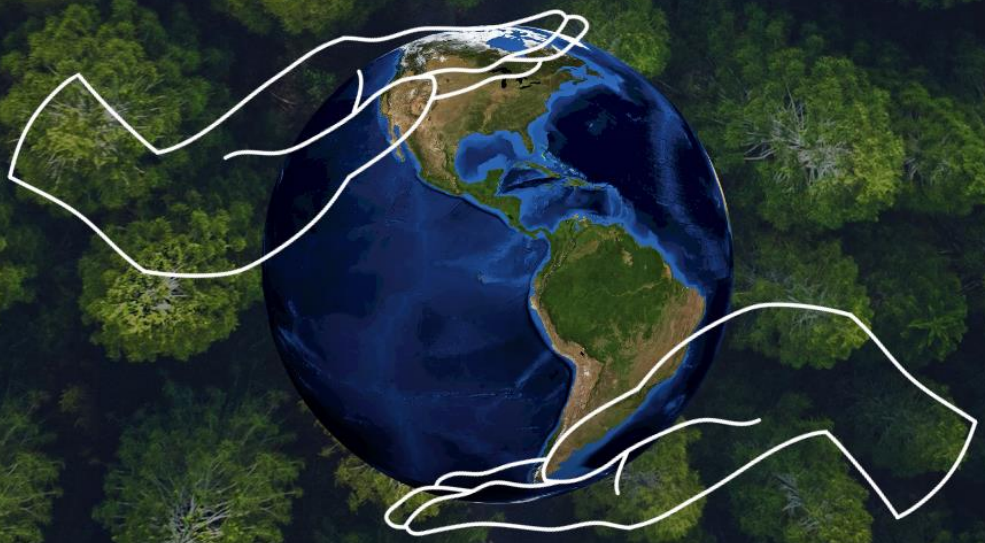
ENVIRONMENT, CLIMATE CHANGE, AND WOMEN AND CHILDREN'S RIGHTS:

CHALLENGES, PERSPECTIVES AND THE ROLE OF INDIGENOUS PEOPLES



GENEVA CENTRE FOR HUMAN RIGHTS ADVANCEMENT AND GLOBAL DIALOGUE
مركز جنيف لحقوق الإنسان والحوار العالمي
CENTRE DE GENÈVE POUR LA PROMOTION DES DROITS DE L'HOMME ET LE DIALOGUE GLOBAL
In special Consultative Status with the Economic and Social Council of the United Nations
ذو مركز استشاري خاص لدى المجلس الاقتصادي والاجتماعي للأمم المتحدة
Bénéficiant du Statut consultatif spécial auprès du Conseil économique et social des Nations Unies

This report follows the Geneva Centre Conference “Environment, Climate Change, and Women and Children’s Rights: Challenges, Perspectives and the Role of Indigenous Peoples” held on the 6th of September 2023 at the United Nations Office in Geneva

The conference was organized by the Geneva Centre for Human Rights Advancement and Global Dialogue and co-sponsored by
the Permanent Mission of Chile to the United Nations in Geneva,
the Permanent Mission of Cabo Verde to the United Nations in Geneva and
the Permanent Mission of Finland to the United Nations in Geneva

GENEVA CENTRE FOR HUMAN RIGHTS ADVANCEMENT AND GLOBAL DIALOGUE

Misión de Chile ante la ONU en Ginebra
Gobierno de Chile

REPÚBLICA DE CABO VERDE

Permanent Mission of Finland
Geneva

PROGRAMME OF THE CONFERENCE

Allocution by the Guest of Honor **Ms. Nathalie Fontanet**, State Councilor of the Republic and Canton of Geneva

Welcome remarks by **Ambassador** (retd) **Mr. Ghazi Jomaa**, Chairman of the Board of Management of the Geneva Centre for Human Rights Advancement and Global Dialogue

Moderation by Dr. Umesh Palwankar, Executive Director of the Geneva Centre for Human Rights Advancement and Global Dialogue

OPENING STATEMENTS

H.E Mrs. Claudia Fuentes Julio, Ambassador and Permanent Representative of Chile to the United Nations in Geneva

H.E Mrs. Clara Manuela da Luz Delgado Jesus, Ambassador and Permanent Representative of Cabo Verde to the United Nations in Geneva

H.E Ms. Lubna Qassim Albastaki, Deputy Permanent Representative of the United Arab Emirates to the United Nations in Geneva

KEYNOTE ADDRESSES

Mr. Todd Howland, Chief of Branch, Development Economic and Social Issues OHCHR

Dr. Ian Fry, UN Special Rapporteur on the promotion and protection of human rights in the context of climate change

PANEL 1 : PROMOTING AND PROTECTING THE RIGHTS OF WOMEN AND ENSURING GENDER EQUALITY IN THE CONTEXT OF CLIMATE CHANGE AND ENVIRONMENTAL DEGRADATION

Dr. David Boyd, UN Special Rapporteur on human rights and the environment (pre-recorded video message)

Prof. Liliana Andonova, Professor of Political Science and International Relations and Academic Co-director of the Cener fot International Environmental Studies at IHEID

Ms. Gina Cortès Valderrama, co-Focal Point of the UNFCCC Women and Gender Constituency

PANEL 2 : CHILDREN'S RIGHTS, ENVIRONMENT AND CLIMATE CHANGE : INTEGRATING CHILDREN'S RIGHTS INTO CLIMATE ACTION

Dr. Octavian Bivol, Deputy Regional Director for Europe and Central Asia, UNICEF

Ms. Saher Rashid Baig, Representative of the Child Rights Working Group of the UNFCCC Children and Youth Constituency

A voice for children : **Ms. Licypriya Kangujam**, young environmental activist and Founder of the Child Movement India

PANEL 3 : TRADITIONAL KNOWLEDGE AND PRACTICES OF INDIGENOUS PEOPLES IN RECONCILIATING PURSUIT OF LIVELIHOODS WITH ENVIRONMENTAL PROTECTION : INNOVATIVE APPROACHES TO ADDRESSING CLIMATE CHANGE AND SAFEGUARDING NATURAL RESOURCES

Mr. José Francisco Cali Tzay, UN Special Rapporteur on the Rights of Indigenous Peoples (pre-recorded video message)

Dr. Pasang Dolma Sherpa, Executive Director of the Center for Indigenous Peoples' Research & Development (CIPRED)

Dr. Mohamed Handaine, President, Indigenous Peoples of Africa Coordination Committee (IPACC)

"We are hurtling towards disaster, eyes wide open –
with far too many willing to bet it all on wishful thinking,
unproven technologies and silver bullet solutions",
UN Secretary-General António Guterres, on 15 June 2023, in New York.[1]

"We must urgently disrupt business as usual and unite like never before to move from ambition to action and from rhetoric to real results"
Sultan Al Jaber, president designate of COP28, on 8 September 2023 UN NEWS.[2]

"From heat waves across Europe to droughts across Africa
and massive flooding in Asia, the past year of extreme weather events
have served as a(nother) visible wake-up call for humanity.
Global Youth urges political leaders to take heed, take charge, and take action.
We have no more time to lose. Our future literally depends on it."
Global Youth Statement for COP27.[3]

"We must not leave this for our children to fix – no matter how inspiring their activism". [4]
UN High Commissioner Volker Türk, on 3 July 2023, in a statement to the Human Rights Council.

"We need women, in all their diversity, involved at all levels –
from climate negotiations to boardrooms to forests and fields,
especially in sectors and regions hit hard by the ravages of climate change.
UNFCCC statement on the occasion of International Women's Day"[5]

Foreword

The world is facing an acute climate crisis, with natural disasters, at times of epic proportions, occurring at an alarmingly increasing frequency across the globe, with calamitous consequences for entire populations and subsequently for their basic human rights. Indeed, we are at the edge of what could legitimately be considered humanity's survival, vitally dependent on the environment, ecosystems and nature at large.

However, and thankfully, all hope is not lost, but universal collaboration in the adoption and effective implementation of the necessary measures already identified as appropriate remedial action needs to be urgently and robustly undertaken.

It is thus that the Geneva Centre for Human Rights Advancement and Global Dialogue decided to organize an international conference at the United Nations Office in Geneva on 6 September, on the heels of the Bonn Climate Conference and in anticipation of COP 28, with the aim of offering a platform for in-depth discussions among eminent specialists.

The Geneva Centre was honoured to have the Geneva State Councillor also in charge of external affairs, as Guest of Honour. The conference had the further privilege of being co-sponsored by the Permanent Missions of Chile, Cabo Verde and Finland. The opening statements included an address by the Deputy Permanent Representative of the United Arab Emirates, host of COP 28.

In the course of the high-level segment and three thematic panel discussions, speakers hailing from the UN, including Special Rapporteurs, international bodies, civil society and academia from all major regions of the world delivered insightful reflections and concrete recommendations on the rights of women and children in the context of the climate emergency, and the role that the ancestral knowledge and practices of Indigenous Peoples could play to effectively address this crisis.

The outcomes of the conference, including conclusions and recommendations, together with the Geneva Centre's own research and analyses, with best practices of Indigenous Peoples in annex, are presented in this report, prepared by Ms Maryna Yazianok in close cooperation and under the supervision of the Geneva Centre. The report represents an effort to complement other similar initiatives in providing informative and hopefully useful inputs for appropriate consideration at the crucial COP 28.

Dr Umesh Palwankar
Executive Director
Geneva Centre for Human Rights Advancement and Global Dialogue

Table of Contents

List of Abbreviations

CCRI	Children's Climate Risk Index
CEDAW	United Nations Committee on the Elimination of Discrimination Against Women
COP	Conference of the Parties to the UNFCCC
COP27	The 27th UN Climate Change conference or Conference of the Parties of the UNFCCC
COP28	The 28th UN Climate Change conference or Conference of the Parties of the UNFCCC
CRC	United Nations Committee on the Rights of the Child
GHGs	Greenhouse gas emissions
GST	Global Stocktake Process
HRC	United Nations Human Rights Council
ILO	International Labour Organization
IPCC	Intergovernmental Panel on Climate Change
NAP	National Adaptation Plan
NCQG	New Collective Quantified Goal on climate finance
NDCs	Nationally Determined Contributions
NGO	Non-governmental organization
OHCHR	United Nations Office of the United Nations High Commissioner for Human Rights
SB58	The 58th session of the Subsidiary Bodies to the UNFCCC
SDGs	Sustainable Development Goals
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
UNPFII	United Nations Permanent Forum on Indigenous Issues
WGC	Women and Gender Constituency of the UNFCCC
WMO	World Meteorological Organization
YOUNGO	Children and Youth Constituency of the UNFCCC

Introduction

The sixth and the latest report by the Intergovernmental Panel on Climate Change (IPCC), an international body responsible for assessing the science related to climate change, unequivocally confirmed that human-induced climate change is affecting weather and climate extremes in all world regions.[6] In his keynote address at the Geneva Centre Conference[i], Dr. Ian Fry, the UN Special Rapporteur on the promotion and protection of human rights in the context of climate change, warned that human-induced climate change is the largest, most pervasive threat to humanity that the world has ever experienced.

Today, approximately 3.3 to 3.6 billion people live in contexts that are highly vulnerable to climate change.[7] The past eight years have been the eight warmest on record globally, fueled by ever-rising greenhouse gas concentrations and accumulated heat.[8] Most recently, on 5 September 2023, scientists confirmed that the summer of 2023 was the hottest on record – and by a large margin.[9] From frequent extreme-weather events, such as intense heatwaves, devastating wildfires, increasing floods, cyclones and typhoons, as well as extreme cold, to the longer-term effects of rising sea levels, growing temperatures, ocean acidification, glacial retreat, soil salinization, forest degradation, loss of biodiversity, desertification and drought, climate change is altering the world's ecosystems and jeopardizing the right to a safe, clean, healthy and sustainable environment for all people, but particularly for the most vulnerable groups.

Meanwhile, as stated in the latest IPCC Synthesis Report, world leaders have, so far, utterly failed to take sufficient action to protect people and the planet from the accelerating climate crisis.[10] Concerted international action on climate, which would promote gender equality and meaningful participation of climate-vulnerable stakeholders, such as *inter alia*, women, Indigenous Peoples, children and youth, is urgently needed. Furthermore, as confirmed by the IPCC, climate action needs to be implemented with a rights-based approach, which would lead to more sustainable outcomes.[11]

According to UNICEF, to achieve climate justice, human rights must be linked with development and climate action.[12] This includes a people-centered approach and ensuring representation, inclusion, and protection of the rights of those most affected by climate change. Pursuing climate justice means holistically addressing social injustice, gender injustice, economic injustice, intergenerational injustice and environmental injustice, and acknowledging their cross-cutting nature in order to ensure that new injustices are not created due to climate action measures.[13]

While the climate emergency harms all people, pervasive patriarchal norms and practices constrain women, undermining their capacity to adapt and respond resiliently.[14] Building on its previous research on the subject matter[15], the present publication will address gender-differentiated impacts of climate change and the role of women as agents of change in the context of climate change and environmental degradation. It will also focus on the disproportional impacts of climate change on children's rights and specifically address the role of Indigenous Peoples' knowledge and practices in the context of climate change mitigation, adaptation and loss and damage.

The present report will also provide a brief overview of how the United Nations human rights mechanisms have addressed climate change and human rights in the past years, an analysis of the main linkages between climate change and human rights, with a special focus on women's and children's rights, an overview of the most recent UNFCCC discussions and trends, particularly as related to women, children and Indigenous Peoples, and will conclude with some recommendations. An annex, which is a compendium of over 40 examples of indigenous practices in the context of climate mitigation and adaptation, is offered at the end of the report.

---

[i] Here and throughout the text, the reference is made to the conference entitled *"Environment, Climate Change and Women and Children's Rights: Challenges, Perspectives and the Role of Indigenous Peoples"*, held by the Geneva Centre for Human Rights Advancement and Global Dialogue (hereafter, the Geneva Centre) at the United Nations Office in Geneva and online, on 6 September 2023.

I. Recent Developments on Climate Change and Human Rights Agenda at the UN Human Rights Council and Treaty Bodies

Following the adoption of the United Nations Framework Convention on Climate Change (UNFCCC) in 1992, the international community has increasingly recognized that climate change was not solely about emissions reductions but also had an important human rights dimension. Adoption of the Paris Agreement, the first universal legally binding climate change agreement to make explicit references to human rights, was a significant milestone in this regard.

Offered below is a short overview of some of the recent positive steps implemented by the United Nations Office in Geneva, particularly at the UN Human Rights Council and Treaty Bodies level.

1. United Nations Human Rights Council

Mandated by annual resolutions on climate change and human rights since HRC resolution 10/4.[16], analytical studies, panel debates and interactive dialogues tackled a wide range of specific issues such as migration, gender, the rights of the child, the rights of older persons, among others.[17] A new study by the HRC Advisory Committee on the impact of new technologies intended for climate protection on the enjoyment of human rights is to be presented during the 54th session of the HRC, while the topic of ensuring livelihood resilience in the context of the risk of loss and damage is scheduled to be addressed at the HRC Annual Panel discussion in September 2024.

The UN Human Rights Council in Geneva is also a key mechanism for civil society engagement, as, unlike many other major intergovernmental bodies, the HRC is relatively accessible to civil society actors. NGOs that do not hold ECOSOC consultative status can contribute to the overall work of the HRC and its mechanisms in a number of meaningful ways[18] and have often demonstrated effective engagement, especially when joining forces among society actors in working groups and coalitions.

> *"In its recent resolutions about climate change, the Human Rights Council has mandated OHCHR to produce a series of reports covering a wide range of issues including on gender equality, migration, children's rights and the rights of people in vulnerable situations. These reports have made it very clear that the worst impacts of climate change often fall on those least responsible and with limited resources to withstand them. This is unjust, untenable, unsustainable, and entirely preventable."*
>
> *Mr. Todd Howland, Chief of the OHCHR Development, Economic and Social Issues Branch, delivering a Keynote Address at the Geneva Centre conference*

Recognition of the Right to Clean, Healthy and Sustainable Environment

In October 2021, the UN Human Rights Council adopted a landmark resolution 48/13, which marked the historical recognition of access to a clean, healthy and sustainable environment as a universal right. This right, already contained in the constitutions, laws, policies and regional agreements of at least 156 States[19], includes other recognized rights such as "the rights to life, to the enjoyment of the highest attainable standard of physical and mental health, to an adequate standard of living, to adequate food, to housing, to safe drinking water and sanitation and to participation in cultural life, for present and future generations" [20]. In July 2022, Member States of the UN General Assembly also recognize this right in resolution 76/300[21], largely based on HRC resolution 48/13.

The Global Coalition of civil society, Indigenous Peoples, social movements, and local communities, a diverse coalition of more than 1350 entities from 75 countries across the world, played an instrumental role in advocating to the UN and its Member States for the recognition of the right to a clean, healthy and sustainable environment.[22] For this vital work, in July 2023, and a year after the adoption of resolution 76/300, the Coalition was awarded the United Nations' highest human rights honor – the prestigious Human Rights Prize.

Special Rapporteur on human rights and climate change

Another notable achievement is the establishment by the HRC, in October 2021, of a long-awaited mandate of Special Rapporteur on the promotion and protection of human rights in the context of climate change, following the adoption of the HRC resolution 48/14.[23]

Dr. Ian Fry, the first-ever Special Rapporteur has identified six important thematic priorities to follow during his mandate : human rights in the context of mitigation, adaptation, loss and damage, and financial actions to address climate change; climate change displacement; climate change legislation, litigation and the principal of intergenerational justice; corporate accountability with respect to human rights and climate change; just transition for workers in industries that contribute to climate change; and new technologies associated with climate change mitigation on human rights.[24]

Since the beginning of his mandate, Dr. Fry made several key recommendations, including one for the development of an optional protocol to the Convention relating to the Status of Refugees to define and give legal protection to persons displaced across international borders due to climate change.[25] Divergent opinions remain on the terms to define persons displaced across international borders due to climate change, and on appropriate international legal approaches to address their rights. Specialized international agencies such as the IOM and the UNHCR expressed reservations against extending refugee legal protection to persons internationally displaced due to climate change.[26]

The forthcoming report of the Special Rapporteur is going to address enhancing climate change legislation, support for climate change litigation and advancement of the principle of intergeneration justice.[27] As announced by Dr. Fry himself during the Geneva Centre conference, it will make the recommendation for all States to provide open standing for children and Indigenous Peoples to appear before courts and defend their rights to a healthy environment, free from the adverse impacts of climate change.

Special Procedures addressing human rights and climate change

Under the mandate of Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment alone, eighteen thematic reports have been issued since the establishment of the mandate in 2012, including, inter alia, on climate change in 2016, on children's rights and the environment in 2018, on safe climate in 2019, and, most recently in 2023, on women, girls and the right to a clean, healthy and sustainable environment, and on the catastrophic consequences of investor-State dispute settlement for climate and environment action and human rights.[28] [29]

The UN Special Rapporteur on the rights of Indigenous Peoples also consistently brings attention to the negative impact of the climate crisis on the rights of Indigenous Peoples, and the paramount role that their knowledge plays in fighting against climate change and the loss of biodiversity.

2. United Nations Treaty Bodies: CEDAW and CRC

Committee on the Elimination of Discrimination against Women (CEDAW)

In 2018, the CEDAW Committee adopted its General Recommendation No. 37, highlights the steps necessary to achieve gender equality and reinforce the resilience of individuals and communities globally in the context of climate change and disasters.[30] It also intends to contribute to coherence, accountability and the mutual reinforcement of international agendas on disaster risk reduction and climate change adaptation.[31]

As Ms. Nahla Haidar, Vice-Chairperson of the CEDAW and ICJ Commissioner, reminded in her statement at the Geneva Centre Conference, women's human rights are promoted and protected by the CEDAW at all stages of climate change and disaster prevention, mitigation, response, recovery and adaptation. In her presentation, Ms. Haidar reaffirmed the General Obligations of the States Parties, including those related to effective mitigation and adaptation to the adverse effects of climate change; the adoption of targeted laws, policies, mitigation and adaption strategies and allocation of adequate budgets; taking specific steps to address discrimination against women in the fields of disaster risk reduction and climate change; ensuring that climate change and disaster risk reduction measures are gender responsive and sensitive to indigenous knowledge systems; and ensuring the right of women to participate in all levels of decision-making in climate change policies and programs.

Finally, the most recent CEDAW's General Recommendation No. 39, also clarified that the States Parties ensure their laws and policies address the specific impacts of climate change on Indigenous women and girls and that they have equal opportunities to meaningfully and effectively participate in decision-making related to the environment, disaster-risk reduction and climate change.[32]

Committee on the Rights of the Child (CRC)

During its 93rd session in May 2023, the Committee on the Rights of the Child adopted its General Comment No. 26 on children's rights and the environment with a special focus on climate change.[33] During the consultation process, the Committee received 16,331 contributions from children from 121 countries[34] and more than 170 written submissions from States, United Nations agencies, national human rights institutions, non-governmental organizations, children's organizations, and independent experts. It reaffirmed that the effects of climate change, including water scarcity, food insecurity, vector-borne and waterborne diseases, air pollution and physical trauma linked to both sudden- and slow-onset events, are disproportionately borne by children.[35]

For the first time, the General Comment explicitly recognized the right to a clean, healthy and sustainable environment as both a standalone right itself and necessary for the full enjoyment of a broad range of children's rights.[36]. The General Comment also recognized intergenerational equity and the interests of future generations, stating that governments have a responsibility for foreseeable environmental threats.[37]

As highlighted by Mr. Todd Howland, Chief of the OHCHR Development, Economic and Social Issues Branch at the Geneva Centre conference, the General Comment also emphasizes children's agency. Around the world, children and youth are playing a lead role in pushing for environmental justice, and society only stands to gain from the meaningful and informed participation of children and youth in environmental decision-making as well as their effective access to justice.

