

STOP BURNING OUR RIGHTS!

WHAT GOVERNMENTS AND CORPORATIONS MUST DO TO PROTECT HUMANITY FROM THE CLIMATE CRISIS

AMNESTY INTERNATIONAL

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Cover photo: *Protesters sing during a rally in Johannesburg, South Africa, for climate action on 20 September 2019, as part of a Global Climate Action day.*
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EXECUTIVE SUMMARY

CLIMATE CHANGE IS A HUMAN RIGHTS CRISIS

The climate emergency is a human rights crisis of unprecedented proportions. Climate change threatens the enjoyment of civil, political, economic, social and cultural rights of present and future generations and, ultimately, the future of humanity. When climate change-related impacts hit a country or a community, the knock-on effects can seriously undermine the enjoyment of the right to life lived in dignity, endanger a range of freedoms, and in many cases even put at risk the cultural survival of entire peoples.

At the current level of 1.1°C of global warming above pre-industrial levels, we are already witnessing devastating impacts, such as heatwaves and unprecedented wildfires, back-to-back tropical storms of high intensity and severe drought. These events, together with the slow-onset impacts of climate change such as sea-level rise, severely affect the enjoyment of the human rights of millions of people, including the rights to life, water, food, housing, health, sanitation, adequate standard of living, work, development, healthy environment, culture, self-determination as well as the right to be free from discrimination and cruel, inhuman and degrading treatment, among others. This publication describes how people are denied enjoyment of these rights due to climate change, and what the future threats are. For example, about 6,300 people died in the aftermath of super-typhoon Haiyan in the Philippines in 2013 and almost 4 million were affected by the 2019 cyclones in Mozambique, Malawi and Zimbabwe, being killed, displaced and losing access to schools, hospitals and sanitation. According to the Internal Displacement Monitoring Centre, on average, 20.88 million people were internally displaced every year by weather-related events between 2008 and 2018.



Local villagers seen on a dried river bed in 2015 in Satkhira, Bangladesh.

Bangladesh is one of the most vulnerable continental countries to climate change. Its people are threatened by sea level rise, tropical cyclones, river erosion, floods, landslides and drought.

Photo © Barcroft Media via Getty Images

Every further increase of global average temperature will aggravate the impacts of climate change for people and the planet. For example, the World Health Organization predicts that climate change is expected to cause 250,000 additional deaths per year between 2030 and 2050 due to malaria, malnutrition, diarrhoea and heat stress. The World Food Programme expects that climate change could lead to a 20% increase in global hunger and malnutrition by 2050. A 2°C rise in global temperature would lead to more than 1 billion people suffering from a severe reduction in water resources.

Scientists have confirmed that it is crucial that global warming is maintained within 1.5°C. For example, the Intergovernmental Panel on Climate Change (IPCC) estimated that holding the increase in the global average temperature to 1.5°C could – compared with 2°C – result in 420 million fewer people frequently exposed to extreme heatwaves, reduce the number of people exposed to climate-induced water stress by 50% and reduce the risk of coastal flooding by up to 80% for small island developing states. The 1.5°C threshold can still be met but urgent and wide-ranging measures are needed and the window for action is closing rapidly. Once carbon emissions are reduced to zero, states will need to establish a further, lower threshold for the global average temperature that reduces even further the harmful impacts on human rights that have occurred even at the current global average temperature.

The climate crisis is a manifestation of deep-rooted injustices. Although climate change is a global problem affecting everybody, it disproportionately affects individuals and groups who are already subjected to multiple and intersecting forms of discrimination or who are marginalized as a result of structural inequalities, ingrained practices or official policies that unfairly distribute resources, power and privilege. For example, women are often confined to roles and jobs that make them more reliant on natural resources and therefore more exposed to climate impacts. Because they face barriers in accessing financial or technical resources or are denied land ownership, they are less able to adapt to climate change. Because Indigenous Peoples heavily rely on the natural environment for their livelihoods, housing, medicines and cultural identity, and because they often live in areas prone to climate-related disasters due to a history of expropriation and forced evictions, they are among the groups suffering the most from climate impacts. People with disabilities are at greater risk during climate disasters compared with people without disabilities and their needs and voices are generally neglected in disaster risk reduction strategies. This publication describes the way in which climate change impacts these groups as well as other people marginalized on the basis of gender, class, caste, race and minority status, disability, age and migration status.

The climate crisis also disproportionally affects people in developing countries, especially in low-lying small island states and least developed countries, due not only to their exposure to climate-related disasters, but also to underlying political and socio-economic factors that amplify the impacts of those events, including the lasting consequences of colonialism. Climate change will not only perpetuate the effects of colonialism but, in effect, it is a new form of atmospheric colonization by states that had established colonial empires, and the states based on the settler societies they left behind. The climate scientists James Hansen and Makiko Sato have shown that between 1751 and 2014, the USA, UK and Germany produced cumulative per capita greenhouse gases (GHG) emissions that were at least six times higher than the global average. Russia, Canada and Australia meanwhile produced four to five times the global average. Responsibility for climate change closely tracks privilege across the world. OXFAM has calculated that from 1990 to 2015, the richest 10% of the world's population (about 630 million people) were responsible for more than half of the cumulative carbon emissions, while the poorest 50% (about 3.1 billion people) were responsible for just 7% of cumulative emissions. The wealthiest 1% of the world's population were responsible for the emission of more than twice as much carbon dioxide (CO_2) as the poorer half of the world combined.

HUMAN RIGHTS ARE ESSENTIAL TO TACKLE THE CLIMATE CRISIS

Under international human rights law, states have legal and enforceable obligations to tackle the climate crisis. When states fail to take sufficient measures to prevent human rights harms caused by climate change, including foreseeable long term harms, they violate their obligations under human rights law.

International human rights law provides extensive legally binding obligations that can be used to demand effective climate change policies and measures. Human rights law also provides extensive tools to enforce states' legal obligations. Similarly, human rights principles and standards provide significant guidance to establish the responsibility of businesses in relation to the climate crisis. Human rights are therefore essential

to hold states and corporations accountable for the human rights harms related to climate change for which they are responsible.

Recognizing that the climate emergency is a human rights crisis is also important as it can broaden the spectrum of people inspired to campaign for a just and rapid response to tackling climate change. Campaigning and advocating on the basis of human rights – as opposed to solely environmental protection – can motivate some decision-makers to adopt decisions in favour of human rights-consistent climate action, either due to the intrinsic argument made, or by showing that climate action has broad support in society.

As illustrated by several UN agencies and experts, civil society organizations and Indigenous Peoples, human rights are essential to strengthening climate action. Ensuring that climate measures and policies are consistent with human rights and centred in human rights principles, such as public participation, respect of free, prior and informed consent of Indigenous Peoples, equality and non-discrimination and respect of labour rights, is a legal obligation based on the human rights treaties that states have joined. It is also an effective approach to ensure the shift to a zero-carbon economy happens at the speed and scale required to limit global heating to 1.5°C or below without negatively impacting disproportionately on the rights of the most marginalized and those living in poverty. Affirming human rights principles and standards, but also using human rights mechanisms, tools and tactics to enforce these rights, can and has provided a crucial contribution to shape climate action that is ambitious enough to bring real positive transformation to people and the environment.

Groups most affected by the climate crisis, such as women, Indigenous Peoples, persons with disabilities, migrants and refugees, must not be seen only as victims, but everyone should recognize them as key agents of change and leaders in the local, national and international efforts to tackle climate change.

This publication presents Amnesty International's analysis of international human rights standards and how they are relevant to climate change as a human rights issue and to key climate change-related issues such as mitigation, adaptation and loss and damage. It explains the importance of adopting a human rights lens to tackle the climate crisis, and it illustrates how climate change adversely affects the enjoyment of human rights and worsens inequality and discrimination. This document therefore seeks to spell out state obligations and corporate responsibilities as precisely as possible.

Amnesty International's positions described in this document are based on human rights law, as developed by international and regional human rights treaty bodies and courts. They are also informed by the work of numerous UN and regional agencies and independent human rights experts, NGOs, think tanks and academics over the past decade as well as the activism of social movements and grassroots groups on the frontline of the fight for climate justice.

FAILING TO TAKE AMBITIOUS STEPS TO TACKLE CLIMATE CHANGE VIOLATES HUMAN RIGHTS

Despite a convergence of goodwill that led to the adoption of the Paris Agreement in 2015, states' efforts to tackle climate change remain far below what is required to avoid the most devastating impacts for ecosystems and humanity. In 2018, the IPCC confirmed that it was still possible for states to collectively reduce GHGs to a level that would keep the global average temperature increase to no more than 1.5°C. This requires that GHG emissions are reduced by 45% globally from 2010 levels by 2030, and to net-zero by 2050. Yet, GHG emissions continued to grow between 2010 and 2019. Although the confinement measures imposed in many countries in response to the COVID-19 pandemic temporarily reduced GHG emissions in 2020, they did not have any significant impact in tackling climate change.

Many governments, particularly in major emitting countries and nations with historical responsibility for the climate crisis, still lack the political will to take the bold and unprecedented measures that scientists have told us are necessary to avoid an impending catastrophe. The first round of governments' emissions reduction plans adopted in 2015 put us on a course to reach at least 3°C increase by 2100. While a slew of new 2030 and carbon-neutrality targets have recently been announced, most countries – especially wealthier states that are members of the G20 – are currently failing to adopt sufficiently ambitious and human rights consistent climate plans that would contribute to avoiding the worst human rights impacts of climate change. The current emission gap is a major concern from a human rights perspective, as the impacts associated with the predicted level of global warming would be catastrophic for the enjoyment of human rights.

Given the extensive knowledge about the causes and harms of climate change, failure to take adequate action to reduce climate change, to support people to adapt to its unavoidable effects and to provide remedy to those whose rights have been violated as a result of the loss and damage resulting from climate-related impacts, represents a human rights violation. Human rights violations related to insufficient ambition on climate action are no different than other human rights violations, and even bigger in scope. They condemn millions of people to premature death, hunger, diseases, displacement, not just in the future but also at present. They contribute to conflicts and to the unfolding cycle of human rights violations. They perpetuate and accelerate current inequalities and discrimination against those who are already being oppressed by systemic injustices. Failure to adequately tackle the climate crisis is a form of discrimination.



Amnesty International France's supporters take part in the World Climate March, Paris, 20 September 2019
Photo: © Benjamin Girette / Hans Lucas

WEALTHY COUNTRIES MUST ACT FASTER DOMESTICALLY AND ABROAD

The transboundary nature of climate change requires all countries to reduce emissions, achieve zero carbon emissions as soon as possible and help people to adapt to climate change to the full extent of their abilities. However, this does not mean that countries are equally responsible for the climate crisis, nor that they have the same level of responsibility on climate action. G20 countries are responsible for 78% of current global annual emissions, with some having a heightened responsibility because of the emissions they have historically produced since the beginning of the industrial revolution. In addition, all of the highest historical emitters are also among the wealthiest states with greater capacity to act.

As a consequence, according to the principle of common but differentiated responsibilities and respective capabilities, a principle that is also implicitly reflected in international human rights law, wealthier countries must take the lead in climate mitigation efforts by decarbonizing their economies more quickly than

developing countries, including by stopping the expansion of fossil fuel production. However, until now the vast majority of wealthier countries have not showed their willingness to act faster. For wealthier countries, net-zero emission targets by 2050 are too little, too late.

Based on their obligations under international law, wealthy countries must also provide sufficient financing and support to developing countries to allow them to meet their climate mitigation targets and implement effective climate change adaptation measures, as well as to provide compensation and other forms of remedies for the losses and damages people have already suffered due to the climate crisis.

However, wealthier countries continue to fail in this duty. Although the amount of international climate finance to support climate change mitigation and adaptation in developing countries is increasing, this is far from what is needed to ensure that the rise of global average temperatures is kept below 1.5°C above pre-industrial levels and that mitigation and adaptation efforts do not translate into an excessive burden for people in developing countries. In particular, the target for developed countries to jointly mobilize USD$100 billion a year by 2020 to support developing countries for climate change mitigation and adaptation measures remains significantly unmet, while the vast majority of the funds provided have been in the form of loans as opposed to grants, half of which were non-concessional, meaning that the loans were offered on ungenerous terms. Moreover, states have until now failed to agree on adequate mechanisms to mobilize new and additional finances for loss and damage caused by the effects of climate change.



Gas flares at a crude oil extraction site in the Niger Delta, Nigeria, April 2010.
Photo: © SU- Anna Tresse

Wealthy countries that refuse to pay their fair share are in practice turning their back to the millions of people displaced every year by climate change-related events or to residents of low-lying Pacific islands who face an existential threat.

FOSSIL FUELS ARE INCOMPATIBLE WITH HUMAN RIGHTS PROTECTION

Burning fossil fuels such as coal, oil and gas is the source of most GHG emissions for almost all economic sectors and accounts for more than 70% of global GHG emissions. Despite the urgency of the climate crisis and the commitments made by states under the Paris Agreement, carbon emissions from fossil fuel use continued to grow by roughly 1% annually between 2010 and 2018. Emissions were slightly higher in 2019 compared to 2018 and dropped by 5.8% in 2020 due to the fallout from the COVID-19 pandemic. The International Energy Agency projects that they will grow by 4.8% in 2021, in what could be the second biggest annual rise in history. Total carbon dioxide (CO_2) emissions are now 62% higher than emissions at the time international climate negotiations began in 1990.

Overall fossil fuel production needs to be cut by roughly 6% per year until 2030 in order to limit the increase of the global average temperature to 1.5°C. Yet in 2020 the United Nations (UN) Environment Programme (UNEP) calculated that countries were instead planning an annual increase of 2%. In response to the COVID-19 pandemic and its economic consequences, many wealthy industrialized countries and states have injected public money in bailing out or supporting fossil fuel companies, the aviation industry and other carbon-polluting companies with no conditions attached.

The IPCC has confirmed that the only way to keep the increase of temperatures below 1.5°C is to quickly phase out fossil fuels. This requires action addressing both the supply and the demand side. The supply side refers to reducing the production of fossil fuels, including curbing exploration, extraction, production and supply of fossil fuels abroad, and related investments. Demand side action involves cutting the demand for and the consumption of fossil fuels, for example by promoting energy efficiency, facilitating access to renewable energy that is responsibly produced in a manner that does not violate human rights, putting in place financial and other incentives and disincentives to switch production and use of energy from fossil fuels to renewable energy, and promoting behavioural change to reduce consumption.

Rapidly phasing out fossil fuel production and use, including by ending fossil fuel subsidies, is therefore an urgent task if we are to reduce emissions to a level where we can mitigate the worst impacts of the climate crisis on the enjoyment of human rights. At the same time, the transition to renewable energy and a zero carbon economy must be just, sustainable and human rights-consistent, to facilitate access to energy to all and ensure it is not carried out to the detriment of communities and individuals who are already marginalized or disadvantaged. For example, climate change mitigation and forest conservation projects must strengthen the rights of Indigenous Peoples, including by ensuring security of tenure on their ancestral land, so they have some form of legal protection against forced eviction. Carbon taxes must reduce inequalities rather than deepen them, thus putting the burden primarily on fossil fuel corporations and wealthier consumers while protecting low-income groups from regressive impacts through subsidies, grants and tax reforms and ensuring their access to affordable energy.

States that are failing to phase out fossil fuels in a timeline aligned with the 1.5°C imperative and with their respective capabilities are violating human rights. Similarly, companies, including financial institutions, that advance the production and use of fossil fuels without taking sufficient measures to reduce emissions in a timeline compatible with the 1.5°C imperative are abusing human rights and are accountable for human rights harms.

NOT JUST ZERO EMISSIONS, ALSO ZERO HUMAN RIGHTS ABUSES IN THE PROCESS

It has been well documented that some climate mitigation and adaptation projects and measures can negatively impact on the enjoyment of human rights, often disproportionately affecting groups already facing discrimination and marginalization. For example, renewable energy projects, biofuel crop farms and

conservation projects are often initiated in violation of the rights of Indigenous Peoples and local communities who live there. An excessive reliance on crop-based biofuels as a climate change mitigation measure or on carbon removal mechanisms such as Bioenergy with Carbon Capture and Storage (BECCS) can have very serious impacts on the right to food.

The mass production of rechargeable batteries for electric vehicles and renewable energy storage and generation is essential for the shift to renewable energy, reducing carbon emissions from transport and power generation. However, this requires a massive increase in extraction of critical minerals, that all too often results in widespread human rights abuses of local communities, and egregious environmental harm from irresponsible water, waste, and tailings management. Amnesty International's research has demonstrated this is often in arid ecosystems severely impacted by climate change.

Decarbonizing the economy and ensuring all societies are resilient to climate impact are crucial objectives to tackle the climate crisis. However, how these objectives are achieved equally matters. The transition must lead to a more equal society, rather than putting most of the costs and burdens on those least able to carry them. Human rights principles, such as equality and participation, must be applied to help shape the policies underlying this transition.

States must therefore ensure that measures intended to protect people from the effects of climate change do not result in the violation of other human rights and must avoid using the response to climate change to justify violations of human rights. They should also ensure a just transition for all workers and communities affected by climate change and the decarbonization process, taking the opportunity to reducing poverty and correct existing inequality in the enjoyment of human rights.



Members of the Sengwer Indigenous People, Kenya The Sengwer have suffered repeated forced evictions from their forest lands in Embobut, Kenya, due to abusive forest conservation policies. They are defending their human rights, and their demands are clear: the government must recognize their land rights and work with them to protect the forest. Photo: © Amnesty International

RECOMMENDATIONS TO STATES

The following are Amnesty International's key recommendations to states on immediate steps to implement their obligations under international law to respect, protect and fulfil human rights in the face of the climate crisis.

PROTECT PEOPLE BY URGENTLY PHASING OUT GREENHOUSE GAS EMISSIONS

Under human rights law, states have obligations to protect people and the enjoyment of their human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors, including businesses. This requires states to prevent or minimize the adverse impacts of climate change on human rights by taking adequate action to reduce GHG emissions. In particular, states must take all feasible steps to the full extent of their abilities, both nationally and through international co-operation, to reduce global GHG emissions within the shortest possible time-frame and in a manner compatible with the imperative of keeping the global average temperature rise as low as possible and no higher than 1.5°C above pre-industrial levels (climate change mitigation).

In particular, states must:

- Adopt and implement national climate plans, such as new nationally determined contributions (NDCs) and long-term decarbonization strategies. These must be consistent with human rights obligations, reflect each state's level of responsibility and capacity and align states' emissions reduction targets and related implementation plans, as well as their climate- and energy-related policies, with the imperative to keep the increase of global average temperature as low as possible and no higher than 1.5°C above pre-industrial levels;
- Reject any multilateral mechanisms for carbon trading that do not lead to genuine emission reductions and do not include human rights safeguards;
- Rapidly phase out and implement a just transition away from fossil fuel production and consumption as quickly as possible based on their capacities and responsibility for emissions, commencing with eliminating fossil fuel subsidies (with the exception of clean cookstove programmes as an interim measure for people who do not yet have access to affordable electricity) and the most polluting fossils fuels and forms of production, such as coal, peat, fracking, tar sands, and immediately halting fossil fuel expansion;
- Shift towards renewable energy for all produced in a manner consistent with human rights as quickly as possible, based on their capacities and responsibility for emissions and the Sustainable Development Goals (SDGs), and complete this process no later than 2050;
- Adopt sustainable and human rights-consistent policies across the food system, including public policies that promote and facilitate a just transition from unsustainable and exploitative agriculture and food systems to sustainable and human rights-consistent agricultural and land management practices;
- Ensure access to land and legal security of tenure for all, including communities who are dependent on land for their livelihood and access to food, water and housing;
- Adopt and implement effective policies to end deforestation by 2030 and restore natural forests;
- Review the use of bioenergy as a climate mitigation measure by taking human rights and environmental risks fully into account. In particular, they should phase out and end subsidies and tax exemptions for the production and use of bio energy from forest biomass and crop based biofuels. States must also ensure that human rights impact assessments and consultations with Indigenous Peoples and local communities are carried out prior to the approval of bio-energy projects in a way that allows for their meaningful participation and respects the right of Indigenous Peoples to free, prior and informed consent;
- Prioritize measures to prevent and reduce emissions in order to avoid CO_2 removal mechanisms and other offsetting measures that violate people's human rights. Among CO_2 removal measures, prioritize nature-based mechanisms, and particularly those that provide the best outcomes for ecosystems and human rights and do not compete with them for land use;

- Adopt human rights-consistent measures to reduce emissions from the transport sector, including adopting comprehensive, multi-sectoral and human rights-consistent policies and measures to reduce the demand for private cars and air travel; replacing fossil fuel-powered vehicles with electric vehicles while addressing human rights risks and environmental damage across the lithium-ion battery supply chain and life-cycle; requiring aviation companies to set time-bound commitments to reduce emissions in absolute terms without relying on offsets; and establishing regulations to reduce emissions from maritime shipping in a manner compatible with keeping global warming within the 1.5°C target;
- In the context of the COVID-19 pandemic, commit to and implement a just and environmentally sustainable recovery that puts human rights and climate action at its centre. In particular, ensure that stimulus packages and recovery measures facilitate the transition to a zero-carbon economy and resilient society, while also contributing to addressing the inequalities that the pandemic and the climate crisis have exacerbated and brought to light.

In addition, wealthy industrialized states must move fastest on climate mitigation efforts and avoid imposing unreasonable expectations on developing countries. In light of the imperative of reducing global GHG emissions by 45% from 2010 levels by 2030, they must:

- Adopt and implement the most ambitious emission reduction targets possible that would enable them to reduce emissions by half well before 2030 and reach zero carbon emissions by 2030 or as soon as feasible after that while ensuring a just transition that enhances human rights;
- Phase out fossil fuels and shift to renewable energy produced consistently with human rights by 2030 or as soon as possible after that;
- End the production and use of most polluting fossil fuels and forms of production, such as coal, peat, fracking and tar sands, as soon as possible and no later than 2030;
- End fossil fuel subsidies immediately;
- Prohibit, in law and practice, further investments to expand fossil fuel exploration, extraction and production including the development of new infrastructure, and decommissioning existing fossil fuel production within their territory;
- Stop financing fossil fuel projects in other countries, as a rapid fossil fuel phase-out by wealthier countries must not be pursued by simply shifting sources of production to developing countries.

HELP AFFECTED PEOPLE TO ADAPT TO UNAVOIDABLE CLIMATE CHANGE

States have the obligation to adopt all necessary measures to assist those within their jurisdiction to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on their human rights (climate change adaptation).

In particular, states must:

- Adopt and implement human rights-consistent adaptation measures that adequately protect people from the foreseeable and unavoidable impacts of the climate crisis;
- Take into account the needs and requirements of different groups in the design and implementation of climate change adaptation and disaster risk reduction strategies. This requires identifying and addressing the factors, including marginalization and discrimination, that increase the risks of harm from climate impacts and allocating adequate resources to the realization of the economic, social and cultural rights of all persons, with priority to those facing the greatest risks;
- Ensure adaptation measures give priority to the most marginalized groups, communities and individuals, address gender imbalances, and seek to be informed by the traditional knowledge of Indigenous Peoples and other local communities.

ENSURE CLIMATE ACTION IS CONSISTENT WITH PEOPLE'S RIGHTS

States must respect, protect and fulfil human rights in all climate policies and initiatives. In particular, they must ensure that the transition to decarbonized economies and resilient societies is just and fair for all, in line with states' human rights obligations, creating opportunities to combat existing inequalities both within and between countries, including promoting gender, racial, ethnic, disability and inter-generational equality.

In particular, states must:

- Ensure that measures intended to protect people from the effects of climate change do not result in the violation of other human rights;
- Avoid using the response to climate change to justify violations of human rights;
- Guarantee the right to be informed of the effects of climate actions, to take part in decision-making processes, to have their concerns taken into account and to have access to appropriate and effective remedies for violations of their rights;
- Ensure that the transition towards more resilient and zero-carbon societies is an opportunity to reducing poverty and correct existing imbalances in the enjoyment of human rights;
- Ensure a just transition to all workers and communities affected by climate change and the decarbonization process;
- Ensure that the transition towards more resilient and zero-carbon societies occurs at a pace and in a manner consistent with the human rights of future generations;
- Integrate human rights in climate policies and practices.

GUARANTEE EVERYONE'S RIGHTS TO INFORMATION, PARTICIPATION AND REMEDY

States have several procedural obligations in relation to their duty to protect people from environmental harm, including climate change. Their main obligations are to provide access to information, facilitate public participation, and provide access to justice and effective remedies. All of these obligations recognize the crucial role that environmental human rights defenders play in demanding action and accountability in the protection of the environment, and the necessary pre-conditions that states must provide so that defenders can play that role safely and effectively.

In particular, states must:

- Collect, update and disseminate information about climate change, provide access to environmental information, including related to climate change, and ensure children have access to environmental education;
- When planning and designing climate strategies, laws, national plans, as well as specific climate mitigation and adaptation projects and initiatives, conduct adequate and meaningful public consultation, particularly ensuring the participation without discrimination of those most affected by climate change and by the proposed decisions. Specifically, in relation to Indigenous Peoples, states should consult and co-operate with them and obtain their free, prior and informed consent before adopting measures that may affect them, and provide for redress measures in the event that land or property is taken from them without their consent. In particular, states should facilitate the public participation of individuals, communities, groups and peoples who are disproportionately affected by the climate crisis;
- Ensure the right to remedy for those whose rights are affected by climate change or climate-related measures. In particular, states must provide affordable and timely access without discrimination to administrative, judicial, legislative or any other appropriate means to adjudicate claims of imminent and foreseeable human rights violations resulting from climate change or climate measures, as well as past and current violations, including when conduct within their jurisdiction harms the rights of people outside their borders. States must also ensure that victims have access to effective and comprehensive remedies, including measures of cessation, restitution and remediation, compensation, rehabilitation, satisfaction and guarantees of non-repetition, and that all affected individuals have equal access to remedies and reparations;
- Recognize environmental defenders as human rights defenders and protect them in line with the UN Declaration on Human Rights Defenders, adopted by consensus in 1998;
- Protect the rights of everyone to speak out and mobilize for climate action or the protection of the environment, livelihoods and access to land, including through civil disobedience, guaranteeing the freedoms of expression, association and peaceful assembly and ensuring a culture of zero tolerance towards those who attack environmental human rights defenders.

PROVIDE AFFECTED PEOPLE WITH REMEDY FOR LOSS AND DAMAGE

The climate crisis is already seriously harming the enjoyment of human rights for people around the world, and especially in low-income, small island, coastal or arid developing countries that are most exposed to the impacts of climate change and have the most limited resources to deal with them.

Even if actions to mitigate and adapt to climate change are radically stepped up around the world, it is widely recognized that some consequences are inevitable because of historical emissions, the slow pace of mitigation and adaptation so far, and because some effects are beyond people's adaptive capacity. Such inevitable and irreversible residual effects that we see now, and will continue to see growing at an exponential level if climate mitigation and adaptation efforts do not match the urgency of the current crisis, are commonly referred to as "loss and damage". Examples of loss and damage include loss of life or income, degrading health, damage to infrastructure, displacement, inability to continue living on ancestral land and to maintain the identity and the cultural traditions associated with this.

Based on the obligation to provide an effective remedy, all states that have failed to take steps within their ability to limit emissions or to adapt to climate change are collectively responsible for the loss and damage resulting in human right violations within their territory and abroad in accordance with their respective contribution to the harm caused.

Amnesty International urges states to deal with loss and damage on the basis of their human rights obligations.

In particular, states must:

- Step up mitigation and adaptation efforts in order to avoid loss and damage to the greatest possible extent;
- When assessing the losses and damages caused by climate change-related events, and especially non-economic losses, consider the adverse effects of climate change on the enjoyment of human rights, such as the rights to life, health, food, adequate housing, education, work, culture and self-determination;
- Provide adequate resources (such as funds, technology transfer and technical advice) to address and provide remedy, including compensation, for loss and damage.

In particular, based on the duty of international co-operation and on the duty to provide remedy for human rights violations (in this case, the failure to prevent foreseeable human rights harm), **wealthy industrialized countries must provide financial means, technical support and access to remedy, including compensation, to people in developing countries whose rights have been negatively affected as the result of loss and damage caused by the climate crisis.** This includes ensuring that new and additional finance is mobilized specifically to support and compensate people in developing countries for the losses and damages suffered.

INCREASE INTERNATIONAL CO-OPERATION AND ASSISTANCE

Based on the principle of "common but differentiated responsibilities and respective capabilities" under environmental law and the duty of international co-operation under human rights law, all states in a position to do so must provide financial resources, capacity-building and technology transfer according to their capacity, capability and respective responsibility in causing climate change. It is a matter of international law and of climate justice that, while each state has obligations to prevent and tackle climate change, they should do so to the full extent permitted by their capacities and according to their responsibilities. Countries that have contributed the least to the climate crisis should be supported in meeting their climate mitigation and adaptation goals, and in addressing loss and damage.

In particular, states must:

- Co-operate to achieve a swift and human rights-consistent transition towards a zero-carbon and resilient future in a timeframe that allows global average temperatures to remain below 1.5°C. This requires that all states who need assistance request it, and those states in a position to do so provide the necessary financial resources, capacity building and technology transfer to those countries that would not otherwise be able to meet their climate targets alone, to support people to adapt to climate change or to cope with the loss and damage caused by the climate crisis;

- Ensure that climate funding is additional to existing commitments for overseas development assistance, that climate finance to low-income countries is in the form of grants, not loans, and that a better balance is achieved between mitigation and adaptation funding;
- Ensure that projects supported by national and international climate finance mechanisms respect and protect all human rights, and that climate projects that specifically advance the enjoyment of human rights, including promoting gender justice and fulfilling the rights of Indigenous Peoples, are prioritized;
- Support policies and implementing mechanisms within intergovernmental organizations, including multilateral development banks, of which they are members to ensure that these institutions act in conformity with the human rights obligation of their members. In particular, they should oppose any financing and investing in projects, activities and industries that drive fossil fuel expansion and deforestation and support phasing out existing funding and investments on a timeline aligned with the 1.5°C imperative.

In addition, wealthy industrialized states must:

- Significantly increase funding for human rights-consistent climate initiatives in less wealthy countries, including for loss and damage. This means that they should make concrete pledges reflecting their level of responsibility and capacity with a specific timeline for delivery, to jointly meet and go beyond the agreed annual target of USD$100 billion. At international climate negotiations within the UN Framework Convention on Climate Change (UNFCCC) they should also adopt a higher target that matches actual needs for support from developing countries.

SAFEGUARD THE HUMAN RIGHTS OF PEOPLE DISPLACED OR AT RISK OF DISPLACEMENT DUE TO CLIMATE CHANGE

The impacts of the climate crisis are already a significant driver of human mobility. The number of people on the move within or across national borders is anticipated to increase as both rapid-onset and slow-onset weather and climate events are exacerbated by climate change and entire countries or portions of them become uninhabitable.

States must follow their human rights obligations when adopting and implementing policies and measures regarding human mobility in the context of climate change and disasters.

In particular, states must:

- Reduce the likelihood and extent of climate-related displacement, both internally and across borders, by fully implementing their human rights obligations to mitigate climate change, to support people to adapt to its effects and to protect people from disasters domestically and through international co-operation, as well as implementing their commitments under the SDGs, the Sendai Framework for Disaster Risk Reduction and the Paris Agreement;
- Ensure that if permanent planned relocations are necessary as a measure of last resort to protect people from the unavoidable impacts of climate change (for example, when areas have become too dangerous for human habitation), the human rights of both the displaced and the host communities are respected, protected and fulfilled throughout the relocation process;
- Fulfil their obligations under international law in relation to the rights of internally displaced persons and ensure these are reflected in domestic laws and policies;
- Enhance safe and regular migration pathways that respect, promote and realize human rights, including labour rights, in line with international law, and provide a wide range of mobility opportunities, such as work visas and visas for educational purposes or family ties;
- Ensure, including by amending domestic legislation, that relevant authorities take into account the risk of human rights violations caused by the impacts of climate change when deciding admission and when reviewing claims for international protection. Governments should not remove people to any place where they would face a real risk of human rights violations as a result of the adverse effects of climate change;
- Ensure the meaningful, effective and informed participation of all persons, and especially migrants, refugees, asylum seekers, internally displaced persons and all those most impacted by the climate

crisis, to participate in national, regional and international decision-making processes related to climate change and human mobility;

- Co-operate to implement the Global Compact on Refugees, the Global Compact for Migration and the recommendations of the UNFCCC Task Force on Displacement;
- Co-operate to adopt adequate mechanisms and mobilize new and additional finances to provide means, support and remedy, including compensation, to people and communities, including Indigenous Peoples, who have been displaced or may be relocated as the result of loss and damage caused by the climate crisis in climate-vulnerable developing countries.

States that are most responsible for climate change must:

- Accept their collective responsibility to provide a remedy to affected persons in proportion to their contribution to the harm. This includes providing their fair share of climate finance to support an international mechanism on loss and damage and establishing clear protection mechanisms to accept and integrate in their territory displaced people who cannot return to their countries on account of the impacts of climate change.
- Cooperate to support people who need to relocate because their country is becoming uninhabitable due to climate change. States should ensure that following a genuine consultation process, the affected people are able to re-establish themselves and maintain their collective identity and right to self-determination in a safe and adequate location that ensures all their human rights are guaranteed.

RECOGNIZE THE RIGHT TO A SAFE, CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

The right to a safe, clean, healthy and sustainable environment is enjoying growing recognition from around the world. The constitutions of 110 countries include this right. At regional level, it is enshrined in a variety of human rights instruments. The UN Special Rapporteur on human rights and the environment notes that 156 out of 193 UN member states recognize this right either in their constitution or because they are party to a regional instrument that recognizes it. However, the UN has yet to explicitly recognize this right.

A UN resolution on the right to a safe, clean, healthy and sustainable environment would put this right on equal footing with other human rights principles, acknowledging that a healthy environment, including a safe climate, is indispensable for a life of dignity and security and highlighting each generation's responsibilities towards future generations. It will create the basis to strengthen the environmental policies and legislation of states, provide wider support and legitimacy and thus improve their environmental performance. It would also increase recognition and appreciation of the work of environmental defenders.

In particular, states should:

- Adopt and implement national legislation that recognizes and implements the right to a safe, clean, healthy and sustainable environment;
- Support the recognition by the UN of the right to a safe, clean, healthy and sustainable environment.

REGULATE BUSINESSES

Under international law, states have an obligation to protect all persons against human rights harms caused by businesses, including harms resulting from businesses' contributions to climate change, through regulation, oversight, investigation, adjudication and punishment. Where states can control or influence (consistently with international law) the conduct of corporations within their territory or under their jurisdiction, they must ensure that those businesses respect human rights throughout their global operations. States must also ensure effective remedy for the harm caused by businesses.

In particular, states must:

- Adopt regulations and policy measures to ensure that businesses reduce emissions across their operations and value chains by at least 45% by 2030 compared with 2010 levels, and to zero before 2050, in line with IPCC recommendations;

- Adopt and enforce laws obliging all business enterprises, including financial institutions, to respect human rights and conduct human rights and environmental due diligence on their global operations, value chains and business relationships;
- Require business enterprises, including financial institutions, to regularly and publicly report on their due diligence policies and their implementation, their impact assessments, their communications and consultations with potentially and actually affected right-holders, and their measures to mitigate risks and the impact of these. The environmental and human rights risks covered by corporate due diligence must include those linked to climate change;
- Ensure that financial regulators, such as central banks, take regulatory action to accelerate the financial industry's alignment with the threshold of 1.5°C of warming. This includes, for example, the requirement to incorporate climate scenarios within central bank stress tests, make climate risk disclosure mandatory, and changes to capital requirements that impose higher requirements on fossil-fuel lending;
- Ensure that climate-related policy-making and the enforcement of human rights and environmental due diligence requirements are protected from undue corporate influence, including from fossil fuel, agri-business and other industries responsible for high GHG emissions;
- Take appropriate steps to ensure, through judicial, administrative, legislative or other appropriate means, that people who have suffered human rights abuses as a result of corporations' climate impacts or their actions to respond to climate change have access to effective remedy.

RECOMMENDATIONS TO CORPORATIONS

The UN Guiding Principles on Business and Human Rights establish the independent responsibility of businesses to respect human rights. The human rights responsibilities of corporations extend to identifying, preventing, mitigating and accounting for human rights harms resulting from their contribution to climate change. Such responsibilities apply even in the absence of clear domestic regulation on climate change.

Amnesty International calls on corporations to carry out their responsibility to respect human rights in the context of climate change and align their operations and business models to the objectives of the Paris Agreement, specifically to the imperative of limiting the increase in global average temperatures to 1.5°C above pre-industrial levels.

Corporations should do the following to comply with their responsibilities:

- Ensure that their operations, as well as those of their subsidiaries and suppliers, adhere to international environmental and human rights standards;
- Commit to and put in place specific plans to reduce emissions across their operations and value chains as soon as possible and by at least 45% by 2030 compared with 2010 levels and to zero before 2050, in line with the recommendations of the IPCC. They should do so without excessively relying on offsets and carbon removal mechanisms, and implement detailed action plans to operationalize such commitments. In particular, energy producers and providers must expeditiously phase out the production and use of fossil fuels – including by shifting their portfolio towards renewable energy produced consistently with human rights;
- Financial institutions, such as banks, asset managers and insurance companies, should stop financing and investing in new projects, activities and industries that drive fossil fuel expansion and deforestation. They should phase out existing funding and investments on a timeline aligned with the 1.5°C imperative, ensuring that funding and investments for the most polluting fossil fuels and forms of production, such as coal, peat, fracking and tar sands, are phased out as soon as responsibly possible or by 2030 at the latest in wealthy industrialized countries and by 2040 in all other countries;
- As part of their responsibility to implement human rights and environmental due diligence, companies should identify, prevent, reduce and account for GHG emissions throughout their global operations, and make relevant information about their emissions and mitigation efforts public, including of all their subsidiaries, affiliates and supply chain;
- When planning to engage in climate change mitigation and adaptation activities, including those related to the production of renewable energy and associated technology, companies must conduct,

at all stages of the due diligence process, effective, meaningful and informed consultations with both affected and potentially affected right-holders;

- Businesses should be accountable for their climate impacts and human rights harms and ensure affected people have access to remedies;
- Refrain from lobbying governments whether directly or indirectly through trade associations for policies and decisions that perpetuate the carbon-based economy. They should also refrain from supporting public information campaigns based on inaccurate, misleading and unfounded assertions that make it more difficult for the public to access accurate information and make informed decisions.

GLOSSARY

AOSIS	Alliance of Small Island States
BECCS	Bio-energy with carbon capture and storage
CBDR-RC	Common but differentiated responsibilities and respective capabilities
CCA	Climate change adaptation
CCS	Carbon capture and storage
CDM	Clean Development Mechanism
CDR	Carbon dioxide removal
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CLARA	Climate Land Ambition and Rights Alliance
CO_2	Carbon dioxide
COP	Conference of the Parties (to the UNFCCC)
ETO	Extraterritorial obligations
FAO	Food and Agriculture Organization
GCF	Green Climate Fund
GCM	Global Compact for Migration
GCR	Global Compact on Refugees
GHG	Greenhouse gases
HRD	Human rights defender
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic, Social and Cultural Rights
IDP	Internally displaced person
ILO	International Labour Organization
IMO	International Maritime Organization
IPCC	Intergovernmental Panel on Climate Change
LCIPP	Local Communities and Indigenous Peoples Platform
LDCS	Least Developed Countries
NDCS	Nationally determined contributions
OECD	Organisation for Economic Co-operation and Development
OHCHR	Office of the High Commissioner for Human Rights
REDD+	Reducing emissions from deforestation and forest degradation
SDGS	Sustainable Development Goals
SDM	Sustainable Development Mechanism
UN	United Nations
UNEP	United Nations Environment Programme
UNHCR	United Nations High Commissioner for Refugees
UNFCCC	United Nations Framework Convention on Climate Change

UNICEF	United Nations Children's Fund
WFP	United Nations World Food Programme
WHO	World Health Organization
WIM	Warsaw International Mechanism for Loss and Damage
WMO	World Meteorological Organization

DEFINITIONS

Adaptation (climate change adaptation): adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.[1]

Afforestation: the conversion to forest of land that historically has not contained forests.[2]

Carbon budget: the amount of carbon emissions that can be emitted over a period of time to keep within a certain temperature threshold. While the Paris Agreement commits countries to keep the increase in the global average temperature "well below" 2°C, the Intergovernmental Panel on Climate Change has demonstrated the importance of keeping global heating below 1.5°C to avoid the worst effects of climate change. The carbon budget should therefore be calculated based on the 1.5°C threshold. The global carbon budget and the effort to remain within it must be divided fairly based on the principle of common but differentiated responsibilities and respective capabilities and its equivalent under international human rights law.

Carbon emissions: emissions of carbon dioxide (CO_2) caused primarily by the burning of fossil fuels (oil, natural gas and coal), solid waste, trees and wood products. Changes in land use can also contribute. Deforestation and soil degradation add CO_2 to the atmosphere, while forest regrowth takes it out of the atmosphere. According to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, CO_2 emissions from fossil fuel combustion and industrial processes contributed about 78% to the total greenhouse gas emission increase between 1970 and 2010.

Carbon markets (or carbon emission trading): mechanisms under which a limit, or cap, on greenhouse gas emissions is set and countries or companies that reduce emissions below their cap are allowed to sell emissions units to another country or company. Countries and companies that do not meet their target can buy these units to make up the shortfall.

Climate change: a change of the climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and that is in addition to natural climate variability observed over comparable time periods.[3]

Climate finance: the term is applied both to the financial resources devoted to addressing climate change globally and to financial flows to developing countries to assist them in addressing climate change.[4]

Climate justice: a term used by civil society organizations and social movements to highlight the justice implications of the climate crisis and the need to design just policy responses to climate change. The Climate Justice Syllabus, a project endorsed by the Global Campaign to Demand Climate Justice, defines climate justice as "the recognition that climate change is not only a question of emissions reductions and our physical environment, but also a political issue, an ethical issue, and a social issue".[5] The Mary Robinson Foundation – Climate Justice states that "climate justice links human rights and development to achieve a human-centred approach, safeguarding the rights of the most vulnerable and sharing the burdens and benefits of climate change and its resolution equitably and fairly".[6] Climate justice approaches focus on the root causes of the climate crisis and how climate change builds on and magnifies inequalities among countries and within countries. Climate justice demands are based on the imperative of addressing such imbalances and injustices, starting from centering climate action in the perspectives, knowledge and demands of groups and communities most affected by the climate crisis. Gender, racial, class, ethnic, disability and inter-generational justice are essential to achieve climate justice.

Common but differentiated responsibilities and respective capabilities (CBDR-RC): a principle within the UN Framework Convention on Climate Change, and in international law more generally, that acknowledges the different capabilities and differing responsibilities of individual countries in addressing climate change. Parties meeting in Lima at the COP20 in 2014 agreed to formulate the principle as "common but

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[1] UNFCCC definition. See UNFCCC, "Fact sheet: The need for adaptation", unfccc.int/files/press/backgrounders/application/pdf/press_factsh_adaptation.pdf
[2] IPCC, *Special Report on Climate Change and Land, Glossary,* 2019, ipcc.ch/srccl/chapter/glossary/
[3] Article 1, UNFCCC.
[4] IPCC, *Climate Change 2014: Synthesis Report,* Annex II: Glossary, ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_Annexes.pdf
[5] See climatejusticesyllabus.org/
[6] See mrfcj.org/principles-of-climate-justice/

differentiated responsibilities and respective capabilities, in light of different national circumstances". This formulation was adopted in the Paris Agreement. The principle of CBDR-RC is also implicitly reflected under human rights law (see footnote 262).

Conference of the Parties (COP): the governing body of the UN Framework Convention on Climate Change, representing all states that are parties to the Convention. It advances implementation of the Convention and of any other legal instruments that the COP adopts through the decisions it takes at its periodic meetings. The COP meets every year, unless the parties decide otherwise.

Deforestation: the conversion of forested areas to non-forest land use such as arable land, plantations, urban use, logged area, or wasteland. The major driver of deforestation is industrial agribusiness, in particular that of palm, soy, meat and dairy.[7] According to FAO, deforestation is the conversion of forest to another land use or the long-term reduction of tree canopy cover below the 10% threshold. Deforestation implies the long-term (>10 years) or permanent loss of forest cover.[8]

Developing countries: this document uses the term "developing countries" to refer to all countries that are not included in Annex 1 of UNFCCC.[9] However, there are substantial differences between developing countries. Many non-Annex 1 countries are classified as upper-middle income by the World Bank.[10] This publication treats countries classified by the World Bank as "upper middle income" and that are also part of the G20 as "developing countries with greater capacity" (see footnote 302). They have the responsibility to reduce emissions and shift towards renewable energy produced consistently with human rights faster than other developing countries. These are Argentina, Brazil, China, Indonesia, Mexico, South Africa and South Korea.

Ecosystem: a functional unit consisting of living organisms, their non-living environment and the interactions within and between them.[11]

Emissions gap: the shortfall between current commitments by governments on emission reduction against the latest understanding of what will be necessary to limit the mean global temperature rise to below 2°C/1.5°C above pre-industrial levels.[12]

Environmental human rights defenders: human rights defenders who strive to protect and promote human rights relating to the environment in a peaceful manner. As the rights to a healthy environment, including to a safe climate, and to access to land are often interlinked, under this banner we include all those struggling for climate justice, for access to land and for a healthy environment. They may carry out their activities in a personal or professional capacity, individually, or collectively. They may be journalists, lawyers, or ordinary people who expose and oppose environmental destruction or illegal land seizure or fight for climate action. Many live in remote villages, forests or mountain regions. They include Indigenous Peoples and community members who defend their traditional lands against the harmful effects of industries such as commercial cattle farming, plantation farming, mining, dams and fossil fuel industries.

Extraterritorial obligations (ETOs): human rights obligations relating to the conduct of a state within or beyond its territory that affect the enjoyment of human rights outside that state's territory, as well as obligations of a global character to realize human rights universally, including through international co operation (see section 2.2).

Extreme weather and climate events: the Intergovernmental Panel on Climate Change (IPCC) defines an extreme weather or climate event as "the occurrence of a value of a weather or climate variable above (or below) a threshold value near the upper (or lower) ends ('tails') of the range of observed values of the variable".[13] It also explains that some climate extremes (for example, droughts, floods) may be the result of an accumulation of weather or climate events that are, individually, not extreme themselves (though their accumulation is extreme). As well, weather or climate events, even if not extreme in a statistical sense, can

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[7] Greenpeace, *Agribusiness and Deforestation*, greenpeace.org/usa/forests/issues/agribusiness/
[8] FAO, *Manual on Deforestation, Degradation and Fragmentation Using Remote Sensing and GIS*, 2007, fao.org/forestry/18222-045c26b711a976bb9d0d17386ee8f0e37.pdf
[9] See unfccc.int/parties-observers
[10] See data.worldbank.org/income-level/upper-middle-income
[11] IPCC, *Special Report on Climate Change and Land, Glossary* (previously cited).
[12] For the UNEP definition, see UNEP, *Emission Gap Report 2020, Executive Summary*, 2020, unenvironment.org/emissions-gap-report-2020
[13] IPCC, *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Summary for Policymakers*, 2012, ipcc.ch/site/assets/uploads/2018/03/SREX_FD_SPM_final-2.pdf, p. 3.

still lead to extreme conditions or impacts, either by crossing a critical threshold in a social, ecological or physical system, or by occurring simultaneously with other events. A weather system such as a tropical cyclone can have an extreme impact, depending on where and when it approaches landfall, even if the specific cyclone is not extreme relative to other tropical cyclones. Not all extremes necessarily lead to serious impacts.[14] Extreme weather and climate events are generally divided into rapid-onset events, and slow-onset events (see definitions below). The IPCC has concluded that current rates of climate change are leading to "changes in the frequency, intensity, spatial extent, duration and timing of weather and climate extremes, and can result in unprecedented extremes".[15]

Global warming: the long-term heating of the Earth's climate system observed since the pre-industrial period (between 1850 and 1900) due to human activities.[16] The term global warming should not be used interchangeably with the term climate change, since the latter is more comprehensive. Climate change encompasses not only rising average temperatures (global warming) but also other impacts such as extreme weather events, sea-level rise, and so on (see "rapid-onset events" and "slow-onset events"). Global warming is most commonly measured as the average increase in the Earth's global surface temperature.[17] Although the IPCC uses "global warming", some scientists have stated that "global heating" is a more accurate term and more clearly conveys the scale of the problem. This document uses "global warming" and "global heating" interchangeably.

Greenhouse gas (GHG) emissions: a group of compounds that are able to trap heat (longwave radiation) in the atmosphere, keeping the Earth's surface warmer than it would be if they were not present. The emissions of these gases resulting from human activity are the fundamental cause of the greenhouse effect, leading to the warming of the planet. Increases in the amount of GHG emissions in the atmosphere enhance the greenhouse effect, which is creating global warming and consequently climate change. Carbon dioxide is the most important GHG emitted by human activity. Other major GHGs are methane and nitrous oxide. Less prevalent but very powerful GHGs are hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride.

Intergovernmental Panel on Climate Change (IPCC): the leading international body with 195 member states established to provide an objective scientific basis for analysing climate change's impacts on natural and human systems. The IPCC reviews and critically assesses the most recent scientific, technical and socio-economic information relevant to the understanding of climate change produced in thousands of studies worldwide. Its Assessment Reports are endorsed by all member states. Therefore, its reports carry special weight and have been relied upon by courts. The IPCC assesses the risks for different levels of greenhouse gases emissions, among other matters, but it does not take a position on what would be a "safe" level of warming.[18]

Just transition: the concept of a "just transition" originated from trade unions and was originally conceived as a programme of support for workers who lost their jobs due to environmental protection policies. Over time, the term has been used by unions and their partners more broadly to refer to "a deliberate effort to plan for and invest in a transition to environmentally and socially sustainable jobs, sectors and economies".[19] The 2015 *ILO Guidelines for a Just Transition Towards Environmentally Sustainable Economies and Societies for All*[20] provided a vision and a framework for a just transition that is widely accepted by trade unions, employers and governments, providing a systemic and whole-of-economy approach to sustainability that addresses environmental, social and economic issues together. In the context of climate change, Amnesty International supports the ILO Guidelines and considers just transition as a central aspect of human rights-consistent climate action and as the process and vision to ensure that the transition to decarbonized economies and resilient societies is just and fair for all, in line with states' human rights obligations, and create opportunities to combat existing inequalities both within and between countries, including promoting gender, racial, ethnic, disability and inter generational equality.

Land degradation: in the Intergovernmental Panel on Climate Change's *Special Report on Climate Change and Land*, land degradation is defined as a negative trend in land condition, caused by direct or indirect

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[14] IPCC, *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation,* Chapter 3, ipcc.ch/site/assets/uploads/2018/03/SREX-Chap3_FINAL-1.pdf, pp. 116-117.
[15] IPCC, *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Summary for Policymakers* (previously cited), p. 5.
[16] NASA, "Overview: Weather, global warming and climate change", climate.nasa.gov/resources/global-warming-vs-climate-change/
[17] National Geographic, "What is global warming, explained", 22 January 2019, nationalgeographic.com/environment/article/global-warming-overview
[18] See ipcc.ch/about/
[19] ITUC Just Transition Centre, *Just Transition: A Report for the OECD*, 2017, oecd.org/environment/cc/g20-climate/collapsecontents/Just-Transition-Centre-report-just-transition.pdf
[20] See ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf

human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of at least one of the following: biological productivity, ecological integrity or value to humans. This definition applies to forest and non-forest land.[21]

Mitigation (climate change mitigation): efforts to reduce or prevent emission of greenhouse gases in order to curb climate change. Examples include phasing out fossil fuels and shifting to renewable energy, improving energy efficiency, changing management practices or consumer behaviour, insulating buildings, investing in low-carbon public transportation, promoting sustainable agricultural practices such as agro-ecology and protecting, restoring and expanding forests and other carbon "sinks".

Nationally determined contribution (NDC): submissions by countries that have ratified the Paris Agreement indicating the nationally determined target for emission reductions and the actions each national government intends to take to meet that target. Under the Paris Agreement, governments are due to submit new NDCs to the UN Framework Convention on Climate Change Secretariat every five years with each revision representing a progression beyond the target included in the previous NDC.[22]

Net-zero emissions: the balance over a specific period between carbon emissions and negative emissions achieved by removing emitted carbon from the atmosphere. Achieving net-zero emissions is also referred to as "carbon neutrality".

Rapid-onset event: an extreme weather and climate extreme event defined by the UN Framework Convention on Climate Change as "a single, discrete event that occurs in a matter of days or even hours".[23] Examples of rapid-onset events include extreme heat, wildfires and extreme rainfall from tropical storms.

Reforestation: conversion to forest of land that has previously contained forests but that has been converted to some other use.[24]

Renewable energy: energy produced from natural sources or processes that are constantly replenished. Renewable energy stands in opposition to non-renewable energy, sourced from fossil fuels such as oil, gas and coal. Non-renewable sources of energy are only available in limited amounts, take a long time to replenish, and are a major contributor to climate change.

Slow-onset event: an extreme weather and climate event that "evolve gradually from incremental changes occurring over many years or from an increased frequency or intensity of recurring events" such as sea-level rise, increasing temperatures, ocean acidification, glacial retreat and related impacts, salinization, land and forest degradation, loss of biodiversity and desertification.[25]

United Nations Framework Convention on Climate Change (UNFCCC): the Convention, adopted in 1992 and entered into force two years later, which sets an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It recognizes that the climate system is a shared resource whose stability can be affected by industrial and other emissions of carbon dioxide and other greenhouse gases. It also recognizes the importance of fully considering "the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change, and of those Parties, especially developing country Parties, that would have to bear a disproportionate or abnormal burden under the Convention".[26] The Convention enjoys near universal membership.

Wealthy industrialized countries: this document uses the term "wealthy industrialized countries" to refer to countries included in Annex 1 of the UN Framework Convention on Climate Change.[27]

Zero emissions: refers to the point that no new greenhouse gases resulting from or produced by human activities will be emitted in the atmosphere. It differs from net-zero emissions (see above).

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[21] IPCC, *Special Report on Climate Change and Land, Glossary* (previously cited).
[22] Articles 4.2 and 4.9, Paris Agreement.
[23] UNFCCC, *Slow Onset Events: Technical Paper*, 26 November 2012, UN Doc. FCCC/TP/2012/7, para. 20.
[24] See IPCC, *Special Report on Climate Change and Land, Glossary* (previously cited).
[25] UNFCCC, *Slow Onset Events: Technical Paper*, 26 November 2012, UN Doc. FCCC/TP/2012/7.
[26] Article 3(2), UNFCCC.
[27] See unfccc.int/parties-observers

1. INTRODUCTION

The planet's climate has constantly changed throughout the Earth's history, with significant fluctuations of global average temperatures. However, the current period of warming is occurring more rapidly than any past events within human history. As such, 97% of climate scientists conclude that humanity has caused most of the last century's warming by releasing heat-trapping gases – knowns as greenhouse gases (GHGs) – to power our modern lives.[28] We are releasing these gases through the burning of fossil fuels, industrial agriculture and land-use change, transportation and other activities that drive climate change. GHGs are present in the atmosphere today at the highest levels they have ever been over the last 800,000 years.[29]

Climate change involves not only a rise in the global average temperature, but also a range of other impacts at a rate that is too fast for living things to adapt to. Research has shown that climate change has led, and will increasingly lead, to the increased intensity and frequency of certain rapid-onset weather events, such as extreme heat, wildfires and extreme rainfall from tropical storms.[30] Among slow-onset effects, climate change also alters precipitation patterns and leads to glacial melting, sea-level rise, salt-water intrusion and ocean acidification, and contributes to shifting wildlife populations and habitats and to biodiversity loss.[31]

The causes of climate change have been known for decades, with warnings starting to make headlines in the 1980s. In 1992, 165 states signed an international treaty, the UN Framework Convention on Climate Change (UNFCCC), and have held negotiations annually ever since (called "Conference of the Parties" or COP), with the aim of developing goals and methods to reduce climate change as well as to adapt to its already visible effects. Today, 196 states and the European Union are parties to the UNFCCC, which means that they are legally bound by it.[32] In 2015, at the 21st COP (or COP21) the parties adopted the Paris Agreement, with the aim to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below two degrees Celsius (2°C) above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5°C.[33] The Paris Agreement enjoyed a quick rate of ratification, entering into force on 4 November 2016. At the time of writing, 191 states are parties to the Paris Agreement.[34]

However, in practice, states' efforts to tackle climate change remain far below what is required to avoid the most devastating impacts for ecosystems and humanity. Global GHG emissions continued to grow between 2010 and 2019.[35] Although the confinement measures imposed in many countries in response to the COVID-19 pandemic temporarily reduced CO_2 emissions in 2020, they did not have any significant long-term impact in tackling climate change, and the concentration of GHGs in the atmosphere continued to rise in 2020.[36] The first round of governments' emissions reduction plans would put us on a course to reach at least

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[28] NASA, *Scientific Consensus: Earth's Climate is Warming*, climate.nasa.gov/scientific-consensus/
[29] Pursuit, "Key greenhouse gases higher than any time over last 800,000 years", 2017, University of Melbourne, pursuit.unimelb.edu.au/articles/key-greenhouse-gases-higher-than-any-time-over-last-800-000-years
[30] The IPCC has recognized that "[a] changing climate leads to changes in the frequency, intensity, spatial extent, duration, and timing of extreme weather and climate events, and can result in unprecedented extreme weather and climate events". See IPCC, *Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation, Summary for Policymakers* (previously cited), p. 5. See also Union of Concerned Scientists, *The Science Connecting Extreme Weather to Climate Change*, 4 June 2018, ucsusa.org/resources/science-connecting-extreme-weather-climate-change
[31] See UNFCCC, *Slow Onset Events: Technical Paper*, 26 November 2012, UN Doc. FCCC/TP/2012/7.
[32] This is more than the number of UN member states, which is 193. For a list of UN member states, see un.org/about-us/member-states
[33] See UNFCCC, *What is the Paris Agreement?*, unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement#:~:text=The%20Paris%20Agreement's%20central%20aim,further%20to%201.5%20degrees%20Celsius
[34] For updates on the status of ratifications, see unfccc.int/process/the-paris-agreement/status-of-ratification
[35] UNEP, *Emission Gap Report 2020, Executive Summary* (previously cited); World Meteorological Organization (WMO) and others, "United in science", 2019; WMO and others, "United in science", 2020. Both available at: public.wmo.int/en/resources/united_in_science
[36] UNEP, *Emission Gap Report 2020, Executive Summary* (previously cited).

3°C increase by 2100,[37] with a continued increase thereafter. The majority of countries, and particularly those responsible for most global emissions, have until now failed to set new adequate emission reduction targets for 2030 that would contribute to avoiding the worst human rights impacts of climate change.

There is a growing recognition that climate impacts are hitting harder and sooner than climate assessments indicated even a decade ago.[38] 2015-2020 were the six warmest years on record.[39] We have already reached at least 1.1°C of global warming above pre-industrial levels[40] and the global mean temperature for 2020 was 1.2°C above pre-industrial levels.[41] The Intergovernmental Panel on Climate Change (IPCC) has stated that global GHG emissions need to be cut by 45% by 2030 compared with 2010 levels and brought to zero by 2050 if we want to limit the increase of the global average temperature to 1.5°C.[42]

The climate emergency threatens the environment, the enjoyment of all human rights for present and future generations, and the future of humanity. The climate crisis is also the manifestation of deep-rooted injustices. Although the climate crisis is a global problem affecting everybody, it disproportionately affects persons, populations, groups, descent-based communities[43] and Indigenous Peoples who are subjected to multiple and intersecting forms of discrimination and to structural inequalities. The climate crisis also disproportionally affects people in developing countries, especially in low-lying small island states and least developed countries, due not only to their exposure to climate-related disasters, but also to underlying political and socio-economic factors that amplify the impacts of those events. In particular the lasting consequences of colonialism, and particularly its legacy of unequal distribution of resources among countries, have reduced the ability of lower-income countries to adapt to the adverse effects of climate change.

Such disproportionate impacts are even more shocking considering that people in developing countries have contributed the least to the climate crisis. Between 1751 and 2014, the USA, UK and Germany produced per capita GHG emissions that were at least six times higher than the global average. Russia, Canada and Australia meanwhile produced four to five times the global average.[44] From 1990 to 2015, the richest 10% of the world's population (some 630 million people) were responsible for more than half (52%) of the cumulative carbon emissions, while the poorest 50% (some 3.1 billion people) were responsible for just 7% of cumulative emissions. The wealthiest 1% of the world's population were responsible for the emission of more than twice as much carbon dioxide (CO_2) as the poorer half of the world combined.[45]

As a human rights organization, Amnesty International is profoundly alarmed by the climate crisis and its injustices, its multiple and serious impacts on human rights and the failure of governments to tackle it. In 2014, 27 UN Special Procedures described climate change as "one of the greatest human rights challenges of our time".[46] In 2019 the UN High Commissioner for Human Rights stated that "the world has never seen a threat to human rights of this scope".[47] Amnesty International concurs with these views and believes that the failure of world governments to tackle the global climate crisis could amount to one of the greatest inter-generational human rights violations in history.[48]

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[37] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers*, 8 October 2018, ipcc.ch/sr15/chapter/spm/, p. 18; UNEP, *Emission Gap Report 2020, Executive Summary* (previously cited).
[38] WMO and others, "United in science", 2019 (previously cited).
[39] WMO, *The State of the Global Climate 2020*, 20 April 2021, library.wmo.int/index.php?lvl=notice_display&id=21880#.YJy4sqhKiUl
[40] The IPCC calculated that human activities had caused approximately 1.0°C of global warming above pre-industrial levels in 2018 and that global warming was increasing at 0.2°C per decade. It also clarified that "present level of global warming is defined as the average of a 30-year period centred on 2017 assuming the recent rate of warming continues". See IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited).
[41] WMO, *The State of the Global Climate 2020*, 20 April 2021.
[42] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited).
[43] Discrimination based on "descent" includes discrimination against members of communities based on forms of social stratification such as caste and analogous systems of inherited status that nullify or impair their equal enjoyment of human rights. See UN Committee on Racial Discrimination, General Recommendation 29.
[44] J. Hansen and M. Sato, "Regional climate change and national responsibilities", 2016, Environmental Research Letters. Based on current emissions, the three countries with the highest levels of emissions are China, the USA and India (see globalcarbonatlas.org/en/CO2-emissions). However, climate change is caused by cumulative emissions, calculated by adding up each country's annual CO_2 emissions over time, starting from the year 1751. As shown by J. Hansen and M. Sato (2016), the USA and Europe are each responsible for more than one-quarter of the world's climate change, China about 10% and India about 3%. See also ourworldindata.org/contributed-most-global-co2
[45] Oxfam, *Confronting Carbon Inequality*, 21 September 2020, oxfam.org/en/research/confronting-carbon-inequality
[46] OHCHR, "A new climate change agreement must include human rights protections for all", 17 October 2014, ohchr.org/Documents/HRBodies/SP/SP_To_UNFCCC.pdf
[47] OHCHR, Global update at the 42nd session of the Human Rights Council, Opening statement by UN High Commissioner for Human Rights Michelle Bachelet, 9 September 2019, ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24956&LangID=E
[48] Amnesty International, "Amnesty International stands in solidarity with school strike for climate", 13 March 2019, amnesty.org/en/latest/news/2019/03/amnesty-international-stands-in-solidarity-with-school-strike-for-climate/

This document presents Amnesty International's analysis of international human rights standards and how they are relevant to climate change as a human rights issue and to key climate change-related issues such as mitigation, adaptation and loss and damage. It explains the importance of adopting a human rights lens to tackle the climate crisis, and it illustrates how climate change adversely affects the enjoyment of human rights and worsens inequality and discrimination. The document therefore seeks to spell out state obligations and corporate responsibilities as precisely as possible. However, it does not cover all climate change issues with implications on human rights, nor it provides an exhaustive list of all the measures that governments must take to decarbonize their economies and adapt to climate change.

Amnesty International's positions described in this document are based on human rights law, as developed by international and regional human rights bodies and national courts. They are also informed by the work of numerous UN and regional agencies and independent human rights experts, NGOs, think tanks and academics over the past decade as well as the activism of social movements and grassroots groups on the frontline of the fight for climate justice.

An earlier version of this document was subject to an extensive consultation within the Amnesty International movement. Numerous staff, Board members and other volunteers in Amnesty International national sections, as well as staff in International Secretariat thematic and regional teams, submitted comments either in writing or through videoconferences. This document has also benefitted from the discussions and insights from human rights, environment and other social justice groups who commented on the Declaration of the Peoples' Summit on Climate, Rights and Human Survival in New York on 18-19 September 2019, which Amnesty co-organized with Greenpeace International, OHCHR, Center for International Environmental Law (CIEL), New York University's Center for Human Rights and Global Justice and the Wallace Global Fund (see section 2.1).

The draft of this publication was also shared with external experts who form part of Amnesty International's reference group on climate change, representing a variety of regional and thematic expertise in relation to climate change and human rights, and with other civil society organizations with lengthy experience of working on climate change. In particular, Amnesty International would like to thank for their detailed comments on particular parts of the document: ActionAid International, Business & Human Rights Resource Centre, CIEL, FIAN International, Greenpeace International, International Trade Union Confederation, OHCHR, Project Dryad, Rainforest Action Network, Prof Kamal Amakrane, Eric Doherty, Vinuta Gopal, Prof John Knox, Prof Jane McAdam, Hindou Oumarou Ibrahim, Prof César Rodríguez-Garavito, Louise Rouse, Laurie van der Burg and Judith Wedderburn. Commentators have not reviewed the final version of the document and Amnesty International is solely responsible for any errors or misjudgements. Amnesty International would also like to thank Zoe Rasbash and Ajay Taheem for their research assistance. Many others not listed here, including members of the Human Rights and Climate Change Working Group and Climate Action Network - coalitions of which Amnesty International is a member, have asdvised Amnesty International and influenced its thinking since it began to develop this publication in 2016 – we thank them all.

This document aspires to provide guidance to governments, corporations and international organizations to formulate policies and measures that adequately and urgently address the climate crisis in a manner that enhances human rights. It also seeks to support the advocacy of civil society organizations, groups and Indigenous Peoples who are leading the fight for climate justice. Finally, it aims to provide information and analysis to human rights activists from around the world, including Amnesty International's own supporters and those who have not yet fully engaged with the issue of climate change, with the aim to increase the mobilization of the climate crisis from a human rights perspective.

2. WHY HUMAN RIGHTS MATTER

Human rights and climate change are not two separate issues. They are two sides of the same coin. We cannot fully enjoy our human rights in a world in which extreme weather and climate events are bringing ever more devastation, where safe water and adequate food are becoming inaccessible for many, and where, for many people whose lives are increasingly unbearable, leaving their homes and communities behind is becoming the only or best option.

The climate emergency is a human rights crisis of an unprecedented proportion. Scientists have confirmed that maintaining global warming within 1.5°C is absolutely crucial to avoid even more devastating impacts for people and the environment.[49] But they have also warned us that humanity has only a limited amount of time left to do so.[50] However, despite a convergence of goodwill that led to the adoption of the Paris Agreement in 2015, many governments are still lacking the political will to take those bold and unprecedented measures that scientists have told us are necessary to avoid an impending catastrophe.

Yet, not everything is lost. As explained below, affirming human rights principles and standards, but also using human rights-based mechanisms, tools and tactics to enforce these rights, can and has provided a crucial contribution to shape climate action that is ambitious enough to bring real positive transformation to people and the environment. Centring climate action on human rights, including by taking into account the wealth of knowledge, ideas and solutions that people at the frontline of climate change have developed,[51] could bring us a long way in building a safer, more just and more sustainable society.

2.1 CLIMATE CHANGE IS A HUMAN RIGHTS CRISIS

As illustrated in section 3 below, the climate crisis affects the full spectrum of human rights. When climate change-related impacts hit a country or a community, the knock-on effects can seriously undermine the enjoyment of the right to life lived in dignity, endanger a range of freedoms, and in many cases even put at risk the cultural survival of entire peoples. As described in section 4, those most affected are individuals and groups who are already subjected to multiple and intersecting forms of discrimination or who are marginalized as a result of structural inequalities, ingrained practices or official policies that unfairly distribute resources, power and privilege. In other words, those who are already experiencing human rights violations are the most likely to see their rights further undermined and denied as the result of governments' failure to adequately tackle the climate crisis.

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[49] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited).
[50] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited); H. D. Matthews and others, "An integrated approach to quantifying uncertainties in the remaining carbon budget", 2021, Communications Earth & Environment nature.com/articles/s43247-020-00064-9
[51] See for example the work of the Local Communities and Indigenous Peoples Platform established within the UNFCCC to facilitate the exchange of information about knowledge, technologies, practices and efforts of local communities and Indigenous Peoples related to addressing and responding to climate change, unfccc.int/LCIPP#eq-1 (see also section 4.3). For a list of "gender-just climate solutions", see womengenderclimate.org/gender-just-climate-solutions/ For youth-led climate initiatives, see for example unfccc.int/resource/docs/publications/publication_youth_2013.pdf

For more than a decade, the far-reaching threat that climate change poses for the full enjoyment of human rights has been solidly established by the UN Human Rights Council[52] and many of its special procedure mechanisms,[53] several UN human rights treaty bodies,[54] the Office of the High Commissioner for Human Rights (OHCHR),[55] the United Nations Environment Programme (UNEP),[56] and numerous other intergovernmental bodies[57] and non-governmental organizations.[58] Thanks to advocacy and campaigning carried out by the Human Rights & Climate Change Working Group[59] – a coalition of civil society groups, Indigenous Peoples and academic researchers – important references to human rights principles are included in the Paris Agreement and other documents produced under the UNFCCC.

"Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of Indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity"

(Preamble of the Paris Agreement, 2015)

"States have obligations both within and outside their territories to ensure the full implementation of the Convention, including in the areas of disaster risk reduction and climate change mitigation and adaptation. Measures such as limiting fossil fuel use, reducing transboundary pollution and greenhouse gas emissions and promoting the transition to renewable energies are regarded as crucial steps in mitigating the negative human rights impact of climate change and disasters globally"

(UN CEDAW, General Recommendation 37, 2018)

"Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors"

(UN Human Rights Committee, General Comment 36, 2018)

"Failure to take measures to prevent foreseeable human rights harm caused by climate change or to regulate activities contributing to such harm, could constitute a violation of States' human rights obligations."

(Statement on human rights and climate change by 5 UN treaty bodies, 16 September 2019)

However, these developments must be seen in the context of earlier struggles by frontline communities, Indigenous Peoples, women's rights activists, youth groups, groups facing racial discrimination, descent based communities and ethnic, religious and linguistic minorities, among others, who have been highlighting concrete cases that made the link between climate change and human rights in a solid, vivid and compelling way since the 1980s.

The efforts to frame climate change as a human rights issue must continue and escalate. We are at a crunch time if we are to avoid an impending human rights catastrophe for humanity. To face this challenge, we need

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[52] Since 2008, the UN Human Rights Council has issued numerous resolutions recognizing the linkages between climate change and human rights. See the full list at ohchr.org/EN/Issues/HRAndClimateChange/Pages/Resolutions.aspx

[53] For a list of climate-related reports and interventions by Special Procedures of the UN Human Rights Council, see ohchr.org/EN/Issues/HRAndClimateChange/Pages/HumanRightsMechanisms.aspx

[54] For a compilation of developments in the Human Rights Treaty Bodies' work on human rights in the context of climate change, see CIEL and GI-ESCR, *States' Human Rights Obligations in the Context of Climate Change: 2020 Update*, 2 April 2020, gi-escr.org/publications/states-human-rights-obligations-in-the-context-of-climate-change-2020-update

[55] See ohchr.org/en/issues/hrandclimatechange/pages/hrclimatechangeindex.aspx

[56] See UNEP, *Climate Change and Human Rights*, December 2015, unenvironment.org/resources/report/climate-change-and-human-rights#:~:text=Climate%20change%20is%20one%20of,and%20communities%20across%20the%20world

[57] See for example World Bank, *Human Rights and Climate Change*, 17 March 2011, openknowledge.worldbank.org/handle/10986/2291; UNICEF, "Child rights at risk: The case for joint action on climate change", 16 December 2014, unicef-irc.org/article/928-child-rights-at-risk-the-case-for-joint-action-with-climate-change.html#:~:text=These%20essential%20rights%20of%20children,protection%2C%20and%20participation%20in%20society

[58] See for example Earthjustice, *Is There a Human Right to a Stable Climate?*, 10 December 2009, earthjustice.org/blog/2009-december/there-human-right-stable-climate; CIEL, "Climate change and human rights", ciel.org/issue/human-rights-climate-change/; Mary Robinson Foundation – Climate Justice, "Human rights and climate change", mrfcj.org/our-work/areas-of-work/human-rights-and-climate-change/; International Bar Association, *Achieving Justice and Human Rights in an Era of Climate Disruption*, July 2014, allenovery.com/en-gb/global/news-and-insights/publications/iba-report; Quaker United Nations Office, *Climate Justice and the Use of Human Rights Law in Reducing Greenhouse Gas Emissions*, August 2016, quno.org/sites/default/files/resources/Climate%20Justice_August_2016.pdf

[59] See climaterights.org/

the most powerful and diverse movement ever assembled. The Peoples' Summit on Climate, Rights and Human Survival held in September 2019 and its Declaration, which was signed by more than 430 organizations around the world representing diverse environmental, women's rights, Indigenous, trade union, social justice and other human rights causes, provides a promising example of how diverse groups can come together and share a common vision.[60]

Promoting the understanding of the climate emergency as a human rights crisis is essential to appeal to people who are deeply committed to values such as dignity, equality and justice for all, and especially to those who identify with human rights as providing the value system and vocabulary for such principles.

To advocate on the basis of human rights can motivate some decision-makers to adopt decisions in favour of human rights-consistent climate action, either due to the intrinsic argument we are making, or by showing that climate action has broad support in society. A human rights-based argument places the future of humanity itself at the centre of the climate crisis.

2.2 LEGAL OBLIGATIONS TO ACT

Human rights principles and standards not only help to frame the climate crisis. More importantly, they also clarify that states have legal and enforceable obligations to tackle the climate crisis.

All states have obligations under international human rights law to respect, protect and fulfil all human rights for all persons without discrimination with respect to the various international and regional human rights treaties they have joined.[61] This obligation includes protecting the enjoyment of human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors, including business. The current and foreseeable adverse effects of climate change on the enjoyment of human rights of present and future generations therefore give rise to states' duties to take all reasonable steps to the full extent of their abilities to prevent this harm.[62]

Respecting, protecting and fulfilling human rights in the face of the climate crisis means that all states have the following key duties:

- to take all feasible steps to the full extent of their abilities to reduce greenhouse gas (GHG) emissions within the shortest possible time-frame (see section 5);
- to adopt all necessary measures to assist those within their jurisdiction to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on their human rights (see section 6);
- to ensure that all policies and measures aimed at addressing the climate crisis respect, protect and fulfil human rights, including the right to information, participation and remedy (see sections 7 and 8);
- to ensure effective remedies to all those whose rights have been violated as a result of loss and damage caused by the climate crisis (see sections 8.3 and 9);
- to regulate businesses to ensure they reduce emissions in a manner compatible with scientific evidence and they respect human rights throughout their supply chains (see section 12).

States also have extra-territorial obligations (ETOs). These are defined as human rights obligations relating to the conduct of a state within or beyond its territory that have effects on the enjoyment of human rights outside of that state's territory, as well as obligations of a global character to realize human rights universally, including through international co-operation.[63] The United Nations, Inter-American and African human rights

[60] Amnesty International, "200 environmental and human rights leaders pledge to tackle climate emergency together", 18 September 2019, amnesty.org/en/latest/news/2019/09/200-environmental-and-human-rights-leaders-pledge-to-tackle-climate-emergency-together/. The Declaration is still open for signatures from organizations and groups, see climaterights4all.com/peoples-summit-on-climate-rights-and-human-survival/
For more information on the Declaration, see climaterights4all.com/

[61] See indicators.ohchr.org/

[62] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 33.

[63] Principle 8, Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights. The Maastricht Principles were elaborated through an extensive process over several years and adopted by 40 international legal experts from around the world, including members of international human rights treaty bodies, regional human rights bodies, as well as Special Rapporteurs of the UN Human Rights Council. The Maastricht Principles did not create new law, but rather drew from existing laws and

systems have each clarified that States must not harm the rights of people within and outside their borders and regulate private parties to also refrain from such harm. Several UN human rights treaty bodies and the Inter-American Court of Human Rights have applied this approach to the transboundary aspects of climate change.[64] In addition, international human rights treaties explicitly require States to engage in international assistance and cooperation for the realisation of human rights.[65]

Based on their ETOs, states that have a greater responsibility for the climate crisis – due to their higher than average per capita current and past emissions – are jointly responsible for ensuring remedies to affected people based on the extent of their contribution to this harm (see section 9 on loss and damage). Wealthier states are also responsible for providing sufficient financing and support to developing countries to tackle the climate crisis through climate change mitigation and adaptation measures (see section 10 on international co-operation).

When states fail to take affirmative measures to prevent human rights harms caused by climate change, including foreseeable long-term harms, they are in breach of their obligations under human rights law.[66]

International human rights law provides more extensive legally binding obligations than environmental law, and these obligations that can be used to demand effective climate change policies and measures. For example, international environmental law does not oblige states to take any particular steps to substantively reduce emissions. Under the Paris Agreement, states themselves determine the extent of their commitment to reduce emissions by a particular amount. In contrast, as discussed above, under human rights law, states are required to take all feasible steps within their available capacity to reduce emissions, help people to adapt to climate change and ensure a remedy for violations. International human rights law thus, properly interpreted and applied, places reasonable boundaries on states' margin of discretion on issues ranging from emissions reductions to paying for the losses and damages that people and countries suffer due to climate-related impacts.

Human rights law also provides more extensive tools to enforce states' legal obligations. Human rights accountability and remedy mechanisms are stronger than those available under environmental law, both with regard to procedural and substantive rights. For example, global and regional human rights mechanisms provide for assessment of individual and/or group complaints and regular periodic review by independent treaty monitoring bodies, whereas most environmental treaty bodies do not.[67] Human rights bodies have increasingly been addressing climate change as a human rights issue.

2.3 CORPORATE RESPONSIBILITY TO RESPECT HUMAN RIGHTS

Human rights principles and standards also provide significant guidance to establish the responsibility of businesses in relation to the climate crisis. Under international human rights law, all states have a duty to protect against human rights abuses by all actors, including businesses throughout their global operations.

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standards with a view to clarifying states' obligations in relation to their extraterritorial conduct. The Principles, and their commentary that sets out the legal authority for each principle, were published in O. De Schutter and others, "Commentary to the Maastricht principles on extraterritorial obligations of states in the area of economic, social and cultural rights", Human Rights Quarterly, Volume 34, available at: eprints.lse.ac.uk/47404/

[64] ETO Consortium and others, *Written Submission to the European Court of Human Rights in the Case of Duarte Agostinho and Others v. Portugal and Others* (Index: EUR 01/4092/2021), 6 May 2021, amnesty.org/en/documents/eur01/4092/2021/en/, paras 21-35.

[65] For example, obligations in regard to economic, social and cultural rights, as set out in the International Covenant on Economic, Social and Cultural Rights, Article 2 (1). See also O. De Schutter and others, "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights" (previously cited), pp. 1091- 1095.

[66] OHCHR, "Key messages on human rights and climate change", ohchr.org/Documents/Issues/ClimateChange/KeyMessages_on_HR_CC.pdf

[67] See for example UNEP, *Manual on Compliance with and Enforcement of Multilateral Environmental Agreements*, June 2006, unece.org/fileadmin/DAM/env/documents/2019/ece/Restart/IC/-Manual_on_Compliance_with_and_Enforcement_of_Multilateral_Environmental_Agreements-2006743.pdf

In addition, businesses have a responsibility to respect all human rights wherever they operate in the world.[68] This responsibility is laid out in the UN Guiding Principles on Business and Human Rights, an internationally endorsed standard of expected conduct.[69]

As described in section 12, this responsibility requires companies to avoid causing or contributing to human rights abuses through their own business activities and to address adverse impacts with which they are involved, including by remediating any actual impacts. It also requires them to seek to prevent or mitigate adverse human rights impacts directly linked to their own operations, as well as within their value chains and business relationships. Such responsibilities apply to all business decisions, including business strategy, even in the absence of clear domestic regulations on climate change.

The responsibility of companies to respect human rights is independent of a state's own human rights responsibilities and exists over and above compliance with national laws and regulations protecting human rights.[70]

2.4 SHAPING CLIMATE ACTION

A human rights perspective is crucial to shaping climate action. Under human rights law, it does not only matter that states urgently tackle the climate crisis but also how they do it. Human rights principles and standards help to clarify the steps that states must take to ensure not only that climate measures are effective but also that they work for all persons, without discrimination.

Crucially, states must ensure free, active, meaningful and informed participation in climate decision-making (see section 8). Climate decisions taken without respecting this obligation result in human rights violations, often of very serious nature, for example when renewable energy projects lead to the forced eviction of Indigenous Peoples or even the killing of human rights defenders (see section 7). However, compliance with this obligation most often leads to climate decisions that are broadly supported – that in turn facilitate their implementation and therefore enhance climate action.

The principle of equality and non-discrimination is also essential to shape the content of climate action. Applying an intersectional analysis[71] to climate change issues is essential as it exposes the heightened impacts of the climate crisis on individuals, groups and peoples who are already facing multiple and intersecting forms of discrimination and inequality. It also highlights how people can be affected differently as a result of their different forms of disadvantage that they face, and may as a result have different priorities for remedy and redress. Measures taken to address discrimination on one ground alone may not be sufficient to remedy rights violations caused by intersectional discrimination and may actually make other forms of discrimination worse. Climate action should therefore be designed in a manner that is nuanced enough to address the various multiple and intersecting forms of discrimination, which is only feasible through an approach that is based on participation of people representing all affected groups. Procedurally, the principle of equality and non-discrimination provides for the obligation to ensure that groups disproportionately affected by the climate crisis are given equal and meaningful opportunities to participate in shaping climate measures, including by taking leadership roles.

Finally, human rights principles and standards can help to define what a fast and fair transition to decarbonized economy and resilient societies look like. A truly just transition is one with human rights at its centre, which promotes gender, racial, ethnic, disability and inter-generational justice, respects and promotes labour rights and reduces inequality both within and between countries.

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[68] This responsibility was expressly recognized by the UN Human Rights Council on 16 June 2011, when it endorsed the UN Guiding Principles on Business and Human Rights, and on 25 May 2011, when the 42 governments that had then adhered to the Declaration on International Investment and Multinational Enterprises of the OECD unanimously endorsed a revised version of the OECD Guidelines for Multinational Enterprises (OECD Guidelines). See UN Human Rights Council, Resolution 17/4: Human Rights and Transnational Corporations and other Business Enterprises, adopted on 16 June 2011, UN Doc. A/HRC/RES/17/4; OECD, *OECD Guidelines for Multinational Enterprises*, 2011, oecd.org/corporate/mne/

[69] Principles 11 and 13 including Commentary, OHCHR, *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework*, 2011, UN Doc. HR/PUB/11/04, ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf

[70] Principle 11 including Commentary, UN Guiding Principles (previously cited).

[71] This term was coined by the American legal scholar Kimberle Crenshaw and first published in "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics", 1989, University of Chicago Legal Forum, chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1052&context=uclf

3. HOW CLIMATE CHANGE AFFECTS HUMAN RIGHTS

Whereas climate change has implications for the full range of human rights, this section provides examples of how climate change undermines specific rights, as a way to illustrate the magnitude of the human rights crisis and the interconnectedness of climate change-related impacts on civil, political, economic, social and cultural rights, as well as between individual and collective rights.

KEY HUMAN RIGHTS IMPACTS OF CLIMATE CHANGE IN NUMBERS[72]

Right to life:

- 400,000 premature deaths annually have been linked to climate change (DARA, 2012)
- 250,000 predicted additional deaths per year between 2030 and 2050 due to malaria, malnutrition, diarrhoea and heat stress (WHO, 2014 and 2018)

Right to health:

- 200 million more people will be at risk of malaria by 2050 (IPCC, 2014)
- 88% of the diseases attributable to climate change affect children under the age of five (WHO, 2009)

Right to food:

- 20% more people suffering hunger and malnutrition by 2050 (WFP, 2018)
- At 2°C of global warming, 189 million people could experience levels of vulnerability to food insecurity greater than in the present day. At 4°C, the figure would rise to 1.8 billion people (WFP, 2017)
- 7.5 million children under the age of five will have their growth moderately or severely stunted by 2030 due to malnutrition, rising to 10 million by 2050 (WHO, 2014)

Rights to water and sanitation:

- More than 1 billion people will see a severe reduction in water resources with a 2°C rise in the global temperature. Limiting global warming to 1.5°C, compared with 2°C, may reduce the proportion of the global population exposed to increase in water stress by up to 50%, or one in every 25 people on this planet (IPCC, 2014 and 2018)

[72] The data summarized in this box are fully referenced in this section, under the respective headings. In 2019, Amnesty International produced an infographic summarizing some of this data. See amnesty.org.uk/what-has-climate-crisis-got-do-human-rights

- 1.4 billion people will be without access to basic sanitation in 2050 under a business-as-usual scenario (OECD, 2012)

Right to adequate housing:

- Overall, 1.8 billion people live in inadequate housing conditions, informal settlements, overcrowded homes, homelessness and unstable housing conditions (UN-Habitat, 2020). People living in informal dwellings are particularly exposed to the adverse impacts of climate change
- 30 million people were internally displaced in 2020 due to weather-related events (IDMC, 2021)
- 140 million people could be internally displaced by 2050 in Sub-Saharan Africa, South Asia and Latin America due to climate change (World Bank, 2018)

Rights to work and an adequate standard of living:

- In 2014, around 1.2 billion jobs, or 40% of world employment, were in sectors that depend heavily on natural processes and therefore highly sensitive to climate impacts (ILO, 2018)
- Between 2000 and 2015, 23 million working-life years were lost annually as a result of "different environmentally-related hazards caused or enhanced by human activity" (ILO, 2018)

3.1 RIGHT TO LIFE

Sudden extreme weather events exacerbated by climate change, such as extreme heat, wildfires and extreme rainfall from tropical storms, can negatively affect the right to life. Most of these extreme events lead to loss of lives, with some resulting in very high death tolls, often exacerbated by factors at the local level that increase the extent of the risks to the population from such events. For example, at least 30,000 people died in Europe as the result of the 2003 heatwave.[73] About 6,300 people died in the aftermath of super-typhoon Haiyan in the Philippines in 2013[74] and more than 1,000 people were killed as a result of cyclones in Mozambique, Malawi and Zimbabwe in 2019.[75] Recent wildfires have killed dozens of people in each instance, for example almost 100 people lost their lives in the 2018 wildfires in California and a similar number in Greece in the same year.[76]

In addition, climate change also indirectly affects the right to life when its negative effects on the rights to water and sanitation, health and food ultimately result in premature deaths. Globally, at least 400,000 premature deaths annually have been linked to climate change.[77] The World Health Organization (WHO) predicