster Risk Reduction 2020. United Nations Office for Disaster Risk Reduction. Retrieved from https://www.undrr.org/publication/arab-strategy-disaster-risk-reduction-2020

UNDRR. (2020). Words into action guidelines: Engaging children and youth in disaster risk reduction and resilience building. United Nations Office for Disaster Risk Reduction. Retrieved from https://www.undrr.org/publication/words-action-guidelines-engaging-children-and-youth-disaster-risk-reduction-and

UNFCCC. (2022a, June 1). Dimensions and examples of the gender-differentiated impacts of climate change, the role of women as agents of change and opportunities for women. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/sites/default/files/resource/sbi2022_07.pdf

UNFCCC. (2022, June 1). Dimensions and examples of the gender-differentiated impacts of climate change, the role of women as agents of change and opportunities for women. Synthesis report by the secretariat. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/documents/494455

UNFCCC. (n.d. a). Introduction to Gender and Climate Change. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/gender

UNFCCC. (n.d. b). Admitted NGOs. United Nations Framework Convention on Climate Change. Retrieved from https://unfccc.int/process/parties-non-party-stakeholders/non-party-stakeholders/admitted-ngos/list-of-admitted-ngos

UNHCR. (2022, November). Gender, Displacement and Climate Change. United Nations High Commissioner for Refugees. Retrieved from https://www.unhcr.org/5f21565b4.pdf

UNICEF. (2017a). Climate Landscape Analysis for Children in Kyrgyzstan, Working Paper, 2017

UNICEF. (2017b, July). Climate Landscape Analysis for Children in Turkmenistan, UNICEF Working Paper, July 2017

UNICEF. (2018a). Climate Landscape Analysis for Children in Azerbaijan, 2018

UNICEF. (2018b). Managed Aquifer Recharge (MAR): Protecting Communities from Saline Intrusion of Groundwater in Costal Areas of Bangladesh. UNICEF. Retrieved from https://www.unicef.org/media/91391/file/Managed-Aquifer-Recharge-Protecting-Communities-from-Saline-Intrusion-of-Groundwater-in-Costal-Areas-of-Bangladesh.pdf

UNICEF. (2020). Climate Landscape Analysis for Children in Lebanon, June 2020

UNICEF. (2021, August). Climate Landscape Analysis for Children in Jordan, August 2021

UNICEF. (2022a). Every country protected — Every child resilient. UNICEF. Retrieved from https://www.unicef.org/media/120636/file/UNICEF%20DRR%20in%20Action%20-%20%20Every%20country%20protected.%20Every%20child%20resilient.pdf

UNICEF. (2022b, June 1). Global annual results report 2021: Ensuring that every child lives in a safe and clean environment. UNICEF. Retrieved from https://www.unicef.org/reports/global-annual-results-2021-goal-area-4

UNICEF. (2022c, October 1). Adolescent girls programme strategy. UNICEF. Retrieved from https://www.unicef.org/reports/adolescent-girls-programme-strategy

UNICEF. (n.d. a). MENA Accelerators Gender Background Paper

UNICEF. (n.d. b). Water Scarcity in Egypt - Growing Concerns, And Partnerships. UNICEF. Retrieved from https://www.unicef.org/egypt/media/7986/file/Water%20Scarcity%20in%20Egypt.pdf

UNICEF. (n.d. c). Case Study on the Collaboration with the Department of Public Health Engineering (DPHE) in the Development of Climate Resilient WASH Services, Bangladesh, n.d.

UNICEF. (n.d. d) Advancing Solutions to Climate Change and Environmental Degradation in South Asia an Investment Opportunity for the Private and Public Sectors, n.d..

UNICEF. (n.d. e). Young climate activists demand action and Inspire Hope. UNICEF. Retrieved from https://www.unicef.org/stories/young-climate-activists-demand-action-inspire-hope

Up-fuse. (2021, October 19). Up-Fuse supporting women in Algeria with Giz: Up-fuse. Up-Fuse. Retrieved from https://up-fuse.com/blog/2019/06/26/up-fuse-supporting-women-in-algeria-with-giz/

US Department of Labor. (n.d.). Findings on the worst forms of child labor - jordan: U.S. Department of Labor. United States Department of Labor. Retrieved from https://www.dol.gov/agencies/ilab/resources/reports/child-labor/jordan

World Association of Girl Guides and Girl Scouts (WAGGGS). (2022). Bring In the Girls!: Girls' and young women's views on climate change, WAGGGS, London, 2022

World Bank Group. (2016, May 3). High and dry: Climate change, water, and the economy. World Bank. Retrieved from https://www.worldbank.org/en/topic/water/publication/high-and-dry-climate-change-water-and-the-economy

World Bank Group. (2022, March 31). Yemen: The vital role of women farmers in climate change. World Bank. Retrieved from https://www.worldbank.org/en/news/feature/2022/03/30/yemen-the-vital-role-of-women-farmers-in-climate-change

World Economic Forum. (2015). Global Risks 2015 10th Edition. World Economic Forum. Retrieved from https://www3.weforum.org/docs/WEF_Global_Risks_2015_Report15.pdf

Chapter 03 References

Accenture. (2013). Exploitative Labor Practices in the Global Shrimp Industry. Retrieved from http://humanityunited.org/pdfs/Accenture_Shrimp_Report.pdf.

Adams, H. (2016, June). 'Why Populations Persist: Mobility, Place Attachment and Climate Change'. Population and Environment 37, no. 4: 429–48. https://doi.org/10.1007/s11111-015-0246-3.

African Union. (2022). African Union Climate Change and Resilient Development Strategy Action Plan. Retrieved from https://au.int/sites/default/files/documents/41959-doc-CC_Strategy_and_Action_Plan_2022-2032_23_06_22_ENGLISH-compressed.pdf.

Alam, J. (n.d.). For Climate Migrants in Bangladesh, Town Offers New Life. ABC News. Retrieved August 20, 2022 from https://abcnews.go.com/International/wireStory/climate-migrants-bangladesh-town-offers-life-83755907.

Asian Development Bank. (n.d.). Khulna Sewerage System Development Project: Report and Recommendation of the President: Climate Change Assessment. Asian Development Bank. Retrieved August 13, 2022, from https://www.adb.org/sites/default/files/linked-documents/49329-007-ra.pdf

Bharadwaj, R., Chakravarti, D., Karthikeyan, N., Hazra, S., Daniel , U., Topno, J., Abhilashi, R. (2022). Climate change, migration and vulnerability to trafficking. IIED, London. Retrieved from https://www.ied.org/20936iied

Brown, D., Boyd, D. S., Brickell, K., Ives, C. D., Natarajan, N., & Parsons, L. (2019). Modern slavery, environmental degradation and climate change: Fisheries, field, forests and factories. Environment and Planning E: Nature and Space, 4(2), 191–207. https://doi.org/10.1177/2514848619887156

Bureau of Manpower Employment and Training (BMET). (2022, July). Overseas Employment and Remittances (Country Wise - Yearly) From 1976-2022 (Up to July). Retrieved from http://www.old.bmet.gov.bd/BMET/stattisticalDataAction.

Burianski, M., Clarke, M., Kuhnle, F. P., & Wackwitz, G. (2021, November 9). Climate Change Litigation in Africa: Current status and future developments: White & Case LLP. Climate change litigation in Africa: Current status and future developments | White & Case LLP. Retrieved from https://www.whitecase.com/insight-our-thinking/climate-change-litigation-africa-current-status-and-future-developments

Carrilho, L. (2019, October 7). Police as First Responders to the Global Climate Crisis. The Conversation. Retrieved from https://medium.com/we- the-peoples/police-as-first-responders-to-the-global-climate-crisis-d4896f4d8ec.