II. Interlinkages between Human Rights and Climate Change

The triple planetary crisis of climate change, biodiversity loss and pollution cause untold human rights harms on a continuous basis, disproportionately affecting people in already vulnerable situations. It has long been established by international mechanisms, including the Intergovernmental Panel on Climate Change Climate and the Human Rights Council, that climate change has a negative impact on the enjoyment of a range of human rights, including, among others, the rights to life, health, food, safe water and sanitation, adequate housing, self-determination, development, work, freedom from violence, sexual exploitation, trafficking and slavery, as well as cultural rights. One of the main findings from the recent report by the Australia-based Institute for Economics and Peace, which analyzed ecological threats in 228 independent states and territories, is that current levels of ecological degradation continue to substantially worsen, thereby intensifying a range of human rights challenges as well as forcing people to migration.[38]

Right to life: For millions of people worldwide, climate change already constitutes a severe threat to the enjoyment of the right to life, the supreme right which is the prerequisite for the enjoyment of all other human rights. As acknowledged in 2018 by the Human Rights Committee's General Comment No. 36 on the right to life, environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy human rights, including the right to life.[39] According to the Health Data Explorer, launched at COP27 by the Lancet Countdown and the Climate Vulnerable Forum, a group of 58 developing countries highly vulnerable to climate heating, unabated climate change is likely to cause 3.4 million deaths per year by the end of the century.[40]

Right to food: While armed conflicts and global crises have undermined food availability, increasing extreme weather and climatic events are known to be the biggest structural threat to global food and nutrition security. The interlinkage between climate change and food insecurity was specifically recognized in the Human Rights Council resolution 40/7.[41] Climate change is said to affect the four components of the right to food – namely, its physical and economic accessibility, availability, adequacy and sustainability, in particular in sub-Saharan Africa and Southern Asia, – in different and related ways.[42] Further, in his 2023 report, the UN Secretary-General concluded that, given the catastrophic impact of climate change on food production, the only way to limit climate-related hunger, stunting and starvation was for States and relevant stakeholder groups, including businesses, to take immediate action to fulfil their respective human rights obligations and responsibilities with respect to climate action and food security.[43] Agriculture, in particular, is gaining attention in the international negotiations, while being increasingly recognized as one of the major global human-made greenhouse gas emissions (GHGs) contributors, and therefore one of the key climate change catalysts. Beyond the emissions originating from agricultural operations, today's dominant industrial food system generates GHGs through the production of agricultural inputs such as fertilizers and pesticides, global food transportation, LULUC , food processing, and generation of waste, all in all, being responsible for about a third of all global GHGs.[44] It is noteworthy that in his recent report, the UN Secretary-General, referred to the importance of both reducing the impacts of climate change on the full realization of the right to food, as well as cutting the greenhouse gas emissions created by food systems.[45] Apart from that, the Secretary-General has acknowledged the disproportionate impact of the climate crisis on those who have contributed the least to its occurrence, including women, children and persons with disabilities, particularly in developing countries, as well as rural populations and Indigenous Peoples.[46]

The Intergovernmental Panel on Climate Change has also reported that climate change will lead to increasing pressure on food production and access, particularly in vulnerable regions, thereby undermining food security and nutrition.[47] Encouragingly, at the COP27, the States Parties adopted a decision on establishing – based on the outcomes of the Koronivia joint work on agriculture –[48] the four-year Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security, which recognized the fundamental priority of safeguarding food security and ending hunger, and the particular vulnerabilities of food production systems to the adverse impacts of climate change.[49] It also urged States Parties and other stakeholders to promote sustainable agriculture, including by strengthening the role of Indigenous Peoples and local communities, in particular women and youth, with a view to eradicating hunger and ensuring food security.

Right to adequate housing: The right to adequate housing is well established under international law and includes the following minimum criteria: security of

tenure, availability of services, affordability, habitability, accessibility, appropriate location and cultural adequacy.[50] These elements remain as relevant as ever in the light of the new challenges that the climate crisis poses, as both frequent extreme-weather events and slow-onset events threaten the habitability of housing and human settlements. Such events may inflict harm on housing, rendering existing accommodation unsuitable to living due to constantly changing conditions, drive climate migration and may even require the permanent relocation of entire communities.

In his most recent thematic report, the UN Special Rapporteur on adequate housing focused on the climate crisis and just transformation. Notably, he called for a recognition of an additional core element of the right to adequate housing: sustainability. In his view, sustainability implies that States should not realize the right to adequate housing in a way that continually undermines the environment and contributes to climate change but instead reduce housing's own carbon footprint, and ensure housing's resilience against climate events.[51] This interpretation integrates the right to a clean, healthy and sustainable environment as well as intergenerational justice and the principle of inclusivity with a responsibility to ensure adequate housing for all and for future generations.

Right to water: According to 2022 data by the Institute for Economics and Peace, globally, more than 1.4 billion people live in regions experiencing severe levels of water stress, of which at least 20 per cent do not have access to clean drinking water.[52] In recent decades, the adverse impacts of climate change have severely affected the availability of water resources, including drinking water for human consumption and water for agricultural use. Extreme weather events, aggravated by climate change, hinder access to water sources. At the same time, conflict over water has been increasing, with the number of incidents where water was a trigger of fatal conflict increased by 300 per cent since 2000, particularly, in Yemen, Iraq, Somalia and Sudan.[53]

As climate change and environmental degradation continue to undermine clean water availability, exacerbating water scarcity and contaminating water supplies, Indigenous Peoples suffer a disproportionate impact due to their direct dependence on aquatic ecosystems. As it will be addressed in the following chapters, other populations in situations of vulnerability, such as women and children in many world regions, also experience significant impacts due to inadequate access to clean water and sanitation facilities.

Climate-induced migration and displacement: The number of people displaced within and across international borders due to climate change is rapidly rising, owing both to slow onset- and extreme weather events affecting all world regions. There is an increasing number of reports on people displaced across international borders due to climate-related events; however, the actual number of such people is unknown. The UN Special Rapporteur on the promotion and protection of human rights in the context of climate change, who dedicated his first thematic report to the Human Rights Council to the topic of human rights of persons displaced across international borders due to climate change, estimated that this number could be in the hundreds of thousands annually, or more.[54] He also noted a certain "institutional reluctance, unwillingness or political aversion" to enumerating the people crossing international borders due to climate change.[55]

Nonetheless, there is a broad understanding that displacement and migration related to climate events mostly occurs internally,[56] although this can be due to a research bias and a lack of data allowing to only capture part on a longer migration journey.[57] According to the data provided by the Internal Displacement Monitoring Centre, from the 40.5 million persons internally displaced in 2020, 30 million were displaced owing to weather-related events, ranging from droughts to cyclones – and this figure keeps rising.[58] Non-extreme events exacerbated by climate change can also be a factor of displacement, particularly in combination with other social, political, economic and demographic factors that engender vulnerability.[59] People are also forced to migrate from rural areas due to loss of livelihoods and fresh water. The latest Groundswell report released by the World Bank, having modelled different climate and mobility scenarios, concluded that without concrete climate and development action, by 2050, sub-Saharan Africa, South Asia and Latin America could witness up to 140 million people moving within their own countries to escape the slow-onset impacts of climate change.[60]

There is a difficulty, particularly in circumstances of slow onset climate events, to conceptualize climate change-related human mobility as either adaptation strategy or displacement, which has great bearing on the design of legal and policy responses.[61] The UN Special Rapport on human rights in the context of climate change argued that the term "adaptation" tends to underplay the fact that people, rather than adapting, are escaping the consequences of climate change.[62] To enhance knowledge on the impact of slow onset events, the UNFCCC Executive Committee of the Warsaw International Mechanism mobilized the science community to publish a special issue under the Elsevier journal Current Opinion in Environmental Sustainability providing a collection a papers on several issues related to this topic, including migration.[63]

As people are forced on the move, they face numerous human rights violations. This is particularly the case for women and children, who make up the majority of displaced people.[64] In his report, the Special Rapporteur on human rights and climate change concluded that there is an urgent need to provide better legal protection for this people, and made a number of recommendations on how the legal deficit can be resolved, including, notably, a specific recommendation for the development of an optional protocol to the Convention relating to the Status of Refugees to protect the human rights of persons displaced across international borders due to climate change.[65] At the same time, others argue that, given the lack of empirical evidence underpinning key assumptions about movement, an international treaty solution may not provide the necessary targeted outcomes and shift the attention from more immediate, practical responses.[66]

An often-forgotten aspect of the climate and mobility nexus are also those who cannot or choose not to move, often designated as "trapped", "left behind" or "immobile" populations.[67] Children in particular are disproportionately affected among such populations, and often face far worse risks than other migrants.

1. Women's Rights and Gender Action in the Context of Climate Change

The planetary climate and environmental crisis affect everyone, everywhere, but not equally. Harmful gender norms, stereotypes, biases, discrimination, and structural inequalities exclude women and girls from enjoying a fair share of nature's benefits and participating in environmental decision-making, while imposing disproportionate impacts related to the climate emergency, biodiversity collapse and pervasive pollution.[68] A number of reports have already demonstrated that women and men are experiencing the effects of climate change differently, contribute to environmental degradation and conservation in unique ways, and face different levels of preparedness and capacity to cope with disasters.[69] Rigid gendered social norms surrounding work, mobility, household decision-making authority, and comparatively limited access to natural resources, healthcare, education, food, water, sanitation, technology, information and decision making place women and girls at greater risk during climate-related disasters.[70]

A. Gender-differentiated impacts of climate change on human rights

An empirical study conducted by UN Women demonstrated that climate change related factors such as drought episodes, increases in temperatures, aridity and flooding, among others, all had detrimental effects on gender outcomes. [71] Gender inequality coupled with climate change poses a particular challenge for those in situations of vulnerability or in conflict settings and those facing multiple intersecting forms of discrimination. Moreover, eighty per cent of people displaced by climate change are women[72], and gender-based violence against women and girls is known to become more acute in the wake of displacement, conflicts and natural disasters. Gender inequalities limit women's access to resources such as food, water, land, technology, education, health services, housing, social protection and employment, as well as the control that women and girls have over decisions governing their lives. As a result, women and girls are more likely to be exposed to disaster-induced risks and losses relating to their livelihoods, and less able to adapt to changes in climatic conditions, underlined Ms. Nahla Haidar at the Geneva Centre Conference. The enjoyment of certain rights is particularly undermined, including the already mentioned on the previous pages right to food, water and housing.

*Right to **food**:* Scholars state that climate change affects the nutritional quality of food by reducing the production, storage and consumption of fruits, vegetables, nuts, seeds and fish.[73] It leads to heat stress, resulting in yield losses and impaired product quality, as well as increasing amounts of food loss and waste, which, in turn, means increased workloads for women.[74] Lack of nutritional food, particularly for pregnant and breastfeeding women, can negatively affect their physical and reproductive health and wellbeing. Besides, women are more likely to suffer from undernourishment and malnutrition, being the first to go hungry and often bearing the main responsibility for feeding their families.[75]

Climate change is one of main threats to food security for women. Women are disproportionately dependent on natural resources but their right to land and secure tenure, enshrined in core human rights treaties, is not adequately protected. Across all 68 countries reporting to the Sustainable Development Goal indicator 5.a.2, 47

percent offered poor protection for women's land rights.[76] Despite recent legal reforms at national level, women at the local level still struggle to claim their rights to land or are sometimes simply not aware of it. [77] The right to food of women is further undermined by environmental degradation and pollution of water and land caused by the harmful practices of private and public entities. According to the Working group on this issue of discrimination against women, most of the victims of land dispossession by extractives industries and other corporate abuse and violation of human rights are women.[78]

*Adequate **housing** (CEDAW Article 14h):* Women are more likely to live in inadequate housing that is susceptible to climate-related events such as floods, storms, avalanches, earthquakes and landslides. During climate events, women and girls are also vulnerable as they are less likely than their male counterparts to obtain secure accommodation and often face harassment, discrimination and violence in shelters.[79] Furthermore, camps for internally displaced persons rarely accommodate the gender-specific protection needs of women and children, who may put off going to the toilet until it is dark and they can find privacy, exposing themselves to the increased risk of sexual violence.

*Safe **water** and **adequate sanitation** (CEDAW Article 14h):* In 2022, UN Women reported that lack of access to clean water causes the death of approximately 800,000 women and girls annually.[80] Women and girls are primarily responsible for water collection in 80 per cent of households that lack water on their premises.[81] During these walks women and girls are often exposed to injuries, stress, increased risks of violence and other hazards. For example, the Special Rapporteur on the rights of Indigenous Peoples reported the case of Maasai women who walk five kilometers to fetch water, at the risk of attack by wild animals; a situation aggravated by climate change and pollution.[82] Additionally, young girls who collect household water often miss school, which jeopardizes their right to education.

In cases of floods or droughts, which can cause difficulty obtaining potable water, women often limit their water intake to ensure sufficient supply for men and children. Water pollution can also harm the reproductive health of women and girls, as lack of access to clean water increases the risk of pregnancy complications and death during childbirth.[83] While healthy menstrual care and hygiene is central to women and girls' ability to live dignified lives, one in three women and girls lack access to safe toilets, which exposes them to shame, psychosocial stress, potential violence and elevated risks of disease.[84]

*Right to **health** (CEDAW Article 12)*: Climate change and disasters influence the prevalence of new and re-emerging diseases, and the susceptibility of women to disease is heightened as a result of inequalities in access to food, nutrition and health care. Women and girls are also disproportionately vulnerable to the adverse health effects of toxic substances, suffering heart disease, respiratory illnesses, cancer and adverse reproductive health impacts. As Ms. Liliana Andonova, Professor and Director of the Centre for International Environmental Studies, Geneva Graduate Institute, stated at the Geneva Centre Conference, SDG objectives related to advancing women's health and reducing maternal, infant and childhood mortality, have been among the most difficult to attain despite progress made, particularly in low-income countries, in conflict zones, and among underprivileged groups at large. Achieving the goals of advancing the health, wellbeing and rights of women, she said, was both intricately linked to climatic changes and, at the same time, a necessary and essential condition for stronger resilience of women as well as families and societies at large.

*Right to **freedom of movement** (CEDAW Article 15)*: Climate-induced extreme weather events already result in significant population displacement both within states and across borders. Women migrants face a heightened risk of gender-based violence, including trafficking, discrimination and harassment in transit, at borders and in shelters. Furthermore, in situations of post-disaster displacement, access to maternal health services, contraceptives and hygiene products may not always be provided or prioritized, once again undermining women and girls' right to health.

*Right to live free from **gender-based violence**:* Women face an increased risk of gender-based and sexual violence in situations of disaster and heightened stress. It is also well documented that gender-based violence increases during times of war and conflict[85] – while the climate change, biodiversity and pollution crises increase the risk of conflict, especially in fragile States that are ill-equipped to confront these environmental crises.[86] In her 2022 report to the UN General Assembly, Special Rapporteur on violence against women and girls, its causes and consequences concluded that climate change was – and undoubtedly would continue to be – the most consequential phenomenon that dictates new and existing forms of gendered inequities, profoundly shaping the ways in which violence against women and girls manifests itself across societies and in different contexts, including in non-disaster, mid-disaster and post-disaster settings.[87] Violence against women and girls needs to be addressed as part of the climate

emergency, she reiterated, for which stakeholders need to fulfil procedural and substantive obligations under international human rights law and development of commitments to ensure equitable, non-retrogressive, non-discriminatory, and sustainable action against the gendered impacts of climate change.[88]

*Rights to **work** and social protection (CEDAW Article 11):* Women and girls often have the primary duty for cultivating, gathering and preparing food and collecting fuel and water, placing an additional burden on them in times of climate-related resource scarcity. At the same time, the additional responsibilities of caregiving and domestic work often increase for women following disasters. Furthermore, women are disproportionately represented in the informal economy,[89] meaning they are more vulnerable to climate disasters and other climate related events, and do not benefit from social protection.[90] At the same time, adaptation and mitigation interventions toward a greener economy have the potential to further entrench gender inequalities when gender-sensitive planning is not adequately carried out.[91] Social protection is increasingly recognized as a central to building resilience to climate change.[92] In this context , integrating climate considerations in gender-responsive social protection programmes has the potential to alleviate gender inequalities in the face of climate change and support the active role of women as agents of change.[93]

During her presentation at the Geneva Centre Conference, Ms. Nahla Haidar listed more ways in which women are disproportionally affected by climate change, including higher mortality and morbidity levels in situations of disaster, higher risk of poverty due to economic inequalities, lack of recognition of the specific accessibility needs of diverse groups of women in protective infrastructure, the increased likelihood of domestic violence, early and/or forced marriage, trafficking and forced prostitution during and following disasters, and the particular exposure to risks associated with disaster and climate change of women and girls in situations of conflict.

As noted in several international documents, including CEDAW General Recommendation No. 38, situations of crisis exacerbate pre-existing gender inequalities and compound the intersecting forms of discrimination against, among others, Indigenous women, Afro-descendent women and women belonging to ethnic, racial, religious and sexual minority groups, displaced, migrant, or refugee women, women living in armed conflict, women with disabilities, women from rural or low-income communities, as well as pregnant, breastfeeding, unmarried, adolescents or older women. [94] In addition, the failure to develop and implement gender-transformative disaster risk reduction and response plans has led to early warning systems, shelters and relief programs neglecting the particular needs of diverse groups of women.

Women with disabilities: Women with disabilities are reportedly particular vulnerable to climate change, severely affected in their livelihoods, including food security and income generation options, health and economics.[95] The impacts of climate change are likely to further exacerbate their vulnerability in these areas, as well as the sociocultural, attitudinal, communication, physical and policy barriers they face. In case of an emergency or disaster situation, single women with disabilities often face obstacles in accessing evacuation, in particular if they are accompanied by their children.[96] Women and girls with disabilities are also at heightened risk of violence, including sexual violence, exploitation or abuse, during emergencies, especially in emergency shelters. Moreover, in many cultural contexts, conservative belief systems may result in constraining the movement of women with disabilities, including limiting who may assist in their evacuation and where they can stay during emergencies, placing them at increased risk of harm from the adverse effects of climate change.[97]

Rural women and women from impoverished communities: Women are known to comprise 70 per cent of the world's poor, with rural women faring worse than rural men and urban women and men on every development indicator.[98] It is often women from the poorest communities, who are most reliant on natural resources for their livelihoods and who have the least capacity to respond, who are bearing the brunt when climate-related natural hazards strike, particularly in the case of droughts, landslides, floods and hurricanes.

***Pregnant women**:* In post-disaster settings, pregnant and postpartum women, with their distinct needs for maternal health care, food, water, sanitation and hygiene, face unique health risks due to the many

physiologic and social changes that occur as a result of pregnancy. For example, pregnant women are particularly vulnerable to temperature extremes and are especially susceptible to dehydration, which releases labor-inducing hormones.[99] Other climate-related exposures, including infection with water- and vector-borne diseases and post-disaster emotional distress, may lead to adverse pregnancy and newborn health outcomes, including spontaneous abortion, low birth weight, preterm birth, increased neonatal death, dehydration and associated renal failure, malnutrition, diarrhea, and respiratory disease.[100]

Older women: As demonstrated in the 2021 Analytical Study by the OHCHR, older women face particular risk of vulnerability to climate impacts due to their physiological and physical differences, social norms and roles, and gender discrimination and inequities in access to resources and power.[101] They also experience higher rates of poverty than older men, aggravated by climate change. In Sub-Saharan Africa, Asia and Latin America, older women in particular continue to rely on agriculture as smallholders.[102] They and face disproportionate health risks, and have higher rates of mortality and other health complications from extreme heat events than any other demographic group.[103] As the OHCHR Study also reports, in some countries, older women may even be blamed for extreme weather through accusations of witchcraft or sorcery, and face violence or exclusion as a result.[104] As climate change pushes more and more people to migrate to cities or into situations of displacement, evidence is mounting that shows older people often stay behind.[105]

Women and girls belonging to sexual minority groups: Discrimination and social stigmatization endured by women, girls and LGBTQ+ persons during climate-related disasters increase risks of gender-based violence and limit access to vital relief services. For example, research on the impact of disasters on LGBTQ+ people in the United States demonstrated that they experience barriers to proper healthcare, difficulty accessing food and water rations, and securing emergency shelters after being displaced by environmental disasters.[106] Women belonging to sexual minorities may also face barriers to safe migration routes, widening inequalities and religious persecution in the aftermath of environmental catastrophes.[107]

Indigenous women: Indigenous women often face discrimination which hinders their access to lands and resources, limits development opportunities and restricts their participation in decision-making processes. As it will be discussed in the following sections of this report, Indigenous women also play a vital role in protecting biodiversity, and are the custodians of traditional practices. Rapid climate change-induced changes to ecosystems and biodiversity may affect the application of traditional knowledge and negatively impact Indigenous women's livelihoods, as well as the cultural practices, health, prosperity and resilience of their communities.[108]

B. The role of women as agents of change

In the pioneering resolution 48/13 on the human right to a clean, healthy and sustainable environment, adopted in 2021, the Human Rights Council emphasized that States must fully respect human rights obligations, including those related to gender equality. Later, in its resolution 76/300, adopted in 2022, the General Assembly also recognized the importance of gender equality, gender-responsive action to address climate change and environmental degradation, the empowerment, leadership, decision-making and full, equal and meaningful participation of women and girls, as well as the role that women play as managers, leaders and defenders of natural resources and agents of change in safeguarding the environment.[109] At the UNFCCC level, the enhanced Lima work program on gender and its gender action plan, adopted at COP25 and amended at COP27, set 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 by all stakeholders at all levels, as well as women's full, equal and meaningful participation in all UNFCCC process.[110]

While, in written policy, women are encouraged to play a prominent role in climate and environmental action, in practice, their voices often remain underrepresented in political and decision-making processes related to climate change and human rights at the national and international climate discussions, leading to policies that do not adequately address their specific rights and needs. Women should be better acknowledged as powerful agents of change, making valuable contributions to climate change adaptation and mitigation. It is also important to stress that women are not inherently more vulnerable than men, nor should they be stereotyped as such. As it was underlined by a number of panelists at the Geneva Centre conference, vulnerability is constructed socially, economically and culturally through the distribution of power, wealth and resources – and can and should be deconstructed. Many women, including indigenous women, are already leaders in environmental action and staunch defenders of the right to land, water, nature, environment, and communities.

> *"The persistence of gender discrimination, inequality, stereotypes, and patriarchal institutions inherited from colonialism continue to hinder women's access to, control and use of resources and information to address the effects of climate change in a timely manner."*
> *Ms. Gina Cortés Valderrama, Co-Focal Point of the UNFCCC Women and Gender Constituency, speaking at the Geneva Centre Conference*

There is a growing body of literature and mounting evidence of research on the connections between gender equality and women's empowerment, on the one hand, and environmental conservation, management and degradation, on the other. However, there are still important gaps in official gender- and sex-disaggregated statistics regarding many environmental issues on national, regional and global levels.

A recent UN-Women report argued that the existing environment monitoring frameworks often do not include population measures and, when they do, do not allow for sex-disaggregated data collection.[111] The same unfortunate tendency is apparent in climate-related policies, too. For example, in 2021, only 22 per cent of States included data disaggregated by sex in their nationally determined contributions under the Paris Agreement[112], and in 2022 only 30 countries mentioned girls in their NDCs.[113] Simultaneous disaggregation by dimensions such as income, sex, age, race, ethnicity, migration status, disability, geographic location and other characteristics relevant to national contexts, required to identify those most impacted by climate change, disasters and biodiversity loss, as well as capturing the differentiated economic impact of climate change, disasters and biodiversity loss on women and men is even more rare. At the same time, indicators are essential to adequately capture the gendered drivers of environmental degradation, the differentiated impacts of climate change and disasters on women and men, existing gendered differences in vulnerability and capacity to cope, as well as women's specific contributions to environmental preservation, climate change mitigation and adaptation.[114]

The lack of gender- and sex-disaggregated data regarding environmental issues renders women, girls and their needs invisible to policymakers and limits their chances of participating in recovery mechanisms.[115] The absence of women from decision-making bodies may also limit the gender focus of medium-term policies and strategies, such as those related to climate change mitigation, natural resource conservation and just transitions to sustainable production and consumption patterns. Filling data gaps on the gender-environment nexus, including on climate change and disaster risk reduction, is a key step in informing policies and programs to achieve gender equality and empower women and girls.[116]

Good Practices

In Annex to his 2023 report on women, girls and the right to a healthy environment, Dr. David Boyd, the UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, specifically addressed a diverse array of hundreds of good practices

from more than 100 States in the recognition and implementation of women's and girls' human right to a clean, healthy and sustainable environment. The report included, inter alia, a number of measures to empower women and girls to be transformative agents of change.[117] The participation of women and girls in designing and implementing climate and environmental policies have proven to result in better outcomes.

As Dr. Boyd reiterated in his statement at the Geneva Centre conference, positive correlations exist between women in positions of political authority and lower carbon footprints, higher rates of environmental treaty ratification, and stronger environmental standards. As the good practices chronicled in his report demonstrate, when empowered to take action in defense of their human right to a healthy environment, women and girls have tremendous capacity and potential. Furthermore, as the Special Rapporteur Boyd's report concluded, when women and girls are intentionally, specifically and equitably targeted by interventions as rightsholders and equal partners, rather than being viewed and treated solely as vulnerable persons, environmental and climate actions are more likely to be effective and to contribute to gender equality.[118]

An inspiring example of women taking the lead in calling for more ambitious climate action is the ongoing process *'Klima Seniorinnen Schweiz and Others v. Switzerland'*, which is also the first case of climate change litigation before the European Court of Human Rights where all domestic remedies have been exhausted.[119] A group of senior women in Switzerland founded the association KlimaSeniorinnen Schweiz ("Senior Women for Climate Protection Switzerland"), arguing that, compared to the population as a whole, older women are exposed to a significantly increased risk of disease and death as a result of extreme heat waves. The group then filed a legal request with the authorities, claiming that the Swiss authorities are failing to fulfil their duty to protect them as required by the Swiss Constitution and by the European Convention on Human Rights, and advocating for more ambitious climate policies and mitigation measures.[120] The lawsuit eventually made it to the Grand Chamber of the European Court of Human Rights in Strasbourg, where a public hearing was held on 29 March 2023. The judgement is expected to be delivered at the earliest at the end of 2023.[121]

Good practices in the implementation of women's and girls' right to a clean, healthy and sustainable environment may also include gender-transformative law and policy frameworks explicitly recognizing women's and girls' right to a clean, healthy and sustainable environment. At the regional level, the 2021 Escazu Agreement is amongst the most pioneering legally binding environmental and human rights agreements of the last 20 years, with its Article 7 (10), in particular, calling State Parties to establish conditions that are favorable to public participation in environmental decision-making processes and adapt them to, inter alia, gender characteristics of the public. [122]

An encouraging finding was made in the 2019 research by World Meteorological Organization and Graduate Institute. They reported that climate-induced unemployment and difficulties may determine women and men to engage in different new activities, leading to new roles in the family and in the community.[123] In particular, women may start taking leadership positions along their male counterparts as they engage in alternative livelihoods and income-generating activities.

In its previous publication on women's rights, climate change and environment, the Geneva Centre for Human Rights Advancement and Global Dialogue noted that many environmental initiatives that place women at the heart of their operationalization experience persistent challenges out of fears that either, in the long-term, structural inequalities will corrupt good practices and profits will be captured by men, or, when women do get involved in transition processes, their time may be less valued.[124] Implementing measures that ensure full access to environmental information and education can empower women and girls not only to actively participate in climate and environmental decision-making processes but also lead to a positive shift in gender dynamics, promoting greater diversity in environmental leadership roles, sustained in the long term.

2. Children's Rights and Climate Change and Environmental Degradation

Climate change is already having devastating impacts on children. In August 2021, in its Children Climate Risk Index UNICEF reported that one billion children – or nearly half of the world's 2.2 billion children – lived in 33 countries classified as being at extremely high risk to the impacts of climate change.[125] The report further estimated 820 million children being highly exposed to heatwaves, 400 million children being highly exposed to cyclones, 330 million to riverine flooding, 920 million to water scarcity, 600 million to vector-borne diseases, and 2 billion to air pollution.[126] The Children's Climate Risk Index concluded that almost every child on earth – more than 99 per cent – was exposed to at least one of the major climate and environmental hazards, shocks and stresses.[127]

Owing to their unique metabolism, physiology and developmental needs, children are physically more vulnerable to the direct and indirect impacts of climate change and environmental hazards, especially in the developing world.[128] A bleak environmental outlook poses new and rising threats to children, with climate change acting as a force multiplier on other threats to children's health, nutrition and personal security.[129] The current climate crisis is leading to an unprecedented challenge concerning children's rights. Even as the living standards and overall well-being of children have shown improvement over the past decades, they are also growing up in a world characterized by rising threats, dangers, and uncertainties. These challenges, originating from climate change and environmental deterioration, not only cast a shadow over their future prospects but also have the potential to reverse the progress that has been achieved so far.[130]

The unequal weight carried by children because of age-related vulnerabilities and adverse discrimination linked to the impacts of climate change is further exacerbated by economic and political systems that marginalize their interests. Indeed, research has long demonstrated that during climate change-induced natural disasters and extreme weather events, women and children were up to fourteen times more likely to die than men[131], owing to differences in socioeconomic status and access to information.

According to the UNICEF's recent report analyzing prospects for children in the polycrisis, the climate crisis constitutes the biggest structural threat to global food and nutrition security[132], while extreme weather and natural disasters, inadequate access to clean water, sanitation and hygiene, air pollution, vector-borne diseases, and resulting psychological trauma also cause some of the other substantial impacts of climate change on children. Additionally, climate-induced problems in agriculture, such as poor harvest, land degradation, loss of livelihoods or livestock can elevate the risks of domestic violence, child labor, early marriage, and trafficking in persons.

Compared with adults, children are physically more vulnerable to both sudden-onset climate events and slow-onset processes, and more susceptible to toxic environmental hazards and stresses, as well as to diseases that proliferate with climate change, such as malaria and dengue, and waterborne diseases that emerge as a result of floods. UNICEF refers to a stunning figure of nearly 90 per cent of the diseases associated with climate change being borne by children under the age of five, while every year 525,000 children die from diarrhea, often caused by contaminated water.[133] Children are also said to be disproportionately affected by morbidity and mortality linked to climate and environmental factors, which is further amplified for children living in developing countries.[134]

To identify effective solutions, children's unique vulnerability should continuously be addressed. It is also important to better understand the multiple risk factors affecting children, as well as the evolving interplay between those risk factors.[135]

A. Impacts of climate change on specific children's rights

Ms. Nathalie Fontanet, State Councilor at the Republic and Canton of Geneva, in her Opening Remarks at the Geneva Centre Conference, reminded that the first Declaration of the Rights of the Child, also known as the Geneva Declaration of the Rights of the Child, nears its centennial. Conceived by the British woman

Eglantyne Jebb who, together with her sister, Dorothy Buxton, was involved in the fight against famine and misery following the First World War, the Declaration was drafted by the International Save the Children Union in Geneva on 23 February 1923 and ratified by the League of Nations in 1924.[136] It is the first international human rights document that specifically addressed children's rights, discussing the well-being of children and recognizing their right to development, assistance, relief and protection. On 10 December 1959, the date which will later be adopted as the Universal Children's Day, the UN General Assembly adopted the Declaration of the Rights of the Child, based on the structure and contents of the 1924 original. This Declaration was subsequently followed in 1989 by the UN Convention on the Rights of the Child, the most widely ratified international human rights treaty in history, which sets down the distinct set of rights that apply to children and young people under the age of 18, in addition to the human rights provided in the UDHR and other human rights treaties.

To date, children's rights continue to be neglected in the context of climate policies and action, while the climate crisis undermines the effective enjoyment of most of the rights enshrined in the Convention. Some of the examples of these rights, and the illustration of the lack of their due respect, are summarized in the table below.

Article 6: ***Right to life, survival and development***[137]
Children are more susceptible to injury and death during and in the aftermath of extreme weather events, exacerbated by the climate crisis.

Article 7: The right to birth registration and ***nationality****.* This right may, too, be undermined, for example, if children become stateless as a result of having to leave their country of nationality in the context of climate change-induced migration.

Article 8: Protection and preservation of ***identity****.* Climate change impacts may carry non-material implications, including for children's rights to agency, identity and culture.

Articles 9–10: ***Family relations*** *and the right not to be separated from one's parents against one's will.* Climate change already causes displacement of millions of people, and is likely to keep forcing children and/or their parents to move, often separating entire families.

Article 12: Children have a right to have their ***voices heard*** *on issues that affect them.* As CRC General Comment No. 26 clearly states, the children's voices are a powerful global force for environmental protection, while their views add relevant perspectives and experience with respect to decision-making on environmental matters at all levels.[138] Even from an early age, children can enhance the quality of environmental solutions, for example, by providing invaluable insights into issues such as the effectiveness of early warning systems for environmental hazards. And yet, although one of the most sizeable and vulnerable groups affected by climate change, children tend to have the least participation and representation in political and decision-making processes at all levels.

Article 24: Right to the ***highest attainable standard of health****.* Committee on the Rights of the Child has identified climate change as one of the biggest threats to children's health.[139] Due to an increased incidence of infectious diseases and malnutrition, children are likely to suffer from a loss of healthy life years, while access to hospitals can be disrupted due to climate change related factors.[140] In addition to physical health risks, children exposed to the impacts of climate change can also experience mental health challenges.[141]

Article 27: Right to ***adequate housing*** *and standard of living.* Both extreme and slow-onset events create unsafe living conditions for children. Today, 350 million to 500 million children are already estimated to live in informal settlements,[142] often in conditions that constitute a pervasive violation of their right to adequate housing and other human rights. In the context of climate-related disasters, severe and irreparable damage affecting housing, shelter, and essential infrastructure is a recurrent phenomenon. Damage to housing can endanger children's well-being, particularly if emergency shelters are not readily available.

Article 28: Right to ***education****.* Climate change-related disasters, as well as climate-induce displacement, may keep children out of school. At the same time, repeated schooling disruptions due to climate change induced disasters may increase chances that education is stopped for good.

Article 30: Right to ***indigenous culture and language****.* In case of climate change-induced displacement, children are separated from their homes and may not develop a relationship to their cultural heritage. Not having a strong sense of their own cultural history prevents children from building a positive cultural identity. The connection between land, culture and identity is of particular importance to Indigenous children, whose lifeways are inextricably linked to their land. Impacts on their natural environment, and potential separation

from their homeland can carry profound implications for their specific rights to enjoy and learn about their culture, language and beliefs, and to preserve their collective identity, including as custodians of their traditions for future generations.[143]

*Article 31: Right to **recreation and play**.* Climate change threatens the ability of children to access safe spaces for recreation and play, including within schools' premises, as schools themselves risk to be destroyed or damaged because of climate change impacts.

*Articles 19, 32-35: Protection from **violence, abuse and neglect**; **child labor**; **sexual abuse** and exploitation; child abduction, sale and **trafficking**.* Climate change increases the risks of violence, abuse and neglect, especially when children and their families are displaced. In the case of climate-induced migration, the conditions are likely to be chaotic, presenting heightened risks of exposure to potential violence, exploitation, and abuse, as well as increased risks of abduction and trafficking.

*Article 38: Prohibition to take part **in war and armed conflicts**.* Although the direct causality between climate change, migration and conflict is yet to be established, there is increasing consensus that climate change can influence the likelihood of conflict due to its role in exacerbating social, political and economic stressors.[144]

The following section addresses, in more detail, children's right to education, as well as their right to health, food and adequate water and sanitation.

Right to education

According to UNICEF, children with lower levels of educational attainment are more vulnerable to environmental shocks and stresses.[145] Confronted by climate shocks, educated children, families and communities are often more empowered and adaptive in their disaster preparedness, response and recovery, while in financially insecure families with lower levels of education, children are more likely to be removed from school in order to help with domestic tasks or provide additional means of income when disaster strikes. Girls are generally the first to be removed from schools and bear the majority of the burden of supporting their mothers in maintaining the household.[146]

Additionally, climate change and environmental degradation affect children's ability to go to school, through their impact on health and well-being. Extreme weather events not only can prevent children from physically accessing school facilities but also negatively impact their cognitive function and learning outcomes.[147] Furthermore, following climate-related disasters, schools might be repurposed to serve as shelters for communities that have lost their homes, or students might be relocated to areas that are too distant to make attending school feasible.

Right to health

In 2017, WHO listed climate change as one of the greatest new threats to children's environmental health.[148] Air pollution, contaminated water and environmental toxins are among the most significant risks for children globally, and climate change is exacerbating the myriad health risks that children face. Climate change is also likely to damage or disrupt physical access to essential health services and clinics. According to UNICEF, around 26 per cent of deaths among children under five are due to modifiable environmental factors.[149] Children who have a reduced capacity to regulate their body temperature are also particularly vulnerable to extreme heatwaves.

Children's direct and indirect exposure to pollution and toxic substances, such as lead, through air, ground, food or water can significantly harm their health, development and well-being. Exposure to electrical and electronic waste, pesticides, and toxic metals are also of particular concern. Hundreds of hazardous chemicals have been found in children due to in utero exposure, compromising their fetal development.[150]

Furthermore, evidence confirms that children experience eco-anxiety in reaction to climate change, with serious mental health outcomes that may include depression, anxiety, and extreme emotions like sadness, anger, and fear.[151] Children from vulnerable communities, or those who have strong ties to the land, such as Indigenous children, have been identified as being particularly emotionally impacted by climate change.[152]

Right to food

Malnutrition, which contributes to nearly half of all deaths in children under five,[153] has increased in many world regions due to sudden losses of food production related to more extreme weather and climate events, which reduce access to food with dietary diversity. [154] According to the latest IPCC report, children are among those that are most affected by the impacts of climate change on food accessibility.[155] With increasing frequency and severity of droughts, floods and severe weather, food security is compromised, threatening the level of nutrition children can access. The catastrophic events can damage critical infrastructure and prevent the adequate distribution of food to the affected regions. Climate change can also undermine food security through slow-onset changes to precipitation and temperature, which can alter familiar agricultural practices that communities have relied on for generations.[156] The availability of food may be greatly restricted both during and in the aftermath of slow and sudden-onset climate-induced events, which can, in turn, represent an additional trigger for migration.

Importantly, a child who lacks adequate nutrition becomes particularly vulnerable to climate and environmental shocks and stresses, being more likely to face even more severe impacts, such as stunting and wasting.[157] Stunting, in particular, can have life-long implications for physical, cognitive and reproductive health throughout a child's life, and it is irreversible. [158]

Right to water

Children need to consume more food and water per unit of body weight than adults.[159] At the same time, over one-third of children globally are already highly exposed to water scarcity, which is likely to worsen because of climate change-induced droughts, floods, severe weather events, and contamination.[160] The deprivations can have both immediate and lifelong impacts on children's health but the risks from water scarcity extend beyond threats to their physical well-being. Children also experience emotional distress, mounting tensions within households, the impacts of water-related conflict, and increased workloads.[161]

In addition, there are important gender dimensions as a result of existing inequities in access to safe water and sanitation that could make girls more vulnerable to climate and environmental hazards. For example, in some African countries reduced school attendance by girls can be associated with water fetching duties, often in unsafe conditions, a burden which is mainly placed on women and girls, who collect 80 per cent of water for households globally.[162] In Ethiopia, approximately 20 per cent of girls miss school to assist with water fetching, in comparison to just 5 per cent of boys.[163]

Furthermore, safe water, sanitation and hygiene, including potable water supplies, effective drainage systems and working latrines are essential for coping with the impacts of climate change, as children without access to these provisions are more prone to climate-related diseases, both vector-borne and water-related ones, such as diarrhea, which are among the biggest killers of children.[164]

B. Disproportionate Impacts on Children in Vulnerable Situations

Certain groups of children are even more affected by the negative impacts of climate change. This includes children with disabilities, indigenous children and children from minorities groups, as well as children from low-income communities, migrants and displaced children, and other children in vulnerable situations. As addressed earlier, girls in particular face heightened risks due to climate change. Disproportionate impacts are already felt by children living in developing countries, especially those in geographically vulnerable areas, such as riparian and low-lying coastal areas, arid regions, high mountains, polar zones and other delicate ecosystems.[165] As the latest UNICEF report reveals, children in Africa are among the most affected, with children in 39 out of 49 African states being at high or extremely high risk of the impacts of climate change, based on their exposure and vulnerability to cyclones, heatwaves and other climate and environmental shocks, and access to essential services.[166] At the same time, as Dr. Octavian Bivol, Deputy Regional Director for Europe and Central Asia at UNICEF pointed out at the Geneva Centre Conference, around half of children in Europe and Central Asia – a double the global average – were also exposed to

high heatwave frequency, according to an analysis of the latest available data from 50 countries published in July by UNICEF. [167]

Girls: Situations of crisis exacerbate gender inequalities, affecting girls disproportionally. Girls are more likely to be pulled from school to perform household chores, such as fetching water, but also cooking and care for family members, when households are affected by climate change stresses. According to Malala Fund estimates, by 2025, the climate emergency is expected to prevent at least 12.5 million girls from completing their education each year.[168] Furthermore, to counteract the economic effects of climate change on livelihoods, girls may be sold into child marriage, which exposes them to adolescent pregnancy and damages their health, education and future prospects. Girls' security and bodily integrity can be undermined by climate change and related displacement. Evacuation to shelters that lack safe facilities for girls has been documented to heighten risks of all forms of sexual harassment and violence, as well as human trafficking.[169]

Indigenous children: Indigenous Peoples, who rely upon climate-sensitive ecosystems for livelihoods as well as spiritual and cultural practices, are particularly threatened by the degradation of land, water and biodiversity. Many indigenous children live in impoverished communities, which affects their capacity for climate adaptation. Indigenous children may also be negatively affected by climate change mitigation efforts, such as projects related to the production of biofuel or hydroelectric power, which have sometimes resulted in the displacement of entire indigenous communities without their free, prior and informed consent.[170]

Children with disabilities: The negative impacts of climate change can exacerbate inequities already experienced by children with disabilities, who are more likely to live in poverty and to experience physical abuse, while at the same time having less access to educational and medical services.[171] In addition, the negative impacts of climate change on children can likely lead to an increased risk of new health-related disabilities.[172] In emergencies, including climate change-induced emergencies, children with disabilities may suffer higher rates of abuse, neglect and abandonment, while insufficient accessibility considerations in evacuation, response and relief efforts caused by the exclusion of disability issues from disaster planning, as well as barriers to access to food, drinking water and medical relief in the aftermath of disasters renders children with disabilities particularly susceptible to injuries and diseases.[173]

Children on the move: As climate change-related hazards are becoming more frequent and severe, climate-induced displacement is increasing rapidly. In the most extreme cases, all inhabitants of certain small island States and low-lying coastal areas might need to be relocated. When sudden or slow-onset disasters result in large-scale human movement, children may be separated from their cultural heritage and face barriers in access to schools, adequate health-care facilities and other essential infrastructure.[174] Children travelling alone or separated from their parents can be particularly at risk of emotional, physical and sexual violence.[175] The circumstances of climate change-related displacement such as the separation of families, confusion and desperation can combine to create a perfect storm in which child trafficking can thrive.[176]

Climate-related displacement and migration have been associated with a range of psychological impacts, including loss of or separation from family members or care givers, experiencing traumatic events, exposure to risks, and adjusting to a new environment.[177] A 2017 study by the UNICEF United Kingdom, one of the very few studies specifically exploring children's mobility in the context of climate change, has revealed that displaced children and their families may lose not only shelter, but access to health care, education, livelihoods, as well as social services and networks, religious community, political autonomy, and the security and identity associated with a sense of home.[178]

Even though children constitute a significant proportion of migrants and refugees, a noticeable gap exists when it comes to addressing children in scientific and policy discussions on climate-related mobility. There seems to be a serious lack of legal frameworks to articulate the specific needs and protection of children

who move due to the impacts of climate change, as well as policy documents that make more general reference to children's specific needs, rights and vulnerabilities.[179]

C. Intergenerational equity and the rights of future generations

Intergenerational equity and the rights of future generations are fundamental principles of international environmental law and sustainable development recognized by the Convention on Biological Diversity, Indigenous legal traditions and, most recently, Maastricht Principles on the Human Rights of Future Generations, adopted on 3 February 2023. Specifically, Paragraph VII of the Maastricht Principles' Preamble acknowledges that "children and youth are closest in time to generations still to come and thus occupy a unique position, and have an important role to play, within this transition to long-term, multigenerational thinking. Accordingly, their perspectives and participation in decision-making with respect to long-term and intergenerational risks must be accorded special weight".[180]

And yet, children are consistently overlooked in the design and content of climate policies and related processes as the climate policies often do not address the specific risks that children face as a result of climate change.[181] The 2019 UNICEF review of 160 Nationally Determined Contributions found that only 42 per cent of all NDCs directly mentioned children or youth, while only 20 per cent made specific reference to children. Just three countries mentioned the rights of children, and a further five countries referred to human rights in the context of intergenerational equity or future generations, while almost one-quarter of NDCs did not mention children or youth or child-relevant terms such as education at all.[182]

Due to their limited legal and political standing compared to adults, children frequently lack the means to amplify their voices, or accountability mechanisms to ensure their concerns are addressed at the climate change governance level. Young environmental human rights defenders are likely to encounter linguistic barriers, overly bureaucratic and administrative processes that are difficult to understand, lack of information, dialogue and partnership with public authorities, often tokenistic participation, stigma and intimidating or patronizing behaviors towards them. They depend on adults and grapple with power disparities and gaps in knowledge, including on climate change. In this regard, national advocacy bodies, such as for example, Commissions for Future, or Children's commissions, already operational in some countries, may provide an example of positive practices of invaluable platforms for children to have their needs and priorities considered.[183]

Despite all the structural difficulties, children- and youth-led initiatives have garnered increasing prominence over the past decades. For its 2023 Global Outlook, UNICEF conducted a series of youth foresight workshops to better involve young people in the analysis of trends and provide spaces for stronger intergenerational dialogue. The results of one of the workshops demonstrated that even if some young people are becoming disillusioned, they still feel that the creation of different forums and groups that offer opportunities for young people's participation at various levels is, overall, a positive trend.[184] However, mainstreaming the needs of children and youth does not equal participation. Often, children and youth representation, when included, is rather tokenistic and used as a public relations exercise, with young people's voices not considered when the actual decisions are made.[185] The '*youthwashing*' – using young people's voices in a performative way without paying attention to them or acting on concerns raised by this group[186] – during international events is very common, with no meaningful inclusion of children encouraged and ensured through. According to UNICEF, not responding to children and young people's concerns, undermines the efficacy, strength and power of policies and the response to the climate crisis itself.[187] Appropriate response to climate change will require major decisions and changes to the entire

economic system, as well as systematic addressing how progress is measured and how stakeholders are held accountable.[188]

Climate litigation

At the same time, children and young people are increasingly reclaiming their agency in the face of the climate crisis, and even taking governments to court for their failure to meaningfully abate climate change, arguing that states have a responsibility under domestic and international law to protect, respect and fulfil the rights of children against worsening climate change and laying emphasis on intergenerational equity.[189] The climate litigation cases generally focus on insufficient efforts to reduce carbon emissions and meet climate commitments; insufficient efforts to implement mitigation and adaptation measures; or specific regulatory approvals that are expected to have dramatic climate impacts.[190] Despite a worrisome trend in which youth-focused cases are dismissed due to a lack of justiciability, there are also positive examples of court hearings with favorable outcomes. Most recently, in August 2023, in a landmark climate litigation case, Montana First Judicial District Court ruled in favor of sixteen youth plaintiffs, aged between five and

> *"Please don't leave this crisis alone to children. Your action today will decide our future tomorrow. We are already the victim of climate crisis. I don't want my future generations to face the same consequences again. We will continue to fight until we achieve our goals. We are unstoppable. Another world is possible and the change is possible."*
> *Ms. Licypriya Kangujam, an 11-year-old climate activist and founder of 'The Child Movement', speaking at the Geneva Centre Conference*

twenty-two years, who alleged the state violated their right to a "clean and healthful environment" by allowing fossil fuel development without considering its effect on the climate.[191]

In 2019, sixteen children also filed a petition with the Committee on the Rights of the Child using the Third Optional Protocol against five major emitters, Argentina, Brazil, France, Germany and Turkey, for their failure to protect children's health and well-being in their responses to climate change.[192] The petitioners argued that children were among the most vulnerable to the life-threatening impacts of climate change, physiologically and mentally, and would bear the burden of these harms far more and far longer than adults.[193] This was the first climate litigation case put before the Committee, and its decision did establish that a State party can be held responsible for the negative impacts of its carbon emissions on children outside the emitting country's jurisdiction, albeit the case was found to be inadmissible for failure to exhaust domestic remedies.[194]

General Comment No. 26 adopted by the UN Committee on the Rights of the Child in 2023, will likely encourage a new wave of climate and environment-related litigation cases around the world and could become a pivotal tool to hold governments accountable for insufficient and inadequate climate and environmental action.[195] As the General Comment observed, litigation is often a lengthy process, and supranational bodies generally require the exhaustion of domestic remedies prior to filing a complaint. In this regard, its recommendation for States "to explore options for shifting the onerous burden of proof from child plaintiffs to establish causation in the face of numerous variables and information deficits" is very timely and relevant.[196]

Climate education

Climate change is the defining challenge of the next generation and failure to comprehend it would mean an inability to effectively respond to it. However, despite the recognition of the importance of global climate change education, it is mentioned only in 40 NDCs out of 133, or in less than a third, and none are calling for compulsory climate change education as a strategy to achieve countries' climate mitigation and

adaptation targets.[197] According to the UNICEF research, on average, 77% of young people in high-income countries reported having heard of climate change and being able to define it correctly, while the share was just 23% on average in low and lower-middle income countries which are, generally, most affected.[198]

Children around the world lack not only the necessary environmental and human rights education but also the knowledge and skills on how and where to engage in climate and global environmental decision-making processes and forums. Not all education systems teach climate change, and where they do, what children are taught about climate change, including how to prepare and respond to certain types of disasters, may not be relevant for their context.[199]

Climate change is also affecting the relevance of the skills schools provide, as education systems need to provide children with exactly the skills and training they need to address the challenges of the future.[200] Climate change curriculum could include a special focus on the science behind climate change; disaster response, adapted to local contexts; contemporary environmental challenges; equity, intersectionality as well as the role of civic responsibility and social cohesion. A universal curriculum should promote a common language for the next generation to discuss climate change, helping to foster a sense of solidarity between the children and young people to address climate change together.[201] Moreover, children's capacity to understand the language that is being spoken within the UNFCCC circles should be strengthened, so that they could use this knowledge in their interventions and when co-leading on certain negotiated topics.[202]

Brookings recent report on green learning agenda argues that the values that drive the domination and exploitation of the natural world, which fuel climate change, are the same values that drive the oppression, exploitation, and violence against vulnerable groups, particularly girls and women.[203] It is, therefore, even more important to 'climate proof' the education sector and to produce information that is accurate and that would empower children to become climate-conscious citizens, actively involved in climate adaptation and mitigation.[204]

III. The Role of Indigenous Peoples' Knowledge and Practices in Climate Change Mitigation and Adaptation

1. Vulnerability of Indigenous Peoples to climate change-induced risks and disasters

There exists no single universally agreed definition of Indigenous Peoples, and the use of the term "Indigenous Peoples" remains contested in several Asian and African states. In some countries, Indigenous Peoples can be called, inter alia, tribal peoples, First Nations, hill tribes, hunter-gatherers, pastoralists, ethnic or minority groups, aboriginal people and natives. The scope of the present report is based on the self-identification of Indigenous Peoples, in line with the United Nations Declaration on the Rights of Indigenous Peoples.

According to the most recent estimates by the International Organization of Labor, globally, Indigenous people represent a population of over 476 million individuals, who are dispersed in more than 90 countries across seven socio-cultural regions.[205] The majority of them, more than 335 million, are located in Asia and the Pacific, while Africa has the second highest number of Indigenous people, with 77.9 million, followed by 54 million in Latin America and the Caribbean, 7 million in North America and 0.4 million in Europe and Central Asia.[206] Even if accounting for only 6.2 per cent of the world population, Indigenous people protect an estimated 22 per cent of the planet's surface and 80 per cent of the remaining terrestrial biodiversity[207], and, therefore, have a critical role to play in safeguarding ecosystems, maintaining biocultural integrity and ensuring human, multispecies and environmental justice and equity.

The United Nations Permanent Forum on Indigenous Issues, the UN's major body for matters relating to the concerns and rights of the Indigenous Peoples worldwide, has long noted that Indigenous Peoples, who rely on the environment and the resources therein for their survival, are the first to feel the dire consequences of climate change-induced risks and disasters.[208] These impacts include loss of land and resources, human rights violations, discrimination, marginalization and unemployment, with Indigenous women and children being particularly at risk. Most Indigenous communities are vulnerable to the host of socioeconomic harms associated with tenure insecurity, including poverty, food insecurity, economic hurdles, and limited access to educational opportunities.[209]

The Intergovernmental Panel on Climate Change, the United Nations body responsible for assessing the science related to climate change, in its Sixth and latest report issued in 2022, also reiterated that Indigenous Peoples are among the most vulnerable to climate change.[210] The Arctic communities were said to be particularly affected, experiencing changes, such as ocean acidification and loss of permafrost. Indigenous communities from remaining socio-cultural regions[ii] are exposed to other hazards, such as extreme flooding, fires and severe droughts. The situation is particularly difficult for remote communities with high levels of endemism, whose territories face severe disruption.[211]

Furthermore, for the first time ever, in its Sixth Assessment Report, the IPCC recognized the ongoing legacy of colonialism on Indigenous Peoples, underlining that the vulnerability of Indigenous Peoples is exacerbated by the intersection of multiple constructions that produce inequity and by the marginalization that historically has excluded them.[212] The report also highlighted daunting impacts of the climate change on the rights of Indigenous Peoples: malnutrition, food insecurity, water scarcity, mental health effects, livelihoods losses, rising mortality and morbidity from climate-sensitive diseases, among others.[213]

[ii] The seven socio-cultural regions are Africa; Asia; the Arctic; Central and South America and the Caribbean; Eastern Europe, Russian Federation, Central Asia and Transcaucasia; North America; and the Pacific.

2. Indigenous scientific knowledge

Indigenous Peoples' communities have hundreds of years of experience in collecting and applying local environmental information and are proving to be an important source of climate history and baseline data. Indigenous Peoples' traditional knowledge – transmitted across generations, often only in an oral form – refers to the knowledge and know-how accumulated across generations, and tested and adopted through millennia, which guide indigenous societies in their interactions with their surrounding environment.[214] It is already playing a valuable role for local-scale expertise and adaptive responses at the local level[215] and can further inform the processes of observation, adaptation and mitigation of climate change consequences as well as on addressing and minimizing loss and damage associated with climate impact.

The IPCC Sixth Assessment Report, as analyzed by the International Work Group for Indigenous Affairs, draws five main conclusions on the Indigenous Peoples' knowledge: it is crucial to the resilience of social-ecological systems; it is fundamental to risk reduction; it enhances the effectiveness of local adaptation measures, especially in forest contexts; it is a fundamental element of climate justice; and the involvement of Indigenous Peoples is a prerequisite for achieving sustainable food and water systems.[216]

However, as Dr. Pasang Dolma Sherpa, Executive Director of the Center for Indigenous Peoples' Research and Development, underlined while speaking at the Geneva Centre Conference, with a few exceptions, Indigenous Peoples are invisible as rights-holders, knowledge-holders and agents of positive change in national climate policies. Instead, they are usually featured as victims of climate change, or beneficiaries of climate change projects and funds.[217]

While the terminology "traditional knowledge" is widespread, the UN Special Rapporteur on the rights of indigenous peoples, in his 2022 report on Indigenous knowledge, strongly advised international organizations and States adopt the terminology "indigenous scientific and technical knowledge" in place of "traditional" or "customary" knowledge.[218] This change in terminology is in response to past approaches that viewed Indigenous Peoples' knowledge as inferior and unscientific, and fosters recognition that Indigenous Peoples' knowledge is based on observations and is contemporary and dynamic.[219] While the present report endorses this recommendation, it does not fully reflect the shift in terminology set out above, as it uses quotations that retain the terminology used in the cited texts.

A. Indigenous knowledge for climate mitigation and adaptation

Indigenous communities have accumulated sufficient knowledge of the ways in which the adverse impacts of climate change may be reduced through both mitigation and adaptation, while the loss and damage could be averted or minimized. Examples of traditional knowledge applied in mitigation efforts include agroecological and natural resource management approaches that reduce emissions and sequester carbon.[220] In the area of adaptation, there is also a long record of activities practiced by Indigenous Peoples, including resilient agricultural production, weather forecasting, combatting deforestation, and water management to improve resilience to droughts.[221]

Most, if not all, of the indigenous communities self-identify and function as integral parts of natural ecosystems. Their perspective and knowledge equip them to steward natural environments in ways that restore depleted terrestrial and aquatic ecosystems, manage and prevent fires and other natural disasters, avoid ecosystem degradation, facilitate the recovery of species, promote the early detection and management of alien invasive species, and monitor the health of their territorial lands and waters, thereby facilitating healthier biodiversity and a more sustainable way of life.[222]

Compelling evidence demonstrates that Indigenous Peoples are often more effective at protecting biodiversity and conserving natural ecosystems than governments.[223] Indigenous Peoples' knowledge is fundamental for developing sustainable solutions, which, in turn, will be most successful when they are context-specific and tailored to the ecological conditions of each particular region.

Examples of traditional Indigenous Peoples' practices used in climate change adaptation and mitigation[iii]

- climate monitoring and reporting;
- coastal marine management;
- development of sustainable livelihoods;
- documentation of traditional knowledge;
- forest management and conservation;
- preparedness and response and early warning systems;
- rainwater harvesting;
- traditional agriculture techniques;
- traditional fire management;
- diversification of resource base as a response to harvest failure risk;
- change of cultivated varieties and species in response to changes in climate patterns;
- change in hunting strategies to cope with a reduced population of some animal species;
- change in the timing of activities to adapt to changes in growing seasons and times of animal migrations;
- use of traditional management techniques to cope with scarce and climate-sensitive resources.[224]

Water management: In the worldviews of many Indigenous Peoples, water is life itself, and a common good that belongs to everyone and should be available to all. For centuries, Indigenous Peoples have developed participatory, holistic, and sustainable community water management systems, based on an integrated territorial vision and on deep respect and care for rivers, springs, lakes and wetlands. [225] Today, Indigenous Peoples can share valuable ways to address the global water crisis through their traditional practices, both in terms of the sustainable management of aquatic ecosystems and the democratic governance of safe drinking water and sanitation.[226]

Pastoralism: For many Indigenous Peoples, pastoralism represents both an economic activity and a cultural identity, whose crucial aspects are the interaction between people, animals and the environment. Pastoralism as a livelihood system can also enable people to cope with low productivity environments that are often characterized by climatic fluctuations.[227] UNESCO and UN University report provides an example of the importance of traditional knowledge for climate change adaptation among pastoral communities in the East African context, while also noting that traditional knowledge-based systems can be unintentionally undermined by external interventions.[228]

Agroecology: Defined by the Food and Agriculture Organization as "a holistic and integrated approach that simultaneously applies ecological and social concepts and principles to the design and management of sustainable agriculture and food systems"[229], agroecology encompasses production techniques derived from local experience that rely on traditional knowledge and draw upon immediately available resources.[230] According to the IPCC, agroecological approaches can support food security, nutrition and sustainability and strengthen resilience to climate change.[231] The UN Special Rapporteur on the right to food has also reported that agroecological approaches present a pathway to simultaneously address the climate crisis and safeguard the right to food.[232] Furthermore, applying agroecology methods encourages biodiversity preservation, the use of fewer polluting agents, and production of livestock and crops that are more nutritious and resilient to environmental shocks caused by climate change.[233]

Agroforestry: For Indigenous Peoples, forests are of crucial importance, not only economically and socially, but also to the survival of their cultural identity. Growing evidence shows that forests in Indigenous territories are far more sustainably managed than forests under other land uses.[234] The IPCC's 2019 Special Report on Land and Climate Change also recognizes that the traditional knowledge of Indigenous Peoples and their sustainable stewardship of the world's lands and forests are key to reducing global emissions.[235]

[iii] See the Annex to this report for more concrete examples of positive practices from all seven socio-cultural regions.

B. Indigenous women's knowledge

Indigenous women often serve as custodians of vital traditional knowledge and technical skills, including those related to weather patterns, natural resource management and food and agriculture.[236] Thanks to their intimate relationship of respect, responsibility and interdependency with their ancestral lands, the indigenous women can build their scientific knowledge, a vast resource for environmental protection and stewardship.[237] In addition, Indigenous women's in-depth knowledge of botany and animal species can enhance climate science and mitigate the catastrophic effects of climate change. They provide empirical observations and explanations of the natural world and highlight factors that climate scientists often fail to consider when adopting conservation, climate adaptation, and mitigation measures.[238]

> *"Indigenous women have been at the forefront of environmental conservation and have invaluable knowledge and expertise that can help build resilience and reduce greenhouse gas emissions. Their connection to the land and their traditional role in preserving biodiversity makes them an asset for climate adaptation plans."*
> *Ms. Nahla Haidar, Vice-Chairperson of the CEDAW and ICJ Commissioner, speaking at the Geneva Centre Conference*

Apart from that, Indigenous women play an integral and active role in farming, food production, preparation and preservation, crop identification, weather patterns prediction and seed selection and management, contributing to food security within their own communities and applying sustainable production strategies and distribution.[239] For example, across Africa, women seed custodians determine which of the seeds will do best in conditions they predict are about to unfold.[240] Families and communities rely largely on the women to make a correct assessment of both the weather patterns and the varieties of crops to cultivate – the refined ecological knowledge which becomes even more appreciated in the context of climatic instability. Reading the signs in the ecosystem requires careful observation and attention to detail, such as changes in the behavior of insects, plants, animals or birds, levels of moisture and patterns of rain or drought, as well as knowledge of the constellations and the relationship to the moon's cycle which have an important bearing on determining the seasonal cycles, rains and planting systems.[241] Indigenous girls learn these valuable skills from an early age, observing their mothers and grandmothers.

Despite the important role of indigenous knowledge held by women, its developing, transmitting, producing and applying has been hindered by racism, gender discrimination and violence, noted the Special Rapporteur on the rights of Indigenous Peoples in his 2022 report.[242] Besides, Indigenous women are often absent from decision-making processes, while international and national institutions overlook their contributions. Multiple intersecting forms of discrimination create barriers to women's development and use of their knowledge, including access to lands and resources, educational and employment opportunities, health care, political participation in environmental planning, and labor protections.[243]

Notably, the voices and experiences of indigenous women are often excluded from discussions and decisions about water management, as the vast majority of water-related laws and programs still fail to embody indigenous women's traditional knowledge and their cultural and spiritual values related to water, and do not guarantee their effective participation.[244] Indigenous women have traditionally occupied the role of water caretakers, including in cultural traditions and spiritual practices. In many indigenous cultures, the role of women as carriers and stewards of water is linked to their role as life-givers with a sacred mission to care for water for present and future generations. [245] Indigenous women protect aquatic ecosystems from pollution, care for the forests and plant trees and herbs to maintain the ability of the soil to absorb and retain water.

Indigenous women are also the water providers across many rural, agrarian settings around the world. They collect water which is used for a wide range of homestead activities, including human and livestock

consumption, cooking, cleaning, and sanitation, and have a wide range of strategies to obtain, purify, and preserve water.[246] Nevertheless, just as in communities of non-indigenous persons, even if indigenous women bear the burden of ensuring safe drinking water and sanitation, they rarely have a voice in decision-making on safe water negotiations.[247]

C. Ethical and responsible integration of Indigenous Peoples' knowledge

In her statement at the Geneva Centre Conference, Dr. Pasang Dolma Sherpa, Executive Director of the Center for Indigenous Peoples' Research and Development, shared some insights from her recent field visit to the Indigenous communities in Nepal, India and Pakistan as part of her ongoing study on Indigenous resilience to climate threats in South Asia. She reported a very low level of climate change awareness as most of the Indigenous communities she met still believed that the causes of climate change were due to the pollution of spring water, forest degradation and land grabbing. Dr. Sherpa also regretted the lack of legal recognition of Indigenous customary institutions and land tenure security, which is the basis for increasing Indigenous resilience to climate threats and contributing to sustaining a healthy environment.

The past few decades have seen an increased international recognition of indigenous knowledge and its significance for climate change. For the most part, however, it is still based on documentation of actions that indigenous communities are taking on their own initiative. Indigenous Peoples are willing to contribute their knowledge and experience, working collectively with States and other stakeholders. However, it is not sufficient to simply collect and document their knowledge and adaptation strategies. As the UN Special Rapporteur on the Rights of Indigenous Peoples, noted in his 2022 report on Indigenous women and scientific knowledge, the lack of legal recognition of the Indigenous knowledge is likely to lead to its being utilized, commodified, commercialized, exploited and benefited from through appropriation, reproduction and imitation, without the free prior and informed consent of the Indigenous Peoples concerned.[248] Even in the cases where legal protections exist through the intellectual property regime, the framework is rarely adequate, as the collective dimension of indigenous authorship and the object of protection fail to be taken into account, while Indigenous systems of knowledge are generally not recognized during the patenting process.[249]

It is paramount to remember that support for the very communities from which traditional knowledge is derived and sustained is an essential component of any strategy to promote and protect it. In this regard, implementation of the rights-based approach is both a legal obligation and the most equitable, effective, and efficient strategy available to protect the environment and biodiversity, as well as to scale up climate action. As Mr. José Francisco Calí Tzay, UN Special Rapporteur on the Rights of Indigenous Peoples, reminded in his statement at the Geneva Centre Conference, it is important to recognize and acknowledge that Indigenous Peoples are rights-holders and not stakeholders, who have a *sui generis* system of rights, which States and International Organizations must implement and respect. The policies and guidelines for Indigenous Peoples should always be aligned with international human rights standards. The UN Declaration on the Rights of Indigenous Peoples, adopted by the General Assembly in 2007, represents the minimum standard for protecting Indigenous Peoples' rights.

> *"As the development, application, preservation, and transmission of Indigenous Peoples' knowledge are inextricably linked to the way Indigenous Peoples use their territory, lands, and resources, one of the main threats to Indigenous knowledge is the loss and lack of recognition and protection of their rights to land, territory, and resources."*
> *Mr. José Francisco Calí Tzay, the UN Special Rapporteur on the Rights of Indigenous Peoples, speaking at the Geneva Centre conference*

While Indigenous Peoples' knowledge could greatly benefit strategies such as disaster preparation and response, environmental conservation, land-use planning, energy concerns, and climate education, the *sui generis* traits of the Indigenous knowledge and practices can also make it difficult to be replicated in foreign cultures and climates, as once traditional knowledge is shared outside of a community, it enters alien social and legal contexts.[250] There is, therefore, a need for comprehensive frameworks and policy measures for governance of climate-specific Indigenous knowledge, which would take into account its collective dimension and the fact that it may be sensitive.

Until then, every effort should be made to avoid both benign neglect and well-intentioned but misguided endeavors to generalize Indigenous Peoples' knowledge in order to encourage its wider adoption, being particularly cautious for it to never be replicated without the appropriate context.[251] An equitable and horizontal collaboration and co-production should be aimed for, with Indigenous Peoples' protocols and, indeed, their rights fully respected and strengthened throughout the process. The authority and ways of life of Indigenous Peoples must also be acknowledged, while the latter should be able to determine their priorities regarding the use and management of natural resources and the environment.

IV. UNFCCC and Upcoming COP-28: Main Issues and Ways Forward

1. Key Current Issues under Discussion

A. Just Transition: *Fossil Fuels Phase-Out and Rights-Based Approach*

As consistently stressed by scientists, independent experts, civil society groups and children and young people alike, the only step to reduce emissions and ensure a just transition is a rapid, equitable, full and funded phase-out of *all* fossil fuels, and focus on meaningful, human rights-based, people-centered climate action, that includes Indigenous Peoples rights and is backed by sustainable financing.[252]

Despite these calls, however, fossil fuels remain the key drivers of the climate crisis. The year 2022 was a year of record profits for the oil and gas sector worldwide[253], which happened amid a global energy crisis triggered by Russian Federation's aggression in Ukraine. These record profits are synonymous with increased carbon dioxide emissions which, in turn, continue to exacerbate the climate catastrophe. Besides, fossil fuels are not only at the root cause of the climate crisis, but their extraction, production and related infrastructure are often associated with human rights abuses and violations. At COP27, the State Parties to the UNFCCC and its Paris Agreement were cautious not to express a clear intention to phase out all fossil fuels, and that language was not reflected in the final conference decision.[254] At the recent negotiations at the 58th session of the Subsidiary Bodies to the UN Framework Convention on Climate Change (informally referred to as Bonn intersessionals or SB58), the State Parties also failed to act in alignment with the scientific consensus on the need for an urgent, full, funded, and equitable phase-out of all fossil fuels, including coal, oil, and gas, and petrochemicals.[255] While some Parties have joined the *Beyond Oil and Gas Alliance*[256], an initiative launched at COP26, in calling for a phase-out of fossil fuels in a fair and equitable manner, other stakeholders continue advocating for a range of contradictory climate solutions. Such solutions include, inter alia, carbon removals, carbon capture and storage, carbon capture and utilization, carbon markets and offsets, as well as geoengineering. Positioned as genuine, these new initiatives often lack scientific proof, generally distract and delay other pertinent discussions and may carry even more risk and uncertainty than drilling for oil or gas, prolonging reliance on fossil fuels.[257] Overall, abatement of fossil fuels is taking an increasingly large space in negotiations and mitigation plans at the international level.

Despite the collective acknowledgement that emissions from fossil fuel production and use should be tackled urgently, many State Parties and other stakeholders perceive this as a hinderance to countries' right to development[258] and to the same extent, the right to development as a human right. Article 4, paragraphs 3 to 5 of the Paris Agreement acknowledges differences in domestic circumstances and states that while Parties' pledges should "refect the highest possible ambition, refecting its common but diferentiated responsibilities and respective capacities, in light of diferent national circumstances."[iv] while "Developed countries should take the lead in assuming economy-wide overall absolute emission reductions targets".[v] Fossil fuels are an important source of revenue for resource-rich countries and provinces, reaching up to 40 per cent in some.[259] The social cost of transition does not affect everyone equally and may trigger social and economic consequences that compound with the destabilizing effect of climate change. For instance, according to the ILO, it could lead to the loss 6 million jobs in industries related to fossil fuels and land use but would create an estimated 24 million jobs by 2030.[260] Least developed countries, a number of which possess untapped fossil energy sources, have limited capacities to grow sustainably and address poverty and inequalities. The transition to more sustainable energy systems in line with a human rights-based approach therefore requires measures to extend the fiscal space. Several options can be considered by governments such as taxing natural resource extraction and reallocating revenues to the wider population; phasing out subsidies for fossil fuels and increasing social

[iv] Paris Agreement to the UNFCCC, Art. 4, para. 3

[v] Paris Agreement to the UNFCCC, Art. 4, para. 4

spending ; swapping fossil fuel subsidies to low-carbon energy; or the creation of new financial mechanisms to bolster private and public investment in sustainable energies.[261] It is important to remember that, despite best efforts domestically, a just transition necessarily requires an international approach.

Ms. Gina Cortés Valderrama, a co-focal point of the UNFCCC Women and Gender Constituency, emphasized while speaking at the Geneva Centre Conference, that just transition does not mean the shift from the extraction of one resource to the other, nor the promotion of solutions that foster individual options without challenging global thinking. Instead, just transitions are required from a basis of care economy and feminist analysis in which instances of power are shaken and redistributed. It is, therefore, paramount to include a more robust language on fossil fuel phase-out during the upcoming COP28, while also working towards a just transition to a green economy, that would be gender-responsive, challenge long-embedded colonial structures, empower vulnerable groups, benefit local communities, and secure Indigenous Peoples' rights and livelihoods.

B. Global Stocktaking process: *from Ambition to Gender-Just and Rights-Based Action*

The Global Stocktake (GST), a process which began at COP26 to assess collective progress toward achieving the goals of the Paris Agreement and inform future Climate Action[262], will come to an end at the upcoming COP28, which has already been informally dubbed as "GST COP". The technical assessment phase, preceded by two years of roundtables and discussions, as well as two other GST technical "dialogues" (in Bonn in June 2022, and in Egypt in November 2022) was concluded in June 2023 at SB58 Bonn Climate Conference. During the last technical dialogue, States focused on the main themes of mitigation, adaptation, finance flows and implementation and support, while some references to human rights and social dimensions of the Paris Agreement were also addressed during these talks.[263]

In its synthesis report issued in September 2023, the co-facilitators on the technical dialogue reiterated that, while since its adoption, the Paris Agreement has inspired near-universal climate action, the global community is not on track to meet the long-term goals set out in the Paris Agreement.[264] The Paris Agreement, through its GST, provides the basis for informing further ambition in enhancing action and support to respond to the climate crisis, and the first GST comes at a critical moment for accelerating collective progress and ensuring more action, on all fronts and by all actors.[265]

COP28 will feature the final phase of the Global Stocktake, during which the key findings of the technical phase will be presented and discussed. It is in Dubai, that talks will be shifting into the political phase, and it is important that these references be translated into an ambitious, gender-just and rights-based outcome, which will subsequently guide the revision of the States Parties' National Determined Contributions.

C. Loss and Damage: *a Fund to Bring Justice*

"Loss and damage" is a general term used in UNFCCC climate negotiations that refers to the irreversible adverse harms and costs incurred due to a changing climate, beyond those impacts to which adaptation is possible.[266] Adopting a human rights-based approach can be an important strategic tool for policymakers to strengthen the international response on loss and damage.[267]

In 2022, at COP27, the Loss and Damage Finance Facility was created, thanks to incessant advocacy by small island states, Least Developed States and civil society, and a dedicated Transitional Committee was mandated to make recommendations on how to operationalize it. The discussions on this issue are expected to continue at the upcoming COP28, at a ministerial level. The Transitional Committee will be informed by the First Glasgow Dialogue that took place in March 2023 and the Second Glasgow Dialogue that took place in Bonn SB58.[268]

The establishment of a Loss and Damage Fund has every potential and should become a pivotal step toward a just future, allowing communities to recover effectively from losses they are enduring due to a crisis for which they bear no responsibility. As the Transitional Committee dives into crucial aspects such as community access and modalities of the fund, the challenge remains to ensure that the fund meets the actual needs of the most affected communities, including women and girls, Indigenous Peoples, youth and children, and that is guided by key human rights principles such as inclusion and non-discrimination.[269]

In his 2022 report to the UN General Assembly, the Special Rapporteur on climate change and human rights recommended establishing a diverse consultative group of finance experts to define the modalities and rules for the operation of the loss and damage finance facility.[270] At the Geneva Centre Conference, Dr. Fry further reiterated that it was high time to create such a group, bold and fearless, who would think outside the box and come up with innovative ideas for sourcing loss and damage finance, to which those on the frontlines need to have direct access.

D. Climate finance: *Prioritizing the Most Vulnerable*

A central event at the SB58 in Bonn was the Sixth Technical Expert Dialogue under the Ad hoc Work Program on the New Collective Quantified Goal on Climate Finance (NCQG) with a focus on what the quantum of finance should be.[271]

Ambitious climate action requires ambitious climate finance, and those most responsible for the climate crisis should support those least responsible and most impacted. As evidenced by numerous reports and the long project pipelines of the UNFCCC Green Climate Fund and the Adaptation Fund, the need is great. The amount of funds raised must be commensurate with the scale and scope of the crisis. Principles of equity and non-discrimination should be applied so that direct access to climate finance is provided for those most affected by the adverse impacts of climate change and historically marginalized, including Indigenous Peoples, local communities, women and children.

Meanwhile, a recent study by the Children's Environmental Rights Initiative demonstrated a significant and long-standing omission of children in international climate finance. Stark findings were revealed: only 2.4% of climate finance from the key multilateral climate funds serving the UNFCCC and Paris Agreement, or $70.6 million annual average, can be classified as supporting projects incorporating child-responsive activities.[272] Moreover, as the same study demonstrated, of 591 project proposals assessed, covering a period from 2006 to March 2023, less than 4% explicitly and meaningfully considered girls.[273]

Nor are the climate change funds sufficiently allocated to support Indigenous Peoples-led initiatives. At COP27, Indigenous Peoples came forward with guidelines for direct access funding for climate action, calling for an independent Indigenous-led global green funding mechanism to support global coordination, solidarity, experience- and knowledge-sharing, and lobbying and advocacy work for Indigenous Peoples from all sociocultural regions.[274]

Importantly, climate finance institutions should ensure that the climate activities they finance do not have disparate, adverse impacts on vulnerable groups and individuals. Consequently, to advance human rights, climate finance must be ambitious, equitable, fair, effective, and human rights-based. It should also be accessible, robust, gender-responsive, grants-based and strive not to increase the debt burden.[275]

E. Civic Space: *Enhancing Effective and Safe Participation of All Stakeholders*

Protecting civic space and guaranteeing effective public participation at all stages of negotiations, as mandated under international standards, has been an ongoing struggle during the past editions of the UNFCCC meetings. Most recently, after COP27 has seen some unfortunate reports of harassment and intimidation targeted at civil society delegates[276], the defense and restoration of safe civic space became a political priority at SB58 in Bonn. A number of governments have already proactively addressed the issue of protection of civic space in the negotiations, which eventually resulted in the adoption of a strong

reaffirmation of human rights in the conclusions of the SB58 session, which contained explicit recognition of the need to uphold the human rights of all participants to UN Climate Talks.[277]

The UNFCCC Secretariat also announced the establishment of a civic space task force with other UN agencies to ensure the respect of human rights in the process. Whether it will be fit for purpose will depend on its mandate and the Terms of References.[278]

To guarantee enabling and conductive environment for all, future COP hosting countries should strive to ensure the safe participation of all stakeholders, strictly abide by international human rights law, including with regards to civil and political rights, prevent discrimination on any grounds, abstain from reprisals against civil society, human rights defenders and Indigenous people's representatives and avoid the use of electronic surveillance. Meaningful participation from civil society and frontline groups, including women and child- environment- and climate- champions, as well as Indigenous Peoples representatives should be a priority at every stage of the UNFCCC negotiations and decision-making.

Additionally, as several women delegates share testimonies regarding acts of sexual violence and harassment perpetrated at the UNFCCC negotiations[279], future COP Presidencies should allow zero tolerance for harassment, intimidation or bullying of any kind.

2. Participation of women, children and Indigenous Peoples in the UNFCCC processes

The UNFCCC increasingly encourages active participation of all sectors of society in its negotiation processes. It recognizes nine "constituencies" as the main focal points through which broad and meaningful participation is ensured with the UNFCCC Secretariat and individual States Parties. The constituencies are broadly grouped by the type of organizations they represent, including businesses and industry organizations, environmental organizations, local and municipal governments, trade unions, research and independent organizations, agricultural workers, and, crucially, organizations that work for the rights of indigenous people, children and young people, and women and gender rights.

A. Women and Gender Constituency (WGC)

The Women and Gender Constituency (WGC) was founded as an Observer constituency to the UNFCCC in 2009 and was recognized as an official observer by the UNFCCC Secretariat in 2011. As of 2023, it has 47 member organizations with official accreditation to UNFCCC and hosts an advocacy network of over 700 groups, organizations and individuals.[280] It facilitates participation at the UNFCCC annual conferences of civil society and NGOs that work for women's rights, gender justice and environmental protection, and ensures that meetings, workshops and conferences include the participation and representation of women's civil society and NGOs.[281] It also strives to regionalize the work of the Women and Gender Constituency. Notably, it has supported the formation of the African Feminist Taskforce which led the WGC's advocacy and demands at COP27.[282] Most recently, at the SB58, the Women and Gender Constituency worked on issues related to the Global Stocktake, finance, including Green Climate Fund replenishment and NCQG; Loss and Damage Facility; Just Transition; and gender. It also held a series of events on the implementation of the gender action plan of the enhanced Lima work program on gender.

Since 2015, the Women and Gender Constituency has lead its Gender Just Climate Solutions Awards program, which aims at showcasing, amplifying and scaling gender-responsive transformative climate initiatives, and features the Gender Just Climate Solutions directory – a public collection of locally-driven solutions from all world regions.[283] These technical, non-technical, and transformational solutions are conveniently stored in a dedicated database and fall into several categories, namely business, entrepreneurship and sustainable livelihoods, community education and capacity building, healthy ecosystems and biodiversity, and energy transition, among others.[284]

B. Children and Youth Constituency (YOUNGO)

YOUNGO, the Youth Constituency of the UN Framework Convention on Climate Change, was officially recognized by the United Nations in 2011, at COP17. It comprises both young activists, up to 35 years, and children, as well as youth NGOs, who contribute to shaping the intergovernmental climate change policies and strive to empower youth to formally bring their voices to the UNFCCC processes.[285]

Ms. Saher Rashid Baig, representative of YOUNGO, at the Geneva Centre Conference, brought the audience's attention to the YOUNGO-led Declaration on Children, Youth and Climate Action, launched in 2019, at a high-level event convened by the COP25 Presidency of the Government of Chile in Madrid, Spain. Based on core priorities identified by YOUNGO members and children and youth globally, the Declaration is the first-of-its-kind commitment to accelerate inclusive, child and youth-centred climate policies and action at national and global levels.[286] A vibrant and active constituency, in 2022, YOUNGO also produced a 107-page Global Statement, dedicating it to climate justice, and specifically addressing topics such as climate justice and gender equality, indigenous persons and rights, migration and displacement, climate and conflict, human rights and environmental defenders, decolonizing climate change, and persons with disabilities.[287]

In 2022, the Egyptian presidency for COP27 underlined that youth participation was an integral part of climate action and hosted the first-ever children and youth-led pavilion in the blue zone, as well as a side-event space for young people to speak on climate justice and education. However, young people reported that they still found it difficult to get their messages across, and felt like their voices were used for policy and corporate agendas.[288]

C. International Indigenous Peoples Forum on Climate Change (IIPFCC)

Although Indigenous Peoples were not involved in the negotiations for the UNFCCC in the early 1990s, years later, their persistent advocacy has resulted in the recognition of Indigenous Peoples as one of the constituencies with observer status under the Convention.[289] In 2008, the International Indigenous Peoples Forum on Climate Change (IIPFCC) was established as a joint caucus for Indigenous Peoples for developing common positions and statements as well as for undertaking effective strategies, lobbying and advocacy work at UNFCCC meetings and sessions.[290] Indigenous Peoples' organizations can since apply for observer status and, when accepted, nominate participants to attend the sessions of major climate change bodies and advocate for the Indigenous Peoples' concerns and priorities. Most recently, at the Bonn SB58 Climate Conference, in its Opening Statement, the IIPFCC called for a real reduction in emissions, including the rapid phase-out of fossil fuels, rather than carbon offsets, and prevention rather than compensation in the loss and damage mechanisms. It also expressed concern regarding the growing tendency, at the UNFCCC level, to combine "Indigenous Peoples" with "local communities" who are still yet undefined and should not be equated.[291]

Indigenous Peoples constitute one of the major groups and thereby exercise a progressively more significant role in global climate negotiations. For example, at COP27, Indigenous Peoples attended with over 270 representatives from the seven UN socio-cultural regions of the world, which marked a record number of Indigenous attendees since COP21 in Paris. In addition, Indigenous Peoples hold firm that their status as rights-holders and their inherent, collective right to self-determination as Peoples, reaffirmed in the UNDRIP, necessitates a space at the negotiating table alongside States.[292] However, since the recognition of their nationhood by States is lacking, the Indigenous Peoples are trapped between the Convention's State/non-State binary, and it is yet to be seen whether the participation of Indigenous Peoples within the legal framework of the UNFCCC will be differentiated from other constituencies and that of civil society.[293]

V. Recommendations and Ways Forward

Based on the discussions offered in the previous chapters of this report, the sources used for its preparation as well as the inputs received from the panelists at the Geneva Centre's Conference *"Environment, Climate Change and Women and Children's Rights: Challenges, Perspectives and the Role of Indigenous Peoples"* held on 6 September 2023, the present report formulates a set of brief recommendations for the States Parties and other stakeholders.

1. General Recommendations

Recognition of the right to environment: Explicitly recognize the right to a clean, healthy and sustainable environment in all national and regional legal systems, and accelerate gender-transformative, rights-based climate and environmental action.

Measurable targets: Include measurable targets towards the recognition and implementation of this right.

Promoting climate resilience: Empower communities to mitigate the effects of climate-related weather events and manage residual risks through participatory planning and comprehensive service delivery.

Meaningful participation: Guarantee the full, equal and meaningful participation of women, children, and Indigenous Peoples as rights-holders and leaders in decision-making at all levels.

Access to justice: Provide affordable, appropriate and timely access to justice and effective remedies, both judicial and non-judicial, to all rights-holders, but particularly those belonging to vulnerable groups, when their rights are threatened or violated.

Indigenous knowledge inclusion: Ensure that climate change solutions are not limited to Western scientific knowledge only, but include Indigenous knowledge and innovations in the design of national and international climate programs and policies.

Breaking the silos: Strive for a better connection and collaboration between different mechanisms addressing climate change, environment and human rights at the national, regional and international levels in order to ensure an effective and human rights-based approach to disaster risk reduction, environment protection, and climate change adaptation and mitigation efforts.

Climate education: Provide equal access to evidence-based, contextually relevant, gender-responsive and inclusive environmental and climate information and education, which also integrates Indigenous knowledge.

Right to adequate housing: Provide safe and adequate shelter and reconstruction assistance after climate events, including through the provision of funds, materials, facilities and infrastructure; as well as rights-compliant, resilient and durable housing solutions, in the case of climate-induced migration.

Displacement: Establish a new protocol under the Convention relating to the Status of Refugees, as per the recommendation of the UN Special Rapporteur on human rights in the context of climate change, to give protection to persons displaced across international borders due to climate change.

Climate financing: Scale up drastically human rights-based, gender-responsive, ambitious and grants-based climate finance.

Climate litigation: Encourage courts around the world to be engaged in climate litigation cases and hold businesses and Governments accountable.

Stakeholder engagement: Focus on wider stakeholder engagement, local action, and empowering local communities, as community-led approaches are likely to result in more effective program design, easier implementation and more accurate evaluation.

Safe civil space: Ensure a safe, respectful and inclusive space for civil society engagement for mobilization of broad public support to meet climate goals and deliver ambitious and just climate action.

Fossil fuels phase-out: Ensure a rapid, equitable, full and funded phase-out of all fossil fuels.

Loss and damage fund: Capitalize and operationalize urgently the new Loss and Damage Fund, and ensure that those most affected by climate change have direct access to it.

Collective commitment: Demonstrate collective commitment to respond to the mounting climate emergency, including at the Climate Ambition Summit, scheduled for 20 September 2023, as well as at the upcoming COP28 in November–December 2023, and the future editions of the UNFCCC conferences.

2. Specific Recommendations:

A. Women's rights and gender action

Recognition of the right to environment: Support the gender-transformative implementation of the right to a clean, healthy and sustainable environment, addressing the nexus of gender equality and environmental justice.

Gender statistics: Enhance the availability and gender sensitivity of environment statistics by:

- *including data disaggregated by sex and other dimensions*, such as age, income, disability, race, ethnicity, migration status, and any characteristics relevant to national contexts;
- *adding additional indicators* that would adequately capture the differentiated economic impact of climate change, disasters and biodiversity loss on women and men.

Gender perspective in NAPs and NDCs: Include a gender perspective in national policies and action plans on climate change and disaster risk reduction and ensure the meaningful participation of women in the formulation and implementation of such policies.

Agents of change: Address and consider women and girls as powerful, transformative agents of change, viewed as equal, indispensable partners and leaders in the transition to a just and sustainable future.

Meaningful engagement: Empower women and girls, especially those belonging to vulnerable or marginalized groups, as climate and environmental leaders. Ensure full, equal and meaningful engagement of women and girls, in all their diversity, in climate change decision-making and policymaking processes at all levels.

Institutions and mechanisms: Strengthen institutions and mechanisms, including national human rights institutions, customary justice systems and community paralegal services, to defend the rights of women and girls to a healthy environment, land and other natural resources.

Capacity building: Increase information and resources for women and girls, and provide capacity building for women's groups and networks, including on climate change, resilience, available climate change financing mechanisms, as well as leadership and engagement in decision-making processes related to climate change at all levels.

Women environmental human rights defenders: Ensure the protection and human rights of women environmental human rights defenders, especially those from the Indigenous communities.

Gender-responsive policies: Ensure that all policies, legislation, plans, programs, budgets and other activities related to disaster risk reduction and climate change are gender-responsive.

Climate resilient health systems: Invest in climate- and disaster-resilient health systems, and ensure that these are equally accessible to diverse groups of women in the context of disasters. Inform pregnant patients about environmental risks and adaptation measures, particularly in marginalized communities.

Women's rights: Protect women's equal rights to food, water, housing, sanitation, land and natural resources by supporting sustainable livelihoods and developing gender-responsive development plans.

Increased funding: Increase funding for grass-roots women's organizations working on climate and environmental issues, as well as funding for the implementation of gender action plans under multilateral environmental agreements.

Gender-based violence: Specifically address new risk factors for gender-based violence, including human trafficking and forced marriage.

Unequal burden of work: Address the unequal burden of unpaid and care work performed by women in the context of climate change adaptation.

Engaging men in gender equality efforts: Encourage men and boys to become advocates for women's and girls' environmental rights and for their empowerment as agents of change and environmental leaders.

B. Children's rights

Overarching principles: Apply two main overarching principles in all child-related climate action, namely:

- *rights-based approach*: all rights of children as enshrined in the Convention on the Rights of the Child should be fully maintained;
- *best interests of the child*: in all decisions and actions affecting children, the best interests of the child shall be a primary consideration.

Ambitious action: Take ambitious measures to minimize the negative impacts of climate change on children to the greatest extent possible.

Data and research: Design and carry out new research to collect more information on children and climate change, including on climate-induced displacement, accompanying research efforts by developing child-friendly research methods and approaches to data collection, including diverse characteristics of this demographic, for example, ethnicity, religion, disability, different age ranges.

Meaningful participation: Provide children, including children from low-income, climate-vulnerable and marginalized communities, as well as displaced children, with age-appropriate, safe and accessible mechanisms to fully and meaningfully participate and contribute to the discussions and decisions affecting them as well as solutions to be considered at the international, national and community levels.

Agents of change: Address and consider children as active stakeholders or agents of change rather than as a vulnerable group.

Climate education: Provide accessible, age-appropriate environmental education in school curricula aimed at increasing children's knowledge and capacity to respond to environmental challenges. Encourage compulsory climate change education as a strategy to achieve climate mitigation and adaptation targets.

Critical infrastructure: Urgently adapt the critical social services children rely on, including water and sanitation, health, nutrition, education, and child protection, to the new climate reality and adopt climate-resilient development policies.

Capacity building: Prioritize capacity building programs targeted at children and youth, to expand their knowledge of climate policies and increase their contribution to effective policy-making.

Legal assistance: Provide access for children to free legal and other appropriate assistance, including legal aid and effective legal representation, in order to be heard in any judicial or administrative proceedings affecting them.

NDCs/NAPs: Include children and young people in NDCs/NAPs and make sure that NDCs reflect the full impact of climate change on children, and the actions taken reflect the full scope of their needs and rights in the face of climate change.

Climate finance: Deliver sufficient climate finance, primarily in the form of grants, particularly for adaptation and loss and damage, prioritizing investments to strengthen the climate resilience of child-critical social services, child and social protection services, and through disaster risk reduction.

> *"Funding for adaptation must be drastically scaled-up, as safeguarding children requires them to be prioritized."*
>
> *Dr. Octavian Bivol, Deputy Regional Director for Europe and Central Asia, UNICEF, in his statement at the Geneva Centre conference*

C. Indigenous Peoples' knowledge

Recognition of Indigenous Peoples' rights: Fully protect, recognize, and respect Indigenous Peoples' rights, consistent with the UN Declaration on the Rights of Indigenous Peoples, and implement Free, Prior and Informed Consent.

Terminology: Refrain from the use of "traditional" or "customary" knowledge terminology, instead, consider adopting the terminology "indigenous scientific and technical knowledge", as per the recommendation of the UN Special Rapporteur on the rights of Indigenous Peoples.

Recognition of Indigenous knowledge systems: Ensure meaningful and respectful promotion, recognition and integration of Indigenous Peoples' knowledge systems in national and global climate action, as well as in educational programs and curricula.

Prior consultation: Consult with Indigenous Peoples to obtain their free prior and informed consent and to ensure transparent and equitable benefit-sharing for their contributions to biodiversity, climate adaptation and mitigation efforts, and full protection of their lands and territories.

Collective intellectual property rights: Adopt, in consultation with Indigenous Peoples, adequate legislation on collective intellectual property rights to avoid misappropriation of Indigenous knowledge and ensure equal and fair benefits sharing.

Indigenous women's knowledge: Recognize the knowledge and roles of Indigenous women as change agents, and create and support national, regional and local platforms for Indigenous women to exchange and preserve their knowledge.

Horizontal collaboration: Promote horizontal collaboration with non-Indigenous knowledge systems and ensure that the co-production of knowledge is consistent with the protocols and guidelines of the Indigenous Peoples concerned.

Partnerships: Build partnerships with existing Indigenous Peoples groups, networks, and coalitions, including women Indigenous groups.

Capacity building: Provide Indigenous communities with the resources to strengthen their capacity, including on topics such as climate change, resilience, Indigenous Peoples' rights, and engagement with government and decision-making processes.

Meaningful participation: Establish consultative bodies with Indigenous Peoples representatives to guarantee their full participation and consultation in adopting and implementing relevant policies, actions, and programs. Include Indigenous Peoples in full, meaningful, informed, inclusive and equitable participation in environmental, climate and disaster risk decision-making processes, including within the UNFCCC process as well as at a regional, national- and local level.

Endnotes

[1] United Nations Secretary-General, António Guterres, *Press Conference at the UN Headquarters*, 15 June 2023.
[2] Sultan Al Jaber, president-designate of COP28, UN NEWS, on 8 September 2023.
[3] YOUNGO, *"COP27 Global Youth Statement: Declaration for Climate Justice"*, 2022, p. 3.
[4] UN News, *"UN rights chief: 'Don't leave the climate crisis for our children to fix'"*, 3 July 2023.
[5] UNFCCC, *"Five Reasons Why Climate Action Needs Women"*, 8 March 2023.
[6] Intergovernmental Panel on Climate Change (IPCC), Working Group I, *"Climate Change 2021: The Physical Science Basis"*, *Summary for Policymakers*, 2021, p. 4.
[7] IPCC, Working Group II, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, *Summary for Policymakers,* February 2022, p. 12.
[8] WMO, *"Past eight years confirmed to be the eight warmest on record"*, 12 January 2023
[9] Copernicus Climate Change Service, *"Summer 2023: the hottest on record"*, 6 September 2023.
[10] IPCC, *"Sixth Assessment Report (AR6) - Climate Change 2023: Synthesis Report"*, 2023, p. 57.
[11] IPCC, *"Sixth Assessment Report (AR6) - Climate Change 2023: Synthesis Report"*, *Summary for Policymakers,* 2023, p. 33
[12] UNICEF, *"Climate Justice Roundtable: An online discussion with activists and experts"*, February 2022, p. 6.
[13] idem
[14] UN General Assembly, Report of the Secretary-General, *"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" (E/CN.6/2022/3)*, 2022, p. 2.
[15] Geneva Centre for Human Rights Advancement and Global Dialogue, *"Women's Rights, Climate Change and Environment: Materialising Climate Action on the Ground"*, 2022.
[16] UN Human Rights Council, Tenth session, *"Resolution 10/4. Human rights and climate change"*, March 2009.
[17] UN Office of the High Commissioner on Human Rights, *"OHCHR and Climate Change"*.
[18] OHCHR, *"Working with the United Nations Human Rights Programme: A Handbook for Civil Society"*, 2008, p. 76
[19] European Parliamentary Research Service (EPRS), *"A universal right to a healthy environment"*, December 2021.
[20] UN Human Rights Council, Forty-eighth session, *"Resolution 48/13. The human right to a clean, healthy and sustainable environment"*, 2021.
[21] UN General Assembly, Seventy-sixth session, *"Resolution 76/300. The human right to a clean, healthy and sustainable environment"*, 2022.
[22] UN News, *"Winners of 2023 UN Human Rights Prize Announced"*, 20 July 2023.
[23] UN Human Rights Council, Forty-eighth session, *"Resolution 48/14. Mandate of the Special Rapporteur on the promotion and protection of human rights in the context of climate change"*, 2021.
[24] UN Human Rights Council, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, *"Report on initial planning and vision for the mandate" (A/HRC/50/39),* 2021.
[25] UN Human Rights Council, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, *"Providing legal options to protect the human rights of persons displaced across international borders due to climate change" (A/HRC/53/34),* 2023.
[26] IOM, Submission to the Special Rapporteur on the promotion and protection of human rights in the context of climate change n the topic of :"Addressing the human rights implications of climate change displacement including legal protection of people displaced across international borders", November 2022
[27] OHCHR, Special Rapporteur on climate change.
[28] The reports mentioned are the following: A/HRC/31/52, A/HRC/37/58, A/74/161, A/HRC/52/33, and A/78/168.
[29] Refer, for example, to the following reports: A/HRC/41/39, A/70/287, A/67/299, A/66/285, A/75/207, A/64/255, A/HRC/52/28, A/64/255, A/HRC/54/25, A/HRC/36/46, and A/77/549.
[30] UN Committee on the Elimination of Discrimination against Women, "*General recommendation No.37 (2018) on gender-related dimensions of disaster risk reduction in a changing climate" (CEDAW/C/GC/37)*, 13 March 2018,
[31] "*General recommendation No.37 (2018) on gender-related dimensions of disaster risk reduction in a changing climate" (CEDAW/C/GC/37)*, 13 March 2018, p. 4.
[32] UN Committee on the Elimination of Discrimination against Women, "*General recommendation No.39 (2022) on the rights of Indigenous women and girls" (CEDAW/C/GC/39)*, 31 October 2022, p. 24.
[33] UN Committee on the Rights of the Child, *"General comment No. 26 on children's rights and the environment, with a special focus on climate change" (CRC/C/GC/26)*, 2023.
[34] idem, p. 1, para. 2.
[35] idem, p. 7, para. 40.

[36] idem, p. 2, para. 8.
[37] idem, p. 2, para. 11.
[38] idem.
[39] UN OHCHR, Human Rights Committee, *"General comment No. 36 (2018) on article 6 of the International Covenant on Civil and Political Rights, on the right to life" (CCPR/C/GC/36)*, 2018, p. 14, para. 62.
[40] Climate Vulnerable Forum, *Press Release "New Health Data Shows Unabated Climate Change Will Cause 3.4 Million Deaths Per Year by Century End"*, 12 November 2022.
[41] UN Human Rights Council, Fortieth session, *"Resolution 40/7. The right to food"*, 21 March 2019.
[42] UN Human Rights Council, *"Study of the Human Rights Council Advisory Committee on discrimination in the context of the right to food" (A/HRC/16/40)*, 2011, p. 6, para. 16.
[43] UN Human Rights Council, Report of the Secretary-General, "*Adverse impact of climate change on the full realization of the right to food" (A/HRC/53/47),* 2023, p. 2, para. 2.
[44]Crippa, M., Solazzo, E., Guizzardi, D. *et al.* "Food systems are responsible for a third of global anthropogenic GHG emissions." *Nat Food* 2, 198–209 (2021).
[45] UN Human Rights Council, Report of the Secretary-General, "*Adverse impact of climate change on the full realization of the right to food" (A/HRC/53/47),* 2023, p. 2, para. 2.
[46] idem, p. 13, para. 51.
[47] IPCC, Working Group II, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022, p. 14.
[48] UNFCCC, FCCC/SB/2022/L.2 "*Koronivia joint work on agriculture Draft conclusions proposed by the Chairs",* 14 June 2022
[49] UNFCCC, *Decision -/CP.27 "Joint work on implementation of climate action on agriculture and food security"*, 18 November 2022, p. 1.
[50] UN OHCHR, Committee on Economic, Social and Cultural Rights, *"General Comment No. 4: The Right to Adequate Housing"*, 13 December 1991, p. 3, para. 8.
[51] UN Human Rights Council, Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, *"Towards a just transformation: climate crisis and the right to housing" (A/HRC/52/28)*, 2023, p. 18, para. 63.
[52] Institute for Economics & Peace (IEP), *"Ecological Threat Report 2022: Analysing Ecological Threats, Resilience & Peace"*, 2022, p. 3.
[53] idem, p. 5.
[54] UN Human Rights Council, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, *"Providing legal options to protect the human rights of persons displaced across international borders due to climate change" (A/HRC/53/34),* 2023, p. 2, para. 1.
[55] idem.
[56] Jane McAdam, *"Climate Change, Forced Migration, and International Law"* 2013, Oxford University Press. p. 193-196.
[57] Caroline Zickgraf, *"Climate change, slow onset events and human mobility: reviewing the evidence"* Current Opinion in Environmental Sustainability, Volume 50, 2021, p. 21-30.
[58] Internal Displacement Monitoring Centre (IDMC), *"Global Report on Internal Displacement 2021"*, 2021. p. 12.
[59] idem, p. 88.
[60] World Bank, Groundswell *"Preparing for Internal Climate Migration"*, March 2018, p. XX.
[61] Jane McAdam, *"Climate change displacement and international law: Complementary protection standards"* UNHCR, 2011.
[62] (n) 25.
[63] Susana B. Adamo, Riyanti Djalante, PG Dhar Chakrabarti, Fabrice G. Renaud, Amsalu Woldie Yalew, Doreen Stabinsky, Zinta Zommers, Koko Warner, *"Editorial Overview: Slow Onset Events related to Climate Change"*, Current Opinion in Environmental Sustainability, Volume 50, 2021.
[64] UN Human Rights Council, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, *"Providing legal options to protect the human rights of persons displaced across international borders due to climate change" (A/HRC/53/34),* 2023.
[65] idem, p. 18, para. 68.
[66] (n) 58. p. 187 -211.
[67] UNICEF, *"Climate Mobility and Children: A Virtual Symposium Summary report of the workshop held 3-4 November 2020"*, 2021, p. 7.

[68] UN Human Rights Council, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, *"Women, girls and the right to a clean, healthy and sustainable environment" (A/HRC/52/33)*, 2023, p. 2, para. 2.
[69] See for example: UNFCCC Secretariat, *"Dimensions and examples of the gender-differentiated impacts of climate change, the role of women as agents of change and opportunities for women" (FCCC/SBI/2022/7)*, June 2022; Report of the Secretary-General, *"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" (E/CN.6/2022/3)*, 2022; OHCHR, UNEP and UN-Women, *"Human rights, the environment and gender equality: key messages"*, 2021; Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, *"Women, girls and the right to a clean, healthy and sustainable environment" (A/HRC/52/33)*, 2023; Geneva Centre for Human Rights Advancement and Global Dialogue, *"Women's Rights, Climate Change and Environment: Materialising Climate Action on the Ground"*, 2022; UN Women, *"Measuring the nexus between gender equality and women's empowerment and the environment, including climate change and disaster risk reduction"*, October 2021, among many others.
[70] OHCHR, Committee on the Elimination of Discrimination against Women, "*General recommendation No.37 (2018) on gender-related dimensions of disaster risk reduction in a changing climate" (CEDAW/C/GC/37)*, 13 March 2018.
[71] UN Women, *"Measuring the nexus between gender equality and women's empowerment and the environment, including climate change and disaster risk reduction"*, October 2021, p. 3.
[72] UN News, *"Put women's rights 'front and centre' of climate policies: Bachelet"*, 27 June 2022.
[73] De Moura Ariza Alpino and others, *"The impacts of climate change"*, p. 277.
[74] UN Human Rights Council, Report of the Secretary-General, "*Adverse impact of climate change on the full realization of the right to food" (A/HRC/53/47),* 2023; and UN Women, *"Explainer: How gender inequality and climate change are interconnected"*, 28 February 2022.
[75] OHCHR, *"Recommit to the right to food – UN expert"*, 15 November 2022.
[76] United Nations, *"SDG progress report special edition of 2023",* 2023.
[77] OXFAM, "*Women's Land Rights Scorecard The Failure Of Land Policy And Legal Reforms In Securing Women's Land Rights In Africa"* 2020
[78] UN Working Group on the issue of Discrimination against Women*, "Report of the Working Group on the issue of discrimination against women in law and in practice",* (A/HRC/26/39), 2014. para. 69.
[79] UN Human Rights Council, Report of the Special Rapporteur on adequate housing as a component of the right to an adequate standard of living, and on the right to non-discrimination in this context, *"Towards a just transformation: climate crisis and the right to housing" (A/HRC/52/28)*, 2023, p. 9, para. 27.
[80] UN Women, *"Progress on the Sustainable Development Goals: The gender snapshot 2022"*, 2022, p. 12.
[81] UN Women, Issue Brief *"Gender Equality in the 2030 Agenda: Gender-responsive water and sanitation systems, UN Women"*, 2018
[82] UN Human Rights Council, Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *"Human rights to safe drinking water and sanitation of indigenous peoples: state of affairs and lessons from ancestral cultures" (A/HRC/51/24)*, 2022, p. 12, para. 55.
[83] UN Human Rights Council, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, *"Women, girls and the right to a clean, healthy and sustainable environment" (A/HRC/52/33)*, 2023, p. 5, para. 18.
[84] United Nations Environment Programme (UNEP), *"Global Gender and Environment Outlook"*, May 2018, p. 65.
[85] World Bank, *"Tackling Gender Based Violence in Fragile Contexts"*, 8 March 2023.
[86] UN General Assembly, Report of the Secretary-General, *"Women and peace and security" (S/2021/827)*, 2021, p. 22, para. 73.
[87] UN General Assembly, Report of the Special Rapporteur on violence against women and girls, its causes and consequences, *"Violence against women and girls in the context of the climate crisis, including environmental degradation and related disaster risk mitigation and response" A/77/136,* 2022, p. 21, para. 73.
[88] idem
[89] UN Women, Women in informal economy
[90] ILO, *"Just transition: An essential pathway to achieving gender equality and social justice"*, 2022
[91] idem
[92] UNICEF, *"How Gender-responsive Age-sensitive Social Protection is Related to the Climate Crisis",* 2023, p. 18.
[93] idem
[94] UN OHCHR, Committee on the Elimination of Discrimination against Women, "*General recommendation No.37 on gender-related dimensions of disaster risk reduction in a changing climate" (CEDAW/C/GC/37)*, 13 March 2018, p. 2, para. 2.

[95] The Pacific Resilience Partnership, *"Women and Disability in the Context of Climate Mobility"*, February 2022, p. 19.
[96] UN Committee on the Rights of Persons with Disabilities, *"General Comment No.3 on Article 6 – Women and Girls with Disabilities" (CRPD/C/GC/3)*, 25 November 2016, p. 13, para. 50.
[97] UN Human Rights Council, Report of the OHCHR, *"Analytical study on the promotion and protection of the rights of persons with disabilities in the context of climate change Report of the Office of the United Nations High Commissioner for Human Rights" (A/HRC/44/30)*, 2022, p. 5, para. 12.
[98] UN OHCHR, Committee on the Elimination of Discrimination against Women, *"General recommendation No. 34 on the rights of rural women" (CEDAW/C/GC/34)*, 7 March 2016, p. 3, para. 5
[99] Public Health Institute, and Center for Climate Change and Health, *"Special Focus: Climate Change and Pregnant Women"*, 2016.
[100] idem
[101] UN Human Rights Council, Report of the Office of the United Nations High Commissioner for Human Rights, *"Analytical study on the promotion and protection of the rights of older persons in the context of climate change Report of the Office of the United Nations High Commissioner for Human Rights" (A/HRC/47/46)*, 2021.
[102] (n) 97. p. 22.
[103] idem
[104] idem, p. 9, para. 36.
[105] HelpAge, *" Climate change in an ageing world "*, 2015, p. 8.
[106] Goldsmith Leo at all, *"Queer and present danger: understanding the disparate impacts of disasters on LGBTQ+ communities"*, Disasters, Vol. 46, Issue 4, pp. 946-973, October 2022.
[107] Earth.Org, *"When Disaster Strikes: 4 Ways the Climate Crisis Impacts LGBTQI+ People"*, 13 June 2023
[108] UN Human Rights Council, Report of the OHCHR *"Analytical study on gender-responsive climate action for the full and effective enjoyment of the rights of women" (A/HRC/41/26)*, 2019, p. 7, para. 22.
[109] UN General Assembly, Seventy-sixth session, *"Resolution 76/300. The human right to a clean, healthy and sustainable environment"*, 2022.
[110] *UNFCCC, "The Gender Action Plan"*
[111] UN Women, *"Measuring the nexus between gender equality and women's empowerment and the environment, including climate change and disaster risk reduction"*, October 2021, p. 10.
[112] International Union for Conservation of Nature, *"Gender and National Climate Planning: Gender Integration in the Revised Nationally Determined Contributions"*, 2021.
[113] These countries are: Antigua and Barbuda, Argentina, Barbados, Benin, Cambodia, Canada, Chad, Comoros, Democratic Republic of the Congo, Dominican Republic, El Salvador, Eswatini, Georgia, Honduras, Jordan, Mali, Mauritania, Namibia, Nauru, Pakistan, Palestine, Panama, Sao Tome and Principe, Sierra Leone, South Sudan, Togo, Tunisia, the United Kingdom of Great Britain and Northern Ireland, the Bolivarian Republic of Venezuela, and Viet Nam. See Christina Kwauk, *"The Climate Change Education Ambition Report Card: An Analysis of Updated Nationally Determined Contributions and National Climate Change Learning Strategies"*, 2022.
[114] UN Women, *"Measuring the nexus between gender equality and women's empowerment and the environment, including climate change and disaster risk reduction"*, October 2021.
[115] idem
[116] idem
[117] UN Human Rights Council, Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, *"Annex to A/HRC/52/33 Women, Girls and the Right to a Healthy Environment: Good practices Supplementary information to the report"*, 2023.
[118] idem, p. 2, para. 4b.
[119] Reich, Johannes, et al. *"Climate Change Litigation Before the European Court of Human Rights: How Senior Women from Switzerland Migh Advance Human Rights"*, 2022.
[120] KlimaSeniorinnen Schweiz (Senior Women for Climate Protection Switzerland), *"Swiss Climate Senior Women and Others v. Switzerland"*, 7 March 2023.
[121] KlimaSeniorinnen Schweiz, *"Climate Action"* https://en.klimaseniorinnen.ch/.
[122] The Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, known as the Escazú Agreement (*LC/PUB.2018/8/Rev.1*), 2021, p. 25, Article 7 (10).
[123] WMO and Graduate Institute of International and Development Studies, *Capstone Project Research Report "Gendered Impacts of Weather and Climate: Evidence from Asia, Pacific and Africa"*, 2019, p. 33.
[124] Geneva Centre for Human Rights Advancement and Global Dialogue, *"Women's Rights, Climate Change and Environment: Materialising Climate Action on the Ground"*, 2022, p. 9.
[125] UNICEF, *"The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index"*, 2021, p. 6.

[126] idem, p. 10.
[127] idem, p. 11.
[128] WHO, *"Inheriting a sustainable world: Atlas on children's health and the environment"*, 2017, p. xiii and p. 114.
[129] UNICEF, *"Prospects for Children in the Polycrisis: A 2023 Global Outlook"*, January 2023, p. 8.
[130] UNICEF, *"The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index"*, 2021, p. 109.
[131] Peterson, K. "*Reaching Out to Women When Disaster Strikes*", Soroptimist, 2007.
[132] UNICEF, *"Prospects for Children in the Polycrisis: A 2023 Global Outlook"*, 2023, p. 21
[133] UNICEF, *"The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index"*, 2021, p. 20.
[134] UNICEF, *"Guiding Principles for Children on the Move in the Context of Climate Change"*, July 2022, p. 14.
[135] UNICEF, *"The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index"*, 2021.
[136] Humanium, *"Geneva Declaration of the Rights of the Child, 1924"*. See as well: League of Nations, *Geneva Declaration of the Rights of the Child*, adopted 26 September, 1924.
[137] Throughout the table, articles summarized are from the United Nations *Convention on the Rights of the Child*, as well as, in part, informed by the UNICEF's, *"The Climate Crisis is a Child Rights Crisis: Introducing the Children's Climate Risk Index"*, 2021, p. 111.
[138] UN OHCHR, Committee on the Rights of the Child, *"General comment No. 26 on children's rights and the environment, with a special focus on climate change" (CRC/C/GC/26)*, 2023, para. 26, p. 5.
[139] UN OHCHR, Committee on the Rights of the Child, *"General comment No. 15 on the right of the child to the enjoyment of the highest attainable standard of health"*, 2013, para. 50, p. 12.
[140] UNICEF, *"Guiding Principles for Children on the Move in the Context of Climate Change"*, 2022, p. 14.
[141] idem
[142] UN-Habitat, *"Children, Cities, and Housing: Rights and Priorities"*, May 2022, p. 13.
[143] UNICEF United Kingdom, *"No Place to Call Home: Protecting Children's Rights when the Changing Climate Forces them to Flee"*, 2017, p. 19.
[144] idem, p. 18.
[145] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 64.
[146] UNICEF United Kingdom, *"No Place to Call Home"*, 2017, p. 13.
[147] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 110.
[148] WHO, *"Inheriting a sustainable world: Atlas on children's health and the environment"*, 2017, p. xii.
[149] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 110.
[150] Report of the Special Rapporteur on the implications for human rights of the environmentally sound management and disposal of hazardous substances and wastes (*A/HRC/33/41*), 2016, p. 3.
[151] Léger-Goodes, T. et al, Frontiers in Psychology, 2022, 13, *"Eco-anxiety in children: A scoping review of the mental health impacts of the awareness of climate change"*, July 2022.
[152] idem
[153] UNICEF Data, *"Child Malnutrition"*, http://data.unicef.org/topic/nutrition/malnutrition/.
[154] UN Human Rights Council, Report of the Secretary-General, "*Adverse impact of climate change on the full realization of the right to food" (A/HRC/53/47)*, 2023, p. 3, para. 5.
[155] IPCC, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022, p. 9.
[156] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 110.
[157] idem, p. 63.
[158] UNICEF United Kingdom, *"No Place to Call Home"*, 2017, p. 11.
[159] WHO, *"Inheriting a sustainable world: Atlas on children's health and the environment"*, 2017, p. 25
[160] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 10.
[161] idem, p. 36.
[162] idem
[163] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 58.
[164] idem
[165] Report of the OHCHR, *"Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child" (A/HRC/35/13)*, 2017, p. 8, para. 24.
[166] UNICEF, *"Time to Act: African children in the climate change spotlight"*, September 2023, p. 3.
[167] UNICEF, *"Beat the heat: protecting children from heatwaves in Europe and Central Asia"*, 27 July 2023.
[168] Malala Fund, *"A greener, fairer future: Why leaders need to invest in climate and girls' education"*, 2021, p. 3.
[169] Plan International UK, *"Weathering the storm: Adolescent girls and climate change"*, 2011, p. 16.
[170] UNEP, *"Climate Change and Human Rights"*, December 2015, pp. 8-9.
[171] UNICEF, *"State of the World's Children 2013: Children with Disabilities"*, 2013.

[172] Report of the OHCHR, *"Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child" (A/HRC/35/13)*, 2017, p. 7, para. 20.
[173] idem
[174] Report of the OHCHR, *"Analytical study on the relationship between climate change and the full and effective enjoyment of the rights of the child" (A/HRC/35/13)*, 2017, p. 8, para. 27.
[175] UNICEF Office of Research, *"The Challenges of Climate Change: Children on the front line"*, 2014, p. 30.
[176] UNICEF United Kingdom, *"No Place to Call Home"*, 2017, p. 17.
[177] idem
[178] UNICEF United Kingdom, *"No Place to Call Home"*, 2017, p. 4.
[179] UNICEF, *"Climate Mobility and Children: A Virtual Symposium Summary report of the workshop held 3-4 November 2020"*, 2021, p. 8.
[180] *Maastricht Principles on the Human Rights of Future Generations*, July 2023.
[181] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 94.
[182] idem
[183] IPCC, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022. See p. 973.
[184] UNICEF, *"Prospects for Children in the Polycrisis: A 2023 Global Outlook"*, January 2023, p. 32.
[185] UNICEF, *"Climate Justice Roundtable: An online discussion with activists and experts"*, February 2022, p. 7.
[186] The Climate Reality Project, *"You've Heard of Greenwashing but What Is Youthwashing?"*, 5 April 2023.
[187] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 20.
[188] idem, p. 21.
[189] Parker, L. et al. *"When the Kids Put Climate Change on Trial Youth-Focused Rights-Based Climate Litigation around the World"*, Journal of Human Rights and Environment, 2022.
[190] idem.
[191] Montana First Judicial District Court, Lewis and Clark County, *Cause No. CDV-2020-307*, 14 August 2023.
[192] UN Committee on the Rights of the Child, *"Communication Sacchi, et al. v. Argentina, et al."* , 23 September 2019.
[193] idem, p. 1, para. 3.
[194] UN Committee on the Rights of the Child, *"Decision adopted by the Committee under the Optional Protocol to the Convention on the Rights of the Child on a communications procedure, concerning communication No. 104/2019 (CRC/C/88/D/104/2019)*, 22 September 2021.
[195] Center for International Environmental Law (CIEL), *"CIEL Welcomes New UN Guidance on Children's Rights and the Environment"*, 28 August 2023.
[196] UN OHCHR, Committee on the Rights of the Child, *"General comment No. 26 on children's rights and the environment, with a special focus on climate change" (CRC/C/GC/26)*, 2023, p. 15, para. 86-87.
[197] Education International, *"4 alarming findings about education across countries' Nationally Determined Contributions"*, 31 May 2022.
[198] UNICEF, *"The Changing Childhood Project UNICEF x Gallup | A multigenerational, international survey on 21st century childhood"*, November 2021, p. 56.
[199] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 24.
[200] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 110.
[201] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 24.
[202] YOUNGO, *"COP27 Global Youth Statement: Declaration for Climate Justice"*, 2022
[203] Brookings, *"A new green learning agenda: Approaches to quality education for climate action"*, 6 January 2021, p. 6.
[204] UNICEF, *"The Climate Crisis is a Child Rights Crisis"*, 2021, p. 24.
[205] International Labour Organization (ILO), *"Implementing the ILO Indigenous and Tribal Peoples Convention No. 169: Towards an inclusive, sustainable and just future"*, 2019. See Appendix A.2, pp. 139–145.
[206] Idem. See page 53.
[207] One of the earliest references to this data is quoted in the report by the World Bank, *"The Role of Indigenous Peoples in Biodiversity Conservation: The Natural but Often Forgotten Partners"*, 2008.
[208] United Nations Permanent Forum on Indigenous Issues (UNPFII), *"Backgrounder. Climate change and indigenous peoples"*, 2008.
[209] UN OHCHR, David R. Boyd and Stephanie Keene, *Policy Brief No. 1 "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"*, August 2021. See p. 4.
[210] Intergovernmental Panel on Climate Change (IPCC), *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022. Numerous references throughout the report.

[211] International Work Group for Indigenous Affairs (IWGIA), *"Recognising the contributions of indigenous peoples in global climate action? An analysis of the IPCC report on impacts, adaptation and vulnerability"* 23 March 2022.
[212] idem.
[213] IPCC, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022. Numerous references throughout the report.
[214] International Fund for Agricultural Development (IFAD), *"The Traditional Knowledge Advantage – Indigenous Peoples' Knowledge in Climate Change Adaptation and Mitigation Strategies"*, 2016. See p. 5.
[215] Idem. See p. 7.
[216] IWGIA, *"Recognising the contributions of indigenous peoples in global climate action? An analysis of the IPCC report on impacts, adaptation and vulnerability"* 23 March 2022.
[217] Asia Indigenous Peoples Pact (AIPP), *"Nationally Determined Contributions in Asia: Are governments recognizing the rights, roles and contributions of Indigenous Peoples?"*, June 2022.
[218] UN Human Rights Council, Report of the Special Rapporteur on the rights of indigenous peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022, p. 4.
[219] idem
[220] Climate Investment Funds (CIF), *"Empowering Indigenous Women to Integrate Traditional Knowledge and Practices in Climate Action"*, May 2021, p. 8.
[221] idem
[222] UN OHCHR, David R. Boyd and Stephanie Keene, *Policy Brief No. 1 "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"*, August 2021, p.11
[223] UN OHCHR, David R. Boyd and Stephanie Keene, *Policy Brief No. 1 "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"*, August 2021, p.11
[224] IFAD, *"The Traditional Knowledge Advantage – Indigenous Peoples' Knowledge in Climate Change Adaptation and Mitigation Strategies"*, 2016, p. 50.
[225] UN Human Rights Council, Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *"Human rights to safe drinking water and sanitation of indigenous peoples: state of affairs and lessons from ancestral cultures" (A/HRC/51/24)*, 2022, p. 4.
[226] For more on this please refer to the abovementioned Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *A/HRC/51/24*.
[227] UNESCO Australia and United Nations University, *"Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation"*, 2012, p. 54
[228] idem
[229] See: FAO, "Agroecology knowledge hub" https://www.fao.org/agroecology/home/en/.
[230] UN General Assembly, Report of the Special Rapporteur on the right to food, *A/77/177*, 2022, p. 16.
[231] IPCC *"Climate Change and Land: an IPCC Special Report"*, 2019, p. 21.
[232] UN Human Rights Council, Report of the Secretary-General, "*Adverse impact of climate change on the full realization of the right to food" (A/HRC/53/47),* 2023.
[233] UN OHCHR, David R. Boyd and Stephanie Keene, *Policy Brief No. 1 "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"*, August 2021, p. 12.
[234] See, for example, Waler, W.S. *et al*, PNAS *"The role of forest conversion, degradation, and disturbance in the carbon dynamics of Amazon indigenous territories and protected areas"*, 2020.
[235] IPCC *"Climate Change and Land: an IPCC Special Report"*, 2019.
[236] Report of the Special Rapporteur on the rights of indigenous peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022, p. 7.
[237] idem, p. 8.
[238] idem
[239] Report of the Special Rapporteur on the rights of indigenous peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022, p. 9.
[240] African Biodiversity Network and The Gaia Foundation, *"Celebrating African Rural Women: Custodians of Seed, Food and Traditional Knowledge for Climate Change Resilience"*, 2015, p. 14.
[241] idem
[242] Report of the Special Rapporteur on the rights of indigenous peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022, p. 4.
[243] idem, p. 14.

[244] Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *"Human rights to safe drinking water and sanitation of indigenous peoples: state of affairs and lessons from ancestral cultures" (A/HRC/51/24)*, 2022.
[245] K. Anderson, B. Clow and M. Haworth-Brockman, *"Carriers of water: aboriginal women's experiences, relationships, and reflections"*, Journal of Cleaner Production, vol. 60, 2013, pp. 11– 17.
[246] CIF, *"Empowering Indigenous Women to Integrate Traditional Knowledge and Practices in Climate Action"*, May 2021, p. 27.
[247] Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *A/HRC/51/24*, p. 7.
[248] Report of the Special Rapporteur on the rights of indigenous peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022, p. 16, para. 78.
[249] idem
[250] CIF, *"The contribution of traditional knowledge and technology to climate solutions"*, 2019, p. 36, para. 95.
[251] idem
[252] See for example, Center for International Environmental Law (CIEL) and Heinrich Böll Foundation, *"Lost in Translation: Lessons from the IPCC's Sixth Assessment on the Urgent Transition from Fossil Fuels and the Risks of Misplaced Reliance on False Solutions"*, March 2023.
[253] CBS News, *"4 oil companies had total sales of $1 trillion last year"*, 2 February 2023.
[254] UNFCCC, *"Decision -/CP.27. Sharm el-Sheikh Implementation Plan"*, 20 November 2022.
[255] CIEL, *"UN Climate Process Stalled by Delay and Denial: Despite Mounting Pressure and Momentum for Fossil Phaseout Globally, Once Again, the Talks Failed to Advance Urgent, Ambitious, and Equitable Climate Action"*, 15 June 2023.
[256] Beyond Oil & Gas Alliance (BOGA), https://beyondoilandgasalliance.org/.
[257] See CIEL and Heinrich Böll Foundation, *"Lost in Translation: Lessons from the IPCC's Sixth Assessment on the Urgent Transition from Fossil Fuels and the Risks of Misplaced Reliance on False Solutions"*, 2023; Friends of the Earth International, *"COP27: What's at stake regarding false solutions?"*, November 2022; and Resilience.org, *"Hoodwinked in the Hothouse: Resisting False Solutions to Climate Change"*, Third Edition, 2021, among others.
[258] Paul Akiwumi, *" Least developed countries cannot afford to strand their assets, given their development challenges ",* UNCTAD, 26 November 2021
[259] Tara Laan, Andréa Giulio Maino,*"Boom and Bust: The fiscal implications of fossil fuel phase-out in six large emerging economies"*, International Institute for Sustainable Development, 2022, p. 1.
[260] ILO, Just Transition Policy Brief : Social protection for a just transition, 2023, p. 17.
[261] (n) 263,
[262] UNFCCC, Global Stocktake: https://unfccc.int/topics/global-stocktake.
[263] Carbon Brief, *"Bonn climate talks: Key outcomes from the June 2023 UN climate conference"*, 16 June 2023.
[264] UNFCCC, *"Technical dialogue of the first global stocktake. Synthesis report by the co-facilitators on the technical dialogue"* (*FCCC/SB/2023/9*), 8 September 2023, p. 39, para. 222.
[265] idem
[266] UNFCCC, "Introduction to Loss and Damage".
[267] Toussaint P. and Martínez Blanco, A. *"A human rights-based approach to loss and damage under the climate change regime"*, Climate Policy, 20:6, pp. 743-757, 2019.
[268] Ormond-Skeaping, Teo, *"What is the Glasgow Dialogue on Loss and Damage?"*, The Loss & Damage Collaboration, 5 June 2023.
[269] Vandamme, Lien, *"Realizing a Fund that Brings Justice to People Harmed by the Climate Crisis"*, The Loss & Damage Collaboration, 5 April 2023.
[270] Special Rapporteur on the promotion and protection of human rights in the context of climate change, *"Promotion and protection of human rights in the context of climate change" (A/77/226)*, 2022, p. 22, para. 92b.
[271] Climate Vulnerable Forum, *"Reflections on the June Climate Conference"*, June 2023.
[272] Children's Environmental Rights Initiative (CERI), *"Falling short: Addressing The Climate Finance Gap For Children"*, June 2023, p. 5.
[273] idem
[274] One Earth, *"Indigenous leaders call for independent funding mechanism to support climate and biodiversity action"*, 16 November 2022.
[275] See: Center for International Environmental Law (CIEL), *"Funding Our Future: Five Pillars for Advancing Rights-Based Climate Finance"*, March 2021.
[276] UN News, *"Rights experts decry harassment of activists attending COP27"*, 18 November 2022.
[277] UNFCCC, *"Arrangements for intergovernmental meetings: Draft conclusions proposed by the Chair" (FCCC/SBI/2023/L.10)*, 15 June 2023.

[278] *"UN Climate treaty participants required to disclose industry ties"*, 15 June 2023.
[279] Financial Times, *"UN climate summit female delegates reveal bullying and harassment"*, 17 June 2023.
[280] UNFCCC, *"Information session on Gender SB58 – Presentation"*, 26 May 2023.
[281] See: Women and Gender Constituency, https://womengenderclimate.org/our-background/
[282] UNFCCC, *"Information session on Gender SB58 – Presentation"*, 26 May 2023.
[283] Women and Gender Constituency, *"Gender Just Climate Solutions"*
[284] Gender Just Climate Solutions (GJCS) Directory, https://womengenderclimate.org/gender-just-climate-solutions-directory/.
[285] See: YOUNGO, https://unfccc.int/topics/education-youth/youth/youngo.
[286] UNICEF, YOUNGO and Children's Environmental Rights Initiative coalition (CERI), *"Declaration on Children, Youth and Climate Action"*, 2019.
[287] YOUNGO, *"COP27 Global Youth Statement: Declaration for Climate Justice"*, 2022.
[288] Eco-Business, *At COP27, youths labour to be heard by policymakers*, 14 November 2022.
[289] International Indigenous Peoples' Forum on Climate Change (IIPFCC), http://www.iipfcc.org/.
[290] IWGIA, *"The Indigenous World 2023: UN Framework Convention on Climate Change (UNFCCC)"*, 30 March 2023.
[291] International Indigenous Peoples' Forum on Climate Change (IIPFCC), *"Opening Statement of the International Indigenous Peoples Forum on Climate Change (IIPFCC) at SB58 in Bonn, Germany"*, 5 June 2023.
[292] IWGIA, *"The Indigenous World 2023: UN Framework Convention on Climate Change (UNFCCC)"*, 30 March 2023.
[293] Idem

Annex: Examples of Indigenous Peoples' knowledge and practices used in the context of climate adaptation and mitigation efforts[vi]

Indigenous Peoples	Country / Region	Socio-cultural region[vii]	Specific Practice[viii]	Issue	Context
Bininj/Munguy people	Australia, northern regions	The Pacific	Savanna burning	Fire management	After the wet season, from April through July, when the weather becomes cooler and drier, Bininj/Munguy people light fires in strategic areas. The practice, maintained for generations, reduces the flammability of the landscape over time, as the new speargrass growth is burned before seeded.
Māori people	Aotearoa New Zealand	The Pacific	*Kaitaikitanga* (guardianship, protection)	Co-governance	Sustainable local land management, merging spiritual concerns into environmental governance and incorporating the concept of *kaitaikitanga* (guardianship) of Māori people over the sky, the sea, the land, freshwater and sacred place is reflected in the regional Iwi Environmental Management Plans.
Māori people	Aotearoa New Zealand	The Pacific	*Maramataka,* a traditional calendar system	Climate change assessment and adaptation	*Maramataka* incorporates ecological, environmental and celestial Indigenous knowledge. Māori practitioners collaborate with scientists through the "Effect of Climate Change on Traditional Māori Calendars" which can be used as a framework to identify and explain environmental changes.
Ngati Hine people	Aotearoa New Zealand	The Pacific	Biodiversity monitoring	Climate change mitigation	The Ngati Hine people are monitoring biodiversity and the quality of waters, soil, forests and coast – a practice based on Maori spirituality. It provides a basis for action to restore and protect the environment and to maintain traditional knowledge by applying it in practice and passing it on to new generations.
Ngāti Maniapoto Māori people	Aotearoa New Zealand	The Pacific	Co-governance of the Waipā River	Water co-management	The Government and the Ngāti Maniapoto Māori have secured co-governance agreements to co-manage the Waipā River, which Ngāti Maniapoto people are seeking to restore, manage, and enhance.

[vi] The positive practices listed in this Annex are but a few examples provided for illustration purposes only, in an effort to raise awareness and advance the recognition and respect of Indigenous Peoples' knowledge in the context of climate change adaptation, mitigation and addressing loss and damage. The Annex explicitly discourages any replication of indigenous knowledge in foreign cultures without the in-depth understanding of appropriate context, as well as free, prior and informed consent of the knowledge-holders.

[vii] 7 socio-cultural regions are Africa; the Arctic; Asia; Central and South America and the Caribbean; Eastern Europe, Russian Federation, Central Asia and Transcaucasia; North America; and the Pacific.

[viii] This Annex is a literature review and is not substantiated by the actual collection of primary data. All examples of good practices provided in this Annex originate from the traditional indigenous practices previously described in major international publications. Please refer to the References section for more details on references and sources.

Babanakira and Kolina people	Solomon Islands	The Pacific	Solomon Islands Development Trust	Knowledge transmission	Preservation and recording of oral and written indigenous knowledge and practices regarding prevention measures and coping mechanisms to mitigate the effects of natural disasters and develop community disaster plans.
Punan people	Borneo, East Kalimantan, Indonesia	Asia	Documentation of climate change variations	Climate change assessment	The Punan people, one of the remaining hunter-gatherer communities in East Kalimantan, used to decide on planting crops, clearing cultivation areas and hunting based on the phases of the moon. With the changes of climate, these lunar signals no longer coincide with the favorable times for these activities.
Dayak people	Borneo, East Kalimantan, Indonesia	Asia	Documentation of climate change variations	Climate change assessment	The Dayak have documented climate variations based on various traditional indicators, including new bird species, changes in bird migration patterns, rising water levels, and the disappearance of traditional medicinal plants.
Dayak Jalai people	Indonesia	Asia	*Dahas* system	Agroforestry	The *dahas* system is a form of land and natural resources management focused on agroforestry. Some of the benefits of the *dahas* system include reforestation, local knowledge sustainability, and cultural regeneration.
Kadazan people	Malaysia, the state of Sabah	Asia	*Tagal Hutan* system	Water management	One element of the Tagal system, which is based on conserving and protecting water sources, is a break in harvesting certain fish species for a pre-agreed period, such as during fish breeding seasons, to prevent fish populations from crashing or becoming extirpated.
Moken people	Myanmar, Thailand	Asia	*Laboon,* traditional forecasting techniques	Disaster risk management	Moken folklore includes stories of the “hungry seas”, according to which, events such as the winds and tides shifts and the moving of insects and other animals away from the sea precede the onset of a *laboon* – a “wave that eats people and cleanses the land” (likely, previous tsunamis that occurred in pre-history). This ancient narrative indicates the Moken people when to migrate to higher ground.
The Cordillera region indigenous peoples	Philippines	Asia	*Lapat* system	Natural resources management	*Lapat* system (*lapat* means “to prohibit” or “to regulate”), an indigenous practice of regulating the use of natural resources through customary laws, which ensures community participation.
Pidlisan people	Philippines, the Cordillera region in Northern Luzon	Asia	*Lampisa* practice of communal water management	Water management	Under the *lampisa* system of water distribution, people are nominated to take responsibility for the maintenance of the irrigation canals and the rice fields throughout the dry season. The *lampisa* system promotes communal use of water resources at a low cost, with the beneficiaries paying a reasonable value for the *lampisa* services.
Teduray and Lambangian peoples	Philippines, Southern regions	Asia	*Sulagad* system – agroecological practices	Agroecology	The *sulagad* system involves traditional agroecological practices that respect spirits in nature and include the use of intercropping, rotational cropping and natural organic fertilizers.
Akha people	Thailand	Asia	Agricultural practices	Knowledge transmission;	Indigenous Akha women manage crop production processes, a vital spiritual and cultural tradition for the Akha people. To combat climate change-induced

				Agroecology	increasing monoculture and the gradual disappearance of Akha agriculture, community organizers have established a center to teach youth and interested outsiders the science of Akha agricultural practice.
Shan people	Thailand	Asia	Food fermentation	Food security; Climate change adaptation	The indigenous Shan women use specific practices for food fermentation and storage during famines and other crises, which ensures family and community food security.
Shan, Lua and Akha people	Thailand	Asia	Rotational methods of seeds sharing	Food security; Climate change adaptation	The Shan, Lua and Akha indigenous women use rotational methods of sharing seeds within the community to ensure food security and limit any possible risk of extinction. Each family produces different crops and the seeds are shared after the harvest.
Hmong and Karen peoples	Thailand	Asia	Rotational farming	Biodiversity; Climate change mitigation	Rotational farming practiced by Hmog and Karen peoples is sustainable and supports biodiversity. The data generated through community monitoring showed that rotational farming stores more carbon than it emits and can therefore help mitigate climate change.
Different groups of tribal peoples	Bangladesh	Asia	*Baira* (floating gardens)	Food security; Climate change adaptation	Indigenous women in Bangladesh are taking the lead on securing access to food and purifying and preserving stores of water. They are combating increased flooding and salinization with floating gardens, which are cultivated in the rainy season and float above monsoon floods.
Different groups of tribal peoples	Bangladesh, coastal regions	Asia	Salt-tolerant crops cultivation	Climate change adaptation	Flood-affected indigenous communities cultivate saline-tolerant varieties of reeds and drought-resistant fruit and timber trees, to reduce vulnerability to floods and sea-level rise and ensure longer-term income generation.
Naxi people	China, Yuhu Village	Asia	Natural resources management	Knowledge transmission	The principles for management of natural resources are established by customary laws, that originated both in the domain of spiritual belief by the worship of “Su” (the spirits of Nature), and with the community self-governance institution and mechanism of the “Council of Elders”.
Tangkhul people	India, Northeast regions	Asia	Seeds observation	Climate forecasting	At the seed sowing festival, indigenous women open the container with the best seeds stored for over a year and announce the findings by observing the luster of the container, the dampness of the seeds, and any fungus or mold infestation. The community then takes decisions of their choice of crops and whether to invest in a jhum field (a shifting cultivation field) or a wet terrace plantation.
Qashqai communities	Iran	Asia	Pastoralism and managing livestock in droughts	Natural resource management	Some of the indigenous practices to cope with droughts and reduced availability of rangelands include adjusting the timing for migration from summer to winter grounds and prolonging migration routes, buying and sharing of fodder, and transporting water to wintering grounds.

Łutsël K'é Dene First Nation	Canada	North America	Indigenous guardianship of Canada's Thaidene Nëné National Park	Knowledge transmission; Climate change mitigation	The Indigenous Guardians Program, supported by the Government of Canada and Nature United, facilitates the safeguarding of Thaidene Nëné's fragile ecosystems through environmental monitoring, mapping ecologically significant areas, documenting park visitor activity, and providing ecological education to visitors and younger generations.
Iñupiat people	USA, Alaska	North America	Wind patterns observation	Climate change adaptation	Observation of wind patterns by Iñupiat people, who hold a vast amount of knowledge on local weather on the North Slope of Alaska, helps to plan responses to coastal erosion and flooding.
Aymara people	Bolivia	Central and South America and the Caribbean	*Pachagrama*, indigenous climatic information system	Climate change adaptation	*Pachagrama* system is a register that catalogues "bio-indicators", that is, the behavior of plants and animals. Indigenous Peoples' communities compile and share the Pachagrama in order to know when to plant, when the rains are expected to begin and how long they will last. This system supports management processes of agro-climatic information.
Aymara people	Bolivia	Central and South America and the Caribbean	*Quthañas*, a water harvesting system	Water management	Outhañas is a water harvesting system used by the Aymara people, which collects rainwater by means of small dams. The larger scheme includes the construction of basins, ponds and small and medium dams at the family or group level in watersheds, intended as an adaptation measure to overcome the negative effects of climate change on water availability.
Chipaya people	Bolivia	Central and South America and the Caribbean	Wind, snow, clouds and stars observation	Climate change adaptation	The Chipaya people of Bolivia monitor the wind, snow, clouds and stars to determine what species to plant and when and where to plant them.
Puyanawa Tribe	Brazil	Central and South America and the Caribbean	Controlling rainfall	Forests conservation	The government recognized the Puyanawa as guardians of the forest in a way that benefits everyone. Puyanawa practices include conserving forests by controlling rainfall, reducing drought and flooding, increasing agricultural productivity, and enhancing water quality.
Mapuche people	Chile	Central and South America and the Caribbean	Seed bank	Food security	In Chile, the Mapuche have a complex traditional seed bank which facilitates conserving genetic variability within species, native seeds conservation and exchange, crop rotation, polyculture, water management and agroforestry.
Tukano people	Colombia	Central and South America and the Caribbean	Planning hunting expeditions	Climate change adaptation	The shamans of the Tukano people rely upon their traditional knowledge of local biodiversity and climate to schedule hunting expeditions during periods of species abundance, and to limit them during droughts and other unexpected environmental changes.
Guarani people	Honduras, Guarita	Central and South America	*Quezungal* farming method	Climate change adaptation	The indigenous in the village of Guarita in Honduras use the traditional Quezungal farming method, which involves planting crops under trees whose

		and the Caribbean			roots anchor the soil. They also prune vegetation in order to provide nutrients to the soil and conserve soil water.
Otomí people	Mexico	Central and South America and the Caribbean	Traditional soil and water management practices	Water management; Climate change adaptation	The Indigenous Otomí People in Mexico maintain traditional soil and water management practices through small-scale dams, terraces, management of the erosion and deposit processes, sedimentation management techniques, and systems for classifying relationships between soils, water and soil typology.
Comcaac people	Northern Mexico	Central and South America and the Caribbean	Diversification of livelihood systems	Food security; Climate change adaptation	Comcaac people, who are semi-nomadic hunters, gatherers and fishers, rely on both the desert and the sea for their subsistence in order to minimize risks and to increase options for adaptation to environmental change.
Maya people	Mexico, Yucatán Peninsula	Central and South America and the Caribbean	*Milpa*, the maize agroecosystem,	Food security; Climate change adaptation	Harvesting rainwater and the use of maize landraces, known as *milpa*, by Indigenous Maya farmers is a way to adapt to climate impacts and promote food security.
Maya people	Mexico, Quintana Roo	Central and South America and the Caribbean	Sustainable forestry methods	Climate change mitigation	The Maya and the government of Quintana Roo have formed a partnership, the Emissions Reduction Initiative, aimed at reducing emissions from deforestation while promoting local control, sustainable development, and natural resource management.
Kuna people	Panama	Central and South America and the Caribbean	Preserving native seeds	Food security; Climate change adaptation	The indigenous Kuna women are involved in rescuing and preserving native seeds threatened by climate disasters, rising sea levels and flooding.
Quechua people	Ecuador, Peru and Bolivia – the Andean region	Central and South America and the Caribbean	*Waru Waru* or *camellones*	Water management; Climate change adaptation	In the Andes, the *Waru Waru*, an ancient cultivation, irrigation and drainage system, increases the productivity of land with high salinity levels and poor drainage in areas with frequent droughts and frost. In Peru and Bolivia, *Waru Waru* increases soil humidity levels for cultivating tubers and grains. It combines raised beds with irrigation channels to prevent damage by soil erosion during floods. The technique ensures both the collection of water and drainage.
Yabarana people	Venezuela	Central and South America and the Caribbean	Diversification of livelihood systems	Food security; Climate change adaptation	Yabarana people shift from hunting and gathering to fishing, agriculture and animal husbandry according to seasonal and environmental conditions.
Mossi people	Burkina Faso, Yatenga Province	Africa	*Zaï,* an indigenous method of water harvesting	Climate change adaptation	The *Zaï* is a seasonal method of water harvesting is used to rehabilitate strongly degraded land known as *zî -peele*, which is usually found on relatively flat land on which no crops can be grown. Local knowledge about soil conditions and about the use of organic materials is essential for application of this method.

Pastoralist M'bororo people	Chad	Africa	Hydrology practices	Water management	Pastoralist M'bororo women possess a sophisticated knowledge of hydrology, including the capacity of the land to capture rainwater, and of the importance of conservation of certain tree species in order to protect water sources.
Borana people	Ethiopia	Africa	*Gedaa*	Water management	*Gedaa* is a traditional system for the community management of water, based on a local governance system of well councils.
Afar people	Ethiopia, North-eastern regions	Africa	Ecosystems monitoring	Climate forecasting	The technique consists in forecasting of weather and climate variation through observation of the natural environment, such as changes in insects and wildlife by Afar pastoralists.
Konso people	Ethiopia, Southwest regions	Africa	Soil conservation practices	Climate change adaptation	Terracing hillsides to retain and direct rainfall runoff and build sediment traps to prevent the clogging of strategically placed ponds where the water is stored in the rainy season.
Maasai people	Kenya	Africa	Ecosystems monitoring	Climate forecasting	Maasai pastoralist women use their knowledge of plant and animal bioindicators to support seasonal weather forecasts and community decision-making. They predict droughts and weather-related diseases by watching the movements of celestial bodies and observing the date of emergence of certain plant species. These traditional indicators may change due to climate change impacts.
Inuit people	Canada, United States	The Arctic	Knowledge of environment and climate variability for hunting	Climate change adaptation	The strong reliance on sea ice for travelling and hunting is reflected in the Inuit people knowledge of its processes, characteristics, and annual cycles. Inuit have developed distinct terms to describe different stages of ice development and its associated possibilities. For example, some ice sorts (*sikuak*) support very good breathing holes for seals, while others (*Milutsinik* and *iktaniq*), resulting from freezing snow water, are avoided by hunters and animals.
Inuit and Cree peoples	Canada	The Arctic	Weather forecasting	Climate change adaptation	The traditional ecological knowledge of Inuit and Cree in the Hudson Bay bioregion is acquired from observing, listening to, and interacting with other people and with the land, water, rivers, sea ice, currents, and animals on a regular basis. For example, Cree and Inuit forecast daily weather, predict seasonal characteristics, and adjust to seasonal change using their knowledge of clouds, stars, northern lights, wind, snow ice, currents, and animal behavior.
Saami people	Sweden	The Arctic	Food preparation and conservation that preserves the ecosystems	Food security; Climate change adaptation	Saami reindeer herders' knowledge illustrates the technology they have developed to secure the sustainable and safe consumption of reindeer meat. The correct use of salt and moisture is achieved by selecting specific plants and firewood that produce dense white smoke. It penetrates the meat tissue without requiring very high temperatures and the combined antibacterial effects protect the meat from degradation.

References

Climate Investment Funds (CIF), *"Empowering Indigenous Women to Integrate Traditional Knowledge and Practices in Climate Action"*, May 2021.

Climate Investment Funds (CIF), *"The contribution of traditional knowledge and technology to climate solutions"*, 2019.

International Fund for Agricultural Development (IFAD), *"The Traditional Knowledge Advantage – Indigenous Peoples' Knowledge in Climate Change Adaptation and Mitigation Strategies"*, 2016.

Intergovernmental Panel on Climate Change (IPCC), Working Group II, *"Sixth Assessment Report: (AR6) Climate Change 2022: Impacts, Adaptation and Vulnerability"*, February 2022, pp. 2715-2716.

UNESCO Australia and United Nations University, *"Weathering Uncertainty: Traditional Knowledge for Climate Change Assessment and Adaptation"*, 2012.

United Nations Environment Programme, Convention on Biological Diversity, *"Compilation of Information on The Indicators on Traditional Knowledge and Customary Sustainable Use Global: Workshop on Community-based Monitoring and Information Systems" (UNEP/CBD/WG8J/7/INF/11)*, 26 September 2013.

United Nations Framework Convention on Climate Change (UNFCCC), *Database on Best Practices and Available Tools for the Use of Indigenous and Traditional Knowledge and Practices for Adaptation.*

United Nations Framework Convention on Climate Change (UNFCCC), UNFCCC Report *"A Compilation of Good Practices, Tools and Available Data Collection Initiatives for the Use of Local, Indigenous and Traditional Knowledge and Practices for Adaptation"*, 2016.

United Nations Human Rights Council, Report of the Special Rapporteur on the human rights to safe drinking water and sanitation, *"Human rights to safe drinking water and sanitation of Indigenous Peoples: state of affairs and lessons from ancestral cultures" (A/HRC/51/24)*, 2022.

Unite Nations Human Rights Council, Report of the Special Rapporteur on the rights of Indigenous Peoples, *"Indigenous women and the development, application, preservation and transmission of scientific knowledge" (A/HRC/51/28)*, 2022.

United Nations General Assembly, Report of the Special Rapporteur on Human Rights and Environment, *"Human Rights Depend on a Healthy Biosphere, Annex - Good* Practices", 2020.

United Nations Office of the High Commissioner for Human Rights, David R. Boyd and Stephanie Keene, *Policy Brief No. 1 "Human rights-based approaches to conserving biodiversity: equitable, effective and imperative"*, August 2021.

GENEVA CENTRE
FOR HUMAN RIGHTS
ADVANCEMENT AND
GLOBAL DIALOGUE

Follow us on

Rue de Vermont 37-39, 1211 Geneva 20, Switzerland
Tel:+41(0) 22 748 2780, info@gchragd.org
http://www.gchragd.org/