Carver, D. (2022, January 27). What Were the Outcomes of COP26?. Retrieved from https://commonslibrary.parliament.uk/what-were-the-outcomes-of-cop26/.

CEDAW. (n.d.). General Recommendation No. 37 on Gender-related dimensions of disaster risk reduction in the context of climate change. Retrieved July 22, 2022 from https://tbinternet.ohchr.org/Treaties/CEDAW/Shared%20Documents/1_Global/CEDAW_C_GC_37_8642_E.pdf.

Chiu, C. & Smith, J. (2022, March 3). What Does Climate Change Have to Do With Women, Peace, and Security? A Lot. Georgetown Institute for Women, Peace and Security.

Climate Vulnerable Forum. (n.d.). Members. CVF (blog). Retrieved July 2, 2022 from https://thecvf.org/members/.

Decker Sparks, J. L., Boyd, D. S., Jackson, B., Ives, C. D., & Bales, K. (2021). Growing evidence of the interconnections between modern slavery, environmental degradation, and climate change. One Earth, 4(2), 181–191. https://doi.org/10.1016/j.oneear.2021.01.015

Eckstein, D., Kunzel, V., Schafer, L., & Winges, M. (2019). Global Climate Risk Index 2020. Who Suffers Most from Extreme Weather Events? Weather-Related Loss Events in 2018 and 1999 to 2018. Bonn: Germanwatch.

https://germanwatch.org/sites/germanwatch.org/files/20-2-01e%20Global%20

Climate%20Risk%20Index%202020_10.pdf

Environmental Justice Foundation. (n.d.). 'Impossibly Cheap, Abuse & Injustice in Bangladesh's Shrimp Industry.' Retrieved July 26, 2022 from https://ejfoundation.org/resources/downloads/Impossibly_Cheap_Web.pdf.

Ethical Trade Initiative. (n.d.). Corporate Approaches to Addressing Modern Slavery in Supply Chains: A Snapshot of Current Practices. Retrieved July 26, 2022 from https://www.ethicaltrade.org/sites/default/files/shared_resources/corporate_approaches_to_addressing_modern_slavery.pdf;

European Union. (n.d.) Corporate Sustainability Reporting Directive. Document 52021PC0189. Retrieved July 26, 2022 https://eur- lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0189.

Farukh, M., Akter, L., & Islam, M. (2022). Impact of trans-boundary coal mines on water quality of receiving streams in north-eastern Bangladesh. Journal of Bangladesh Agricultural University, 1. https://doi.org/10.5455/jbau.138730

Gender Climate Tracker. (2016, October 18). The Cancun Agreements: Outcome of the Work of the Ad Hoc Working Group on Long-Term Cooperative Action under the Convention. Retrieved from https://genderclimatetracker.org/gender-mandates/cancun-agreements-outcome-work-ad-hoc- working-group-long-term-cooperative-action-1.

Gerrard, M. (2021, February). Climate Change and Human Trafficking after the Paris Agreement. University of Miami Law Review 72 (2018 2017): 345. And understanding of SOM continues to lag behind TIP. UNODC. UNODC Toolkit for Mainstreaming Human Rights and Gender Equality. Retrieved from https://www.unodc.org/documents/human-trafficking/GLO- ACTII/UNODC_Toolkit_for_mainstreaming_Human_Rights_and_Gender_Equality_February_2021.pdf.

Global Climate Change Litigation Database. (n.d.). Center for Food and Adequate Living Rights et al. v. Tanzania and Uganda. Climate Change Litigation. Retrieved July 3, 2022 from http://climatecasechart.com/non-us-case/center-for-food-and-adequate-living-rights-et-al-v-tanzania-and- uganda/.

Government of the People's Republic of Bangladesh. (2018). Bangladesh Country Report, 2018: Combating Human Trafficking. Retrieved from https://mhapsd.portal.gov.bd/sites/default/files/files/mhapsd.portal.gov.bd/annual_reports/0cc28f8e_1dcf_4b4e_9a38_264aaa42510c/Final%20%20Country%20Report%202018%20_%2018.12.19%20(2).pdf.

Green Climate Fund. (2018). GCF Gender Equality and Social Inclusion Policy and Action Plan 2018–2020. Retrieved from https://www.greenclimate.fund/sites/default/files/document/gcf-b19-25.pdf.

Green Climate Fund. (2019, September 5). Project Safeguards. Green Climate Fund. Retrieved from https://www.greenclimate.fund/projects/safeguards.

Green Climate Fund. (2021a, May 27). Livelihoods of People and Communities. Green Climate Fund. Retrieved from

Green Climate Fund. (2021b, September 14). Consideration of Funding Proposals - Addendum VI: Funding Proposal Package for FP174. Retrieved from https://www.greenclimate.fund/sites/default/files/document/gcf-b30-02-add06.pdf.

Green Climate Fund. (2022, May 27). UNFCCC established a financial mechanism to support climate-vulnerable countries. Funds are managed by the Green Climate Fund (GCF) and Global Environment Facility (GEF). The GCF, for example, will see its disbursements more than double between 2021 and 2023, to $5.1bn. Green Climate Fund. Financing Climate Action. Retrieved from https://www.greenclimate.fund/sites/default/files/document/20220527- financing-climate-action.pdf.

IFC. (2012, January 1). IFC Performance Standards on Environmental and Social Sustainability. Retrieved from https://www.ifc.org/wps/wcm/connect/c02c2e86-e6cd-4b55-95a2- b3395d204279/IFC_Performance_Standards.pdf?MOD=AJPERES&CVID=kTjHBzk.

IFC. (n.d.). Managing Risks Associated with Modern Slavery. Retrieved July 26, 2022 from https://www.ifc.org/wps/wcm/connect/5e5238a6-98b3-445e- a2d6-efe44260b7f8/GPN_Managing-Risks-Associated-with-Modern-Slavery.pdf?CVID=mR5Bx5h&MOD=AJPERES;

ILO. (n.d. a). Implementing the ILO Indigenous and Tribal Peoples Convention No. 169: Towards an Inclusive, Sustainable and Just Future. https://www.ilo.org/global/publications/books/WCMS_735607/lang--en/index.htm.

ILO. (n.d. b). Combating Forced Labour, A Handbook for Employers and Business. Retrieved July 26, 2022 from https://www.ilo.org/wcmsp5/groups/public/---ed_norm/--- declaration/documents/publication/wcms_101171.pdf.

IOM. (2015). Addressing Human Trafficking and Exploitation in Times of Crisis- Evidence and Recommendations for Further Action to Protect Vulnerable and Mobile Populations. Retrieved from https://publications.iom.int/system/files/addressing_human_trafficking.pdf

IOM. (2020, May 21). Institutional Strategy on Migration, Environment and Climate Change 2021–2030. Retrieved from https://publications.iom.int/books/institutional-strategy-migration-environment-and-climate-change-2021-2030.

IOM. (2022, May 21). Chapter 9, Migration and the slow-onset impacts of climate change: taking stock and taking action. World Migration Report 2022. Retrieved from https://publications.iom.int/books/world-migration-report-2022.

IOM. (n.d. a). Migration, Environment and Climate Change. The Climate Change - Human Trafficking Nexus. Retrieved June 8, 2022 from https://publications.iom.int/system/files/pdf/mecc_infosheet_climate_change_nexus.pdf.

IOM. (n.d. b). Brief 13: A Gender Approach to Environmental Migration (from IOM MECCC). Retrieved July 21, 2022 from https://www.iom.int/sites/g/files/tmzbdl486/files/about-iom/gender/Gender-Approach-to-Environmental-Migration.pdf.

Intergovernmental Panel on Climate Change (IPCC). (2022) Climate Change 2022: Impacts, Adaptation and Vulnerability. Summary for Policymakers. Retrieved from https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_FinalDraft_FullR eport.pdf.

International Crisis Group. (2022, February 1). Eight Priorities for the African Union in 2022. International Crisis Group. Retrieved from https://www.crisisgroup.org/africa/african-union-regional-bodies/b-177-eight-priorities-african-union-2022.

Loarne-Lemaire, S. L., Bertrand, G., Razgallah, M., Maalaoui, A., & Kallmuenzer, A. (2021). Women in innovation processes as a solution to climate change: A systematic literature review and an agenda for future research. Technological Forecasting and Social Change, 164, 120440. https://doi.org/10.1016/j.techfore.2020.120440

Maebiru, V., Ryan, S., & Tung, J. (2021, August 31). Sexual Exploitation of Children by Travelling Workers in the Solomon Islands. Retrieved from https://ecpat.org/wp- content/uploads/2021/08/Save-the-Children.pdf.

Milan, A., & Ruano, S. (2014). Rainfall variability, food insecurity and migration in Cabricán, Guatemala. Climate and Development, 6(1), 61–68. https://doi.org/10.1080/17565529.2013.857589

Ministry of Environment, Climate Change & Forestry – Kenya. (2018, May). For example, Kenya aimed to "Fast track the implementation of the Ending Drought Emergencies Common Programme Framework" See Ministry of Environment, Natural Resources and Regional Development Authorities, Kenya. "Republic of Kenya: National Adaptation Plan. Retrieved from http://www.environment.go.ke/wp-content/uploads/2018/05/National-Adaptation-Plan-NAP.pdf.

Nansen Initiative. (2016) Agenda for the protection of cross-border displaced persons in the context of disasters and climate change. International Journal of Refugee Law, 28(1), 156–162. https://doi.org/10.1093/ijrl/eew004

University of Nottingham Rights Lab. (2022, May). University of Nottingham Rights Lab (Dr Bethany Jackson) Contribution to OHCHR Call for Inputs: Trafficking of Persons in the Context of Climate Change. Retrieved from http://owncloud.unog.ch/s/kFQa8RmZP4mSGn9.

OECD. (2021). OECD Guidelines for Multinational Enterprises - Responsible Business Conduct Matters. Retrieved from http://mneguidelines.oecd.org/MNEguidelines_RBCmatters.pdf.

OHCHR. (2022, March). Special Rapporteur on Climate Change. OHCHR. Retrieved from https://www.ohchr.org/en/specialprocedures/sr-climate-change.

OHCHR. (n.d. a). The Impact of Climate Change on the Rights of Persons with Disabilities. OHCHR. Retrieved July 22, 2022 from https://www.ohchr.org/en/climate-change/impact-climate-change-rights-persons-disabilities.

OHCHR. (n.d. b). A/50/39: Report on Initial Planning and Vision for the Mandate. OHCHR. Retrieved June 26, 2022 from https://www.ohchr.org/en/documents/thematic-reports/a5039-report-initial-planning-and-vision-mandate.

OHCHR. (n.d. c). OHCHR | Call for Inputs: Trafficking of Persons in the Context of Climate Change. OHCHR. Retrieved July 20, 2022 from https://www.ohchr.org/en/calls-for-input/2022/call-inputs-trafficking-persons-context-climate-change.

Rayamajhi, N., & Manandhar, B. (2020). Impact of climate change and adaptation measures on transhumance herding system in Gatlang, Rasuwa. Air, Soil and Water Research, 13, 117862212095117. https://doi.org/10.1177/1178622120951173

Seefar. (2020, July). Profitable Ethical Recruitment. Retrieved from https://respect.international/wp- content/uploads/2021/04/PROFITABLE-ETHICAL-RECRUITMENT.pdf.

Sheu, J. C., Torres, M. I. M., Gordon, M. R., Nguyen, P. T., & Coverdale, J. H. (2021). Potential impact of climate change on human trafficking. Journal of Nervous & Mental Disease, 209(5), 324–329. https://doi.org/10.1097/nmd.0000000000001312

Start Network Bangladesh. (2020, Deptember 20). Khulna, Bangladesh Water Logging & Tidal Bore - Briefing Note – 20 September, 2020 - Bangladesh | ReliefWeb. Retrieved August 16, 2022 from https://reliefweb.int/report/bangladesh/khulna-bangladesh-water-logging-tidal-bore-briefing-note-20-september-2020.

Terre des hommes. (2017). The Neglected Link - Effects of Climate Change and Environmental Degradation on Child Labour. Retrieved from https://www.terredeshommes.org/wp-content/uploads/2017/06/CL-Report-2017-engl.pdf.

UNDESA. (2020). International Migrant Stock | Population Division. Retrieved from https://www.un.org/development/desa/pd/content/international-migrant-stock.

UNDRR. (n.d.). Sendai Framework for Disaster Risk Reduction 2015–2030. Retrieved July 3, 2022 from https://www.preventionweb.net/files/resolutions/N1516716.pdf.

UNFCCC. (2012, December). The Conference of the Parties (COP) to the UNFCCC acknowledged that national adaptation planning can enable countries to assess their vulnerabilities, mainstream climate change risks, and address adaptation. UNFCCC. The National Adaptation Plan Process: A Brief Overview. Retrieved from https://unfccc.int/files/adaptation/application/pdf/nap_overview.pdf.

UNFCCC. (2015). 2015 Paris Agreement. Retrieved from https://unfccc.int/sites/default/files/english_paris_agreement.pdf.

UNFCCC. (n.d. a). Introduction to Gender and Climate Change. United Nations Framework Convention on Climate Change. Retrieved July 2, 2022, from https://unfccc.int/gender

UNFPA. (n.d. a). Equally applicable to other essential materials made scarcer by environmental change,

such as firewood. See UNFPA. Infographic: Climate Change and Gender-Based Violence. Retrieved July 21, 2022 from https://esaro.unfpa.org/sites/default/files/pub-pdf/climate_change_and_gender- based_violence.pdf.

UNFPA. (n.d. b). Ethiopia's Worst Drought in 40 Years Threatens to Derail Gains Made in Maternal and Newborn Health. Retrieved July 21, 2022 from https://www.unfpa.org/ethiopias-worst-drought-40-years-threatens-derail-gains-made-maternal-and-newborn-health.

UNICEF. (2019). Are climate change policies child-sensitive? A Guide for Action: Summary. Retrieved from https://www.unicef.org/documents/are-climate- change-policies-child-sensitive

UNODC. (2003). Compendium on Best Practices by Law Enforcement Agencies. Retrieved from https://www.unodc.org/pdf/india/publications/compendium_best_practices_51_100.pdf.

UNODC. (2008). Toolkit to Combat Trafficking in Persons. Retrieved from https://www.unodc.org/documents/human-trafficking/Toolkit-files/07- 89375_Ebook[1].pdf

UNODC. (2012). Conference-of-the-parties-to-the-united-nations-convention-against-transnational-organized-crime. Human Rights Documents Online. https://doi.org/10.1163/2210-7975_hrd-9988-0006

UNODC. (2018, July). Migrant Smuggling in Asia and the Pacific: Current Trends and Challenges, Volume II 2018. Retrieved July 26 2022 from https://www.unodc.org/documents/human-trafficking/Migrant-Smuggling/2018-2019/SOM_in_Asia_and_the_Pacific_II_July_2018.pdf.

UNODC. 2020. Global Report on Trafficking in Persons 2020.

UNODC. (2021a, June 25) The Effects of the COVID-19 Pandemic on Trafficking in Persons. Retrieved from https://www.unodc.org/documents/human- trafficking/2021/The_effects_of_the_COVID-19_pandemic_on_trafficking_in_persons.pdf.

UNODC. (2021b, February).UNODC Toolkit for Mainstreaming Human Rights and Gender Equality. Retrieved from https://www.unodc.org/documents/human-trafficking/GLO- ACTII/UNODC_Toolkit_for_mainstreaming_Human_Rights_and_Gender_Equality_February_2021.pdf.

UNODC. (n.d. a). The UNODC mandate on crimes against the environment covers wildlife, forests, fisheries, illegal mining, and waste. UNODC. "UNODC Environment Team: Our Mandate." Retrieved July 21, 2022 from https://www.unodc.org/unodc/en/environment-climate/our-mandate.html.

UNODC. (n.d. b) Global Report on Trafficking in Persons. United Nations : Office on Drugs and Crime. Retrieved June 26, 2022 from //www.unodc.org/unodc/en/human-trafficking/global-report-on- trafficking-in-persons.html.

UNSCEB. (n.d. a). UN Common Approach to Biodiversity | United Nations - CEB. Retrieved July 28, 2022 from https://unsceb.org/un-common- approach-biodiversity.

UNSCEB. (n.d. b). 50+ ways to integrate biodiversity and nature-based solutions – a UN system commitment to collective action for people and planet. Retrieved from https://unsceb.org/sites/default/files/2022-01/Biodiversity_Common_Approach_50%2B_ways_to_integrate_biodiversity_and_nature-based_solutions.pdf.

UN. (2008). An Introduction to Human Trafficking: Vulnerability, Impact and Action. Retrieved from https://icat.un.org/sites/g/files/tmzbdl461/files/publications/icat_issue_brief_12_vulnerability_to_tip.pdf.

UN. (2015). Nepal: in earthquakes' wake, UNICEF speeds up response to prevent child trafficking. Retrieved from https://news.un.org/en/story/2015/06/502262-nepal-earthquakes-wake-unicef-speeds-response-prevent-child-trafficking

UN. (2018, July 13). Global Compact for Safe, Orderly and Regular Migration. Retrieved from https://refugeesmigrants.un.org/sites/default/files/180713_agreed_outcome_global_compact_for_migration.pdf.

UN Climate Change Conference UK 2021. (20201, November 2). The Global Forest Finance Pledge. UN Climate Change Conference (COP26) at the SEC – Glasgow 2021. Retrieved from https://ukcop26.org/the-global-forest-finance-pledge/.

UN RC Bangladesh. (2020, June 1). HCTT Response Plan: Cy-clone Amphan. United Nations Bangladesh. Retrieved from https://fscluster.org/sites/de-fault/files/documents/31.05.2020_final_draft_hctt_cyclone_amphan_response_plan.pdf

Van Reisen, M., Mawere, M., Stokmans, M., & Gebre-Egziabher, K. A. (Eds.). (2019). Roaming Africa: Migration, Resilience and Social Protection. Langaa RPCIG. https://doi.org/10.2307/j.ctvvh85q7

Chapter 04 References

ACI Limited. (2022). Promoting climate smart agriculture in the coastal belt of Bangladesh. https://www.aci-bd.com/research-development/promoting-climate- smart-agriculture-in-the-coastal-belt-of-bangladesh.html

Adams, B., & Luchsinger, G. (2009). Climate justice for a changing planet: A primer for policy makers and NGOs. UN, Non-Governmental Liaison Office. https://digitallibrary.un.org/record/672521?ln=en

Adra, N. (2013). The impact of male outmigration on women's roles in agriculture in the Yemen Arab Republic. A revised and updated (January 2013) version of a report originally prepared for FAO in 1983. https://www.files.ethz.ch/isn/173204/ca9106951a2408f79cdadbf30fc9c244.pdf

Afsar, R. (1994). Internal Migration and Women: An Insight into Causes, Consequences and Policy Implications. The Bangladesh Development Studies, 22(2/3), 217–243. http://www.jstor.org/stable/40795513

Ahmad, N. (2011, January 18). Gender and climate change: Myth vs. reality. World Bank Blogs. https://blogs.worldbank.org/endpovertyinsouthasia/gender-and-climate- change-myth-vs-reality

Ahmad. R. (2020, December 3). Women twice as active as men in farm activities. Dhaka Tribune. https://www.landportal.org/news/2020/12/women-twice-active-men-farm- activities

Ahmed, R. (2020, December 25). Higher-magnitude flood frequency increases in Bangladesh. Dhaka Tribune. https://archive.dhakatribune.com/bangladesh/agriculture/2020/12/25/higher- magnitude-flood-frequency-increases-in-bangladesh

Alam, M.Z., & Al-Mamun, A. (2022).Dynamics of internal migration in bangladesh: Trends, patterns, determinants, and causes. PLoS ONE 17(2): e0263878. https://doi.org/10.1371/journal.pone.0263878

Al Amin, M. (2022, August 8). Chittagong destination of 80% internal raba. Dhaka Tribune. https://archive.dhakatribune.com/opinion/special/2018/11/24/dhaka- chittagong-destination-of-80-internal-migrants

Al-Eryani. A. (2021, June). To avoid past mistakes, invest in yemen's agricultural sector. Yemen Policy Center. https://www.yemenpolicy.org/yemens-agricultural-sector-a- history-of-neglect-and-lost-potential/#:~:text=Half%20the%20country's%20labor%20force,percent%20of%20it s%20food%20needs.

Assad, R. (2010.) Field notes on the gender-related aspects of a GTZ community-based water management project in the republic of yemen. GTZ (German Agency for Technical Cooperation), Eschborn, Germany.

Augustine E. and R. Assad (2010), Gender Strategy: Component 4, GTZ Water Program- Yemen.

BDRS. (2022). Cyclone preparedness programme. BDRCS. https://bdrcs.org/cyclone- preparedness-programm-cpp/

Blanchet, T., & Biswas, H. (2021). Migration and gender in Bangladesh: An irregular landscape. ILO. https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/--- sro-new_delhi/documents/publication/wcms_832493.pdf

Bhuiyan, M. H. (2013). Improving women's odds in disasters. World Bank. https://www.worldbank.org/en/news/feature/2013/12/12/improving-women- disasters#:~:text=In%201970%2C%20before%20early%20warning,estimated%2030 0%2C000%20victims%20in%20Bangladesh.

CARE. (2020). Report card: Where is gender equality in national climate plans?

https://careclimatechange.org/score-card-ndcs-gender-equality

Center for Disaster Philanthropy, date Insight Issue: People with Disabilities, (n.d.) https://disasterphilanthropy.org/issue-insight/people-with-disabilities/

Charmes, J. (2019). The Unpaid care work and the labour market. An analysis of time use data based on the latest World Compilation of Time-use Surveys. International Labour Office–Geneva: ILO.

https://www.ilo.org/wcmsp5/groups/public/---dgreports/---gender/documents/publication/

Chowdhury, M.R. (2018, May 9). Tropical cyclones in bangladesh in changing climate. The Financial Express.

https://thefinancialexpress.com.bd/views/tropical-cyclones-in-bangladesh-in-changing-climate-1525879475

Chowdhury, A. (2022, March 31). Progressing female labor force participation in Bangladesh. International Growth Centre (IGC).

https://www.theigc.org/blog/progressing-female-labour-force- participation-in-bangladesh/

Commission on Climate Change and Development. (2009). Closing the gaps: Disaster risk reduction and adaptation to climate change in developing countries. https://reliefweb.int/report/world/closing-gaps-disaster-risk-reduction-and- adaptation-climate-change-developing-countries

Concern Worldwide. (2022, February 28). Gender inequality in Bangladesh: Engaging men and boys to close the gap. https://www.concern.net/story/gender-inequality-in- bangladesh-closing-the-gap

Countrymeters. (2022a). Bangladesh population. https://countrymeters.info/en/Bangladesh

Countrymeters. (2022b). Yemen population. https://countrymeters.info/en/Yemen

D'Cunha, J. (1997, November). Engendering disaster preparedness and management. Asian Disaster Preparedness Center (ADPC). Asian Disaster Management News 3(3), http://www.adpc.net/infores/newsletter/1997/theme-3.html

D'Cunha, J. (2019, 3-6 November). Gender, climate change and migration. [Conference Presentation] Representing UN Women ROAS on panel on climate change impacts on vulnerable communities organized by Arab Water Council and League of Arab States, at Arab Sustainable Development Week 2019, Cairo, Egypt.

D'Cunha, J. (2021). The Future of work for women migrant workers in the Asia-Gulf States. Abu Dhabi Dialogue (ADD) Regional Corridor. In Abu Dhabi Dialogue senior officials' meeting. Theme one: Anticipated changes in the employment landscape in the GCC and their impact on labor supply and demand in ADD corridors. https://adduae2021.org/attachments/ADD%20-%20Research%20Papers_Theme%201_v2.pdf

European Commission. (2019). INFORM Index for Risk Management. Bangladesh Country Profile, available at https://drmkc.jrc.ec.europa.eu/ inform-index/Countries/Country- Profile-Map

Ferrant, G., Pesando, L. M., & Nowacka, K. (2014). Unpaid Care Work: The missing link in the analysis of gender gaps in labor outcomes. Boulogne Billancourt: OECD Development Center. https://www.oecd.org/dev/development- gender/Unpaid_care_work.pdf

FAO, IFAD & ILO. (2010). Gender dimensions of agricultural and rural employment: Differentiated pathways out of poverty. Status, trends and gaps. https://reliefweb.int/report/world/gender-dimensions-agricultural-and-rural- employment-differentiated-pathways-out-pover-0

FAO. (2005). Breaking ground: Present and future perspectives for women in agriculture.

https://edepot.wur.nl/25639

FAO. (2014). Country fact sheet on food and agriculture policy trends: Yemen. https://www.fao.org/3/i4127e/i4127e.pdf

FAO. (2016).Women Farmers of Bangladesh. Family Farming Knowledge Platform. https://www.fao.org/familyfarming/detail/en/c/472863/#:~:text=Across%20the%20d eveloping%20world%2C%20rural,across%20a%20variety%20of%20sectors

FAO. (2018).Yemen - Plan of action 2018-2020: Strengthening resilient agricultural livelihoods. https://www.fao.org/3/I9054EN/i9054en.pdf

FAO, UNICEF, & WFP. (2022, March 14). Yemen: Acute hunger at unprecedented levels as funding dries up. https://www.unicef.org/press-releases/yemen-acute-hunger- unprecedented-levels-funding-dries

Flavell, A., Milan, A., & Melde, S. (2020). Migration, environment and climate change: Literature review. Umweltbundesamt. https://www.umweltbundesamt.de/en/publikationen/migration-environment-climate-change-literature

GFDRR. (2015). Country profile: Yemen. https://www.gfdrr.org/en/publication/country- profile-yemen

Global Data Lab. (2019). Sub-national HDI (v5.0). https://globaldatalab.org/shdi/table/shdi/?levels=1&interpolation=0&extrapolation=0

Government of Bangladesh. (2008). Cyclone Sidr in Bangladesh: Damage, loss and needs assessment for disaster recovery and reconstruction. https://reliefweb.int/report/bangladesh/cyclone-sidr-bangladesh-damage-loss-and- needs-assessment-disaster-recovery-and

Government of the United States. (2020, August 26) Livestock service providers break gender biases in Bangladesh. Feed the Future. https://www.feedthefuture.gov/article/breaking-gender-biases-in-bangladesh-for-women- farmers/

Government of Yemen, World Bank, UN-ISDR & IFRCC. (2009). Damage, losses and needs assessment: October 2008 tropical storm and floods, Hadramout and Al-Mahara, Republic of Yemen. https://www.gfdrr.org/sites/default/files/GFDRR_Yemen_DLNA_2009_EN.pdf

Government of Yemen. (2019, April). Comprehensive List of the Republic of Yemen Cabinet http://yemen-embassy.be/en/?cat=7

Gressman, W. (2016). From the Ground Up: Gender and Conflict Analysis in Yemen.

Care,IASC GenCap & Oxfam. https://www.careevaluations.org/wp- content/uploads/rr-yemen-gender-conflict-analysis-201016-en.pdf

Halim, S., & Ahmed, M. K. (2006). Women in fisheries in Bangladesh: level of involvement and scope for enhancement. In Global Symposium on Gender and Fisheries (pp. 159-168). Penang: WorldFish Center.

Hamoud, M. (2016, December 19). In pictures: Yemen's displaced women and girls. https://www.bbc.com/news/in-pictures-38305875

Harb, T. (2019). Yemen: One of the worst places in the world to be a woman. Amnesty International. https://reliefweb.int/report/yemen/yemen-one-worst-places-world-be- woman

Help Age International. (2019). Age inclusive disaster risk reduction: A toolkit.

https://www.preventionweb.net/files/68082_ageinclusivedisasterriskreductionat.pdf

HelpAge International. (2000). Older people in disasters and humanitarian crises: Guidelines for best Practice. https://www.refworld.org/docid/4124b9f44.html

Helvetas & Okup (2021). Insights on migration and climate change. https://www.helvetas.org/Publications-PDFs/Switzerland/International%20Newsletter%20Highlights/Insights%20on%20Migration%20amid%20Climate%20Change.pdf

Herbert, M. (1984). Yemeni women – Still at home. Cultural Survival Quarterly Magazine. https://www.culturalsurvival.org/publications/cultural-survival-quarterly/yemeni-women- still-home

Holleis, J. (2022, August 13). Mass flooding exacerbates hardships of war in Yemen.

Deutsche Welle. https://www.dw.com/en/mass-flooding-exacerbates-hardships-of- war-in-yemen/a-62792249#:~:text=Heavy%20rain%20and%20flash%20floods,already%20looming

%20off%20the%20coast.

Horwood, C. (2020). Weak links: Challenging the climate & migration paradigm in the Horn of Africa & Yemen. Mixed Migration Centre. https://mixedmigration.org/wp- content/uploads/2020/02/087_weak_links.pdf

Hussain, J. (2021, August 2). Growing income inequality in Bangladesh causes concern. The Financial Express. https://thefinancialexpress.com.bd/views/growing-income- inequality-in-bangladesh-causes-concern-1627918086

IDMC. (2021). GRID 2021: Internal displacement in a changing climate. https://www.internal- displacement.org/sites/default/files/publications/documents/grid2021_idmc.pdf

IFAD & FAO. (2007). The status of rural poverty in the Near East and North Africa. Rome: IFAD and FAO. https://www.fao.org/publications/card/en/c/7855bf6b-2111-4c0c- abba-b2fb81b093cd/

ILO. (2009). Policy brief 6: Enhancing the participation of rural women producers in cooperatives in Yemen. https://www.ilo.org/wcmsp5/groups/public/---arabstates/--- ro-beirut/documents/publication/wcms_348064.pdf

IOM. (2008). Migration and climate change. IOM migration and climate change series. No

https://www.iom.int/news/iom-migration-research-series-no-31-migration-and- climate-change

IOM. (2009). Migration, Environment and Climate Change: Addressing the Evidence (p.

396). https://publications.iom. int/system/files/pdf/migration_and_environment.pdf

IOM. (2013). Compendium of IOM's activities in disaster risk reduction and resilience. https://www.iom.int/sites/g/files/tmzbdl486/files/migrated_files/What-We- Do/docs/IOM-DRR-Compendium-2013.pdf

IOM. (2022). Who is a Migrant? https://www.iom.int/who-is-a-migrant.

Islam, M. T. (2017). The capacity of cyclone preparedness programme and flood preparedness program volunteers for gender inclusive preparedness. UN Women. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Doc s/Publications/2017/11/The-Capacity-of-CPP-FPP-for-Gender-Inclusive- Preparedness.pdf

IRIN (Integrated Regional Information Networks). (2009, November 3). Clambering up mountains to find water. IRIN Humanitarian News and Analysis. http://www.irinnews.org/Report.aspx?ReportID=86847

Kotikula, A., & Solotaroff, J. (2019, May 1). To gain economic empowerment, bangladeshi women need equal property rights. World Bank Blogs . https://blogs.worldbank.org/endpovertyinsouthasia/gain-economic-empowerment- bangladeshi-women-need-equal-property-rights

Lackner, H. (2021). Climate change and conflict in Hadhramawt and Al Mahra. Bergof Report 12/2021. Bergof Foundation Berlin. https://berghof- foundation.org/library/climate-change-and-conflict-in-hadhramawt

Manusher Jonno Foundation (MJF). (2020). Recognition of women's role in agriculture: Acknowledge women's unaccounted contribution in agricultural economy. Policy Brief 4. http://www.manusherjonno.org/wp- content/uploads/2021/03/FINAL_Policy-Brief-4-Women-in-Agriculture.pdf

Mcdonnel, T. (2019, January 24). Climate change creates a new migration crisis for bangladesh. National Geographic Society. https://www.nationalgeographic.com/environment/article/climate-change-drives-migration-crisis-in-bangladesh-from-dhaka- sundabans#:~:text=Overall%2C%20the%20number%20of%20Bangladeshis,March

%202018%20World%20Bank%20report

Mohammed, M. (2022, June 6). Yemeni women lead communities in the fight against climate change. IOM. https://middleeastandnorthafrica.iom.int/stories/yemeni- women-lead-communities-fight-against-climate-change

Mondal, M. H. (2010). Crop Agriculture of Bangladesh: Challenges and Opportunities.

Bangladesh Journal of Agricultural Research, 35(2), 235–245. https://doi.org/10.3329/bjar.v35i2.5886

Nicholls, R.J., Lincke, D., Hinkel, J., Brown, S., Vafeidis, A. T., Meyssignac, B., Hanson, S. E., Merkens, J.L., & Fang, J. (2021). A global analysis of subsidence, relative sea- level change and coastal flood exposure. Nature Climate Change. Springer US. https://www.nature.com/articles/s41558-021-00993-z

OECD. (2015). OECD and post-2015 reflections: Keeping the multiple dimensions of poverty at the heart of development. Element 1, Paper 1. https://www.oecd.org/dac/POST-2015%20multidimensional%20poverty.pdf

Pross, C., Yi-Chen Han, J., Dayoon, K., & Vigil, S. (2020). Climate change, gender equality and human rights in Asia. UN Women. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Do cs/Publications/2021/02/ap-HRCC-report_online-compressed.pdf

Rabbani, Md.G., Khan, Z.M., Tuhin. Naznin, M.H.T.Z, Emran, D. A., & Karim, Sazzadul,

K. (2015). Climate Change and migration in Bangladesh: A gender perspective. UN Women. https://asiapacific.unwomen.org/sites/default/files/Field%20Office%20ESEAsia/Doc s/Publications/2016/01/Climate%20Change%20%20Migration%20in%20Banglades h%20A%20gender%20Perspective.pdf

Raghavan, P. (2017). Incorporation of women's economic empowerment and unpaid care work into regional policies: South asia. Action Aid. https://www.actionaid.org.uk/sites/default/files/publications/policy_brief_on_unpaid

_care_work_-_south_asia.pdf

Rahman, M. T. (2017). Role of agriculture in Bangladesh economy: uncovering the problems and challenges. International Journal of Business and Management Invention, 6(7).

Raju, F. R. (2019, January 7). 47-strong council of ministers announced. Dhaka Tribune. https://archive.dhakatribune.com/bangladesh/government-affairs/2019/01/07/47- strong-council-of-ministers-announced

Republic of Yemen. (2016). National Report of Third United Nations Conference on Housing and Sustainable Urban Development - HABITAT III. Quito/ Ecuador. https://habitat3.org/wp-content/uploads/Yemen-National-Report-September- 2016.pdf

Rojas, D. (2021). How the climate crisis is impacting Bangladesh. https://www.climaterealityproject.org/blog/how-climate-crisis-impacting- bangladesh#:~:text=It%20has%20been%20estimated%20that,of%20sea%2Dlevel% 20rise%20alone

Shahed, I. (2009). Assessment of volunteers performance of cyclone preparedness programme from community point of view. Journal of South Asia Disaster Studies, 2(2), 15-30.

https://www.researchgate.net/publication/335528338_Assessment_of_Volunteers_Performance_of_Cyclone_Preparedness_Programme_from_Community_Point_of_View_by_Md_Imtiaz_Shahed

Siddiqui, T., Bhuiyan, M., Alam, R., Das, P. K., Chakraborty, G., & Hasan, M. (2018).

Accommodating migration in climate change adaptation: A GBM delta Bangladesh perspective. Refugee and Migratory Movements Research Unit (RMMRU), Dhaka. Smith, M.D., & Henly-Shepard, S. (2021). Disasters and displacement in Bangladesh: Re-

conceptualizing strategies of risk reduction and resilience. IDMC. https://reliefweb.int/report/bangladesh/disasters-and-displacement-bangladesh-re- conceptualising-strategies-risk-reduction

Statistica. (2022) Cities with the highest population density worldwide in 2021. https://www.statista.com/statistics/1237290/cities-highest-population-density/

Task Force on Population Movement (TFPM). (2016). Yemen: Task force on population movement (TFPM) - 10th report - Executive summary - July 2016. https://reliefweb.int/report/yemen/yemen-task-force-population-movement-tfpm- 10th-report-executive-summary-july-2016

Trent, S. (2022) The new refugees. Environmental Justice Foundation. https://ejfoundation.org/news-media/the-new-refugees#

United Nations Department of Economic and Social Affairs, Population Division (2020).

International Migrant Stock 2020

UNDP. (n.d). Gender Inequality Index (GII). https://hdr.undp.org/data-center/thematic- composite-indices/gender-inequality-index#/indicies/GII

UNDP (2019a, October 15). Yemeni rural women launch the country's first private solar energy grid. https://www.undp.org/yemen/stories/yemeni-rural-women-launch- country%E2%80%99s-first-private-solar-energy-grid

UNDP. (2022). Uncertain times, unsettled lives: Shaping our future in a transforming world. . United Nations Development Programme . Retrieved from https://hdr.undp.org/system/files/documents/global-report-document/hdr2021-22pdf_1.pdf

UNFPA. (2021). UNFPA humanitarian response in Yemen. https://reliefweb.int/report/yemen/2021-unfpa-humanitarian-response-yemen-enar

UNHCR. (2015). Yemen Situation Regional Refugee and Migrant Response Plan, January-December 2016. https://www.unhcr.org/57066a626.pdf

UNGA. (2015). A/Res/70/1 Transforming Our world: The 2030 agenda for sustainable development, 21 October 2015. Seventieth United Nations General Assembly, New York, 25, 86-97.

United Nations. (2015) The Paris Agreement. https://unfccc.int/process-and-meetings/the- paris-agreement/the-paris-agreement . , Articles 6 (8) 7(e); pp 8 and 11

UN Women. (2020). Supporting the recovery of women entrepreneurs and women's micro, small, medium enterprises from the impact of COVID-19 in Bangladesh. https://asiapacific.unwomen.org/en/digital-library/publications/2021/04/supporting- the-recovery-of-women-entrepreneurs---bangladesh

USAID. (2010). Property rights and resource governance: Bangladesh. https://www.land- links.org/wp-content/uploads/2016/09/USAID_Land_Tenure_Bangladesh_Profile.pdf

USAID. (2017). Climate change risk profile Yemen. Fact Sheet. https://pdf.usaid.gov/pdf_docs/PA00MX8Q.pdf

World Bank. (2007). Yemen : Towards Qat Demand Reduction. Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/7734 License: CC BY

3.0 IGO

World Bank.(2011). Costing adaptation through local institutions: synthesis report.

Washington, DC: World Bank.

World Bank & Global Facility for Disaster Reduction and Recovery (GFDRR). (2011).

Climate risk and adaptation country profile: Yemen. World Bank Group. https://climateknowledgeportal.worldbank.org/sites/default/files/2018- 10/wb_gfdrr_climate_change_country_profile_for_YEM.pdf

World Bank. (2021a) Agriculture, forestry, and fishing, value added (% of GDP) – Bangladesh. World Bank National Accounts data, and OECD National Accounts data files. https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS?locations=BD

World Bank. (2021b). Climate risk country profile: Bangladesh. Climate Change Knowledge Portal, World Bank. https://climateknowledgeportal.worldbank.org/sites/default/files/country- profiles/15502-WB_Bangladesh%20Country%20Profile-WEB.pdf

World Bank. (2021c). Employment in agriculture (% of total employment) (modeled ILO estimate) – Bangladesh. International Labour Organization, ILOSTAT database. Data as of January 2021. https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=BD

World Bank. (2022a). Bangladesh. Gender Data Portal. https://genderdata.worldbank.org/countries/bangladesh/

World Bank. (2022b). Employment in agriculture, female (% of female employment) (modeled ILO estimate). International Labour Organization, ILOSTAT database. Data as of January 2021. https://data.worldbank.org/indicator/SL.AGR.EMPL.FE.ZS

World Bank. (2022c). Employment in agriculture, male (% of male employment) (modeled ILO estimate) International Labour Organization, ILOSTAT database. Data as of January 2021. https://data.worldbank.org/indicator/SL.AGR.EMPL.MA.ZS

World Bank. (2022d). Labor force participation rate, female (% of female population ages 15+) (modeled ILO estimate). International Labour Organization, ILOSTAT database. https://data.worldbank.org/indicator/SL.TLF.CACT.FE.ZS

World Bank. (2022e). Labor force participation rate, male (% of male population ages 15+) (modeled ILO estimate). International Labour Organization, ILOSTAT database. https://data.worldbank.org/indicator/SL.TLF.CACT.MA.ZS

World Bank. (2022f). The Gini Index. World Bank, Poverty and Inequality Platform. https://data.worldbank.org/indicator/SI.POV.GINI

World Bank. (2022g). Unemployment, female (% of female labor force) (modeled ILO estimate). International Labour Organization, ILOSTAT database. https://data.worldbank.org/indicator/SL.UEM.TOTL.FE.ZS

World Bank (2022h). Unemployment, male (% of male labor force) (modeled ILO estimate). International Labour Organization, ILOSTAT database. https://data.worldbank.org/indicator/SL.UEM.TOTL.MA.ZS;

World Bank. (2022i). Urban population growth (annual %). https://data.worldbank.org/indicator/SP.URB.GROW

World Bank. (2022j). Women participating in the three decisions (own health care, major household purchases, and visiting family (% of women age 15-49). https://data.worldbank.org/indicator/SG.DMK.ALLD.FN.ZS?locations=BD%29

World Bank. (2022k). Yemen. Gender Data Portal https://genderdata.worldbank.org/countries/yemen/

World Economic Forum. (2021). Global gender gap report. https://www3.weforum.org/docs/WEF_GGGR_2021.pdf

World Population Review. (2022a). Bangladesh Population (Live). https://worldpopulationreview.com/countries/bangladesh-population

World Population Review. (2022b). Human Development Index by Country 2022, https://worldpopulationreview.com/country-rankings/hdi-by-country

World Population Review. (2022c). Yemen Population (Live). https://worldpopulationreview.com/countries/yemen-population

Zaman, A. K. M. H., Alam, K. M. T., & Islam, M. J. (2010). Urbanization in Bangladesh: present status and policy implications. ASA University Review, 4(2), 1-16.

Chapter 05 References

Andrijevic, M., Crespo Cuaresma, J., Lissner, T., Thomas, A., & Schleussner, C. F. (2020).

Overcoming gender inequality for climate resilient development. Nature Communications, 11(1), 1–8. https://doi.org/10.1038/s41467-020-19856-w

Bacchus, L. J., Ranganathan, M., Watts, C., & Devries, K. (2018). Recent intimate partner violence against women and health: A systematic review and meta-analysis of cohort studies. BMJ Open, 8(7), 1–20. https://doi.org/10.1136/bmjopen-2017-019995

Busza, J., Mtetwa, S., Chirawu, P., & Cowan, F. (2014). Triple jeopardy: Adolescent experiences of sex work and migration in Zimbabwe. Health & Place, 28, 85–91. https://doi.org/https://doi.org/10.1016/j.healthplace.2014.04.002

Castañeda Carney, I., Sabater, L., Owren, C., & Boyer, A. E. (2020). Gender-based violence and environment linkages: The violence of inequality. (J. (ed) Wen, Ed.), Gender-based violence and environment linkages: The violence of inequality. Gland, Switzerland: IUCN. https://doi.org/10.2305/iucn.ch.2020.03.en

Commission on the Status of Women Sixty-sixth session. (2022). 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.

Committee on the Elimination of Discrimination against Women (CEDAW). (2018). General Recommendation No. 37 on Gender-related dimensions of disaster risk reduction in the context of climate change.

Dorte Verner. (2012). Adaptation to a changing climate in the Arab Countries. Washington D.C.

Epstein, A., Bendavid, E., Nash, D., Charlebois, E. D., Weiser, S. D., A., E., … Weiser S.D. AO - Epstein Eran; ORCID: http://orcid.org/0000-0002-8364-4711 AO - Nash, Denis; ORCID: http://orcid.org/0000-0002-3280-5386 AO - Charlebois, Edwin D.; ORCID: http://orcid.org/0000-0001-7237-2119 AO - Weiser, Sheri D.; ORCID: http://orci, A.

O. http://orcid. org/000.-0002-8253-6102 A. O.-B. (2020). Drought and intimate partner violence towards women in 19 countries in sub-Saharan Africa during 2011-2018: A population-based study. PLoS Medicine, 17(3), e1003064. https://doi.org/http://dx.doi.org/10.1371/journal.pmed.1003064

Fagen, J. L., Sorensen, W., & Anderson, P. B. (2011). Why Not the University of New Orleans? Social Disorganization and Sexual Violence Among Internally Displaced Women of Hurricane Katrina. Journal of Community Health, 36(5), 721–727. https://doi.org/10.1007/s10900-011-9365-7

Felten-Biermann, C. (2006). Gender and Natural Disaster: Sexualized violence and the tsunami. Development, 49(3), 82–86. https://doi.org/10.1057/palgrave.development.1100276

Fisher, S. (2010). Violence Against Women and Natural Disasters: Findings From Post- Tsunami Sri Lanka. Violence Against Women, 16(8), 902–918. https://doi.org/10.1177/1077801210377649

Gavrilovic, B. M., Rubio, M., Bastagli, F., Hinton, R., & Goulder, R. G. (2022). Gender- responsive social protection post–COVID-19. Science, 375(6585), 1111–1114.

Government of Albania. Albania Revised Nationally Determined Contribution (2021).

Retrieved from https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Albania First/Albania Revised NDC.pdf

H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, & K. Mintenbeck. (2022). IPCC 2022 | Summary for Policymakers. In Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. (Ed.), Climate Change 2022: Impacts, Adaptation, and Vulnerability. Cambridge University Press.

Harville, E. W., Taylor, C. A., Tesfai, H., Xiong, X., & Buekens, P. (2011). Experience of Hurricane Katrina and reported intimate partner violence. Journal of Interpersonal Violence, 26(4), 833–845. https://doi.org/10.1177/0886260510365861

Heise LL. (1998). Violence Against Women: An Integrated, Ecological Framework.

Violence Against Women, 4(3), 262–290. https://doi.org/10.1177/1077801298004003002

Human Security Research Group. (2012). Human Security Report 2012: Sexual violence, education, and war: Beyond the mainstream narrative. Canada.

Intergovernmental Panel on Climate Change (IPCC). (2018). Global warming of 1.5°C: An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change. Geneva. Retrieved from https://www.ipcc.ch/sr15/download/#full.

International Committee of the Red Cross (ICRC). (2020). When rain turns to dust: Understanding and responding to the combined impact of armed conflicts and the climate and environmental crisis on people's lives.

International Federation of Red Cross and Red Crescent Societies. (2015). Unseen, unheard: Gender-based violence in disasters.

Jewkes, R. (2002). Intimate partner violence: causation and primary prevention. Lancet, 359. https://doi.org/10.1016/S0140-6736(02)08357-5

Jewkes R. (2010). Gender Inequities Must Be Addressed in HIV Prevention. Science, 329(5988), 145–147.

King, A. D., & Harrington, L. J. (2018). The Inequality of Climate Change From 1.5 to 2°C of Global Warming. Geophysical Research Letters, 45(10), 5030–5033. https://doi.org/10.1029/2018GL078430

Le Masson, V. (2022). Disasters, Climate Change, and Violence Against Women and Girls.

Oxford Research Encyclopedia of Natural Hazard Science, (June), 1–26. https://doi.org/10.1093/acrefore/9780199389407.013.393

Madkour, A. S., Johnson, C. C., Clum, G. A., & Brown, L. (2011). Disaster and Youth Violence: The Experience of School-Attending Youth in New Orleans. Journal of Adolescent Health, 49(2), 213–215. https://doi.org/10.1016/j.jadohealth.2011.06.005

Masson, V. Le, Lim, S., Budimir, M., Masson, V. Le, Lim, S., Budimir, M., & Podboj, J. S. (2016). Disasters and violence against women and girls Can disasters shake social norms and power relations? Disasters

Nasreen M. (2010). Rethinking disaster management: Violence against women during floods in Bangladesh. In S. Dasgupta, I. Siriner, & P. Sarathi De (Eds.), Women's encounter with disaster (pp. 232–244). Frontpage Publications.

Nejma Bouchama ;, Gaëlle Ferrant;, Léa Fuiret;, Alejandra Meneses;, & Annelise Thim. (2018). Gender Inequality in West African Social Institutions: West African Papers, No. 13,. Paris, France.

Peterman, A., & Donnell, M. O. (2020). COVID-19 and Violence against Women and Children A Third Research Round Up for the 16 Days of Activism.

Rao, S. (2020). A natural disaster and intimate partner violence: Evidence over time. Social Science & Medicine, 247, 112804. https://doi.org/https://doi.org/10.1016/j.socscimed.2020.112804

Rashid, S. F., & Michaud, S. (2000). Female Adolescents and Their Sexuality: Notions of Honour, Shame, Purity and Pollution during the Floods. Disasters, 24(1), 54–70. https://doi.org/https://doi.org/10.1111/1467-7717.00131

Rezwana, N., & Pain, R. (2021). Gender-based violence before, during, and after cyclones: slow violence and layered disasters. Disasters, 45(4), 741–761. https://doi.org/https://doi.org/10.1111/disa.12441

Sanson, A. V., Van Hoorn, J., & Burke, S. E. L. (2019). Responding to the Impacts of the Climate Crisis on Children and Youth. Child Development Perspectives, 13(4), 201– 207. https://doi.org/10.1111/cdep.12342

Sanz-Barbero, B., Linares, C., Vives-Cases, C., González, J. L., López-Ossorio, J. J., & Díaz, J. (2018). Heat wave and the risk of intimate partner violence. Science of The Total Environment, 644, 413–419. https://doi.org/https://doi.org/10.1016/j.scitotenv.2018.06.368

Shipra Jha. (2017). Climate Change is Exacerbating Child Marriage in Bangladesh.

Retrieved from https://www.huffpost.com/entry/climate-change-is- exacerb_b_12913788

Stoebenau, K., Heise, L., Wamoyi, J., & Bobrova, N. (2016). Revisiting the understanding of transactional sex in sub-Saharan Africa: A review and synthesis of the literature.

Social Science and Medicine, 168, 186–197. https://doi.org/10.1016/j.socscimed.2016.09.023

Temple Jeff R., P., van den Berg Patricia, P., "Fred" Thomas John F., P., Northcutt MOT, James, O. T. R.,

Thomas Christopher, M. D., & Freeman Jr Daniel H., P. (2011). Teen dating violence and substance use following a natural disaster: Does evacuation status matter? American Journal of Disaster Medicine, 6(4). Retrieved from https://www.wmpllc.org/ojs/index.php/ajdm/article/view/2060

The Federal Republic of Somalia. (2021). Republic of Somalia Updated Nationally Determined Contributions (NDC), (July).

Thurston, A. M., Stöckl, H., & Ranganathan, M. (2021). Natural hazards, disasters and violence against women and girls: a global mixed- methods systematic review. BMJ Global Health, 6(e004377), 1–21. https://doi.org/10.1136/bmjgh-2020-004377

UNFPA. (2020). West and Central Africa, a forgotten region - Women and girls pay the heavy burden, 1–3.

UNFPA Jordan. (2022). Climate Change and Gender-Based Violence in Jordan. UNFPA Somalia Country Office. (2020). Gender-based violence in Somalia.

UNFPA Syria Office. (2021). Rapid participatory assessment on the impact of water scarcity in north Syria.

van Daalen, K. R., Savić Kallesøe, S., Davey, F., Dada, S., Jung, L., Singh, L., … Nilsson,

M. (2022). Extreme events and gender-based violence: a mixed-methods systematic review. Lancet Planetary Health (in Publication), 6(6), e504–e523. https://doi.org/10.1016/S2542-5196(22)00088-2

Violence against women prevalence estimates, 2018. Global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women. (2021). WHO on Behalf of the United Nations Inter-Agency Working Group on Violence Against Women Estimation and Data (UNICEF, UNFPA, UNODC, UNSD, UNWomen).

Wamoyi, J., Wight, D., Plummer, M., Mshana, G. H., & Ross, D. (2010). Transactional sex amongst young people in rural northern Tanzania: an ethnography of young women's motivations and negotiation. Reproductive Health, 7(1), 2. https://doi.org/10.1186/1742-4755-7-2

Whittenbury KL. (2013). Climate change, women's health, wellbeing and experiences of gender-based violence in Australia. In Alston M & Whittenbury K (Eds.), Research, Action and Policy: Addressing the Gendered Impacts of Climate Change. (p. 207). Dordrecht, The Netherlands: Springer Netherlands.

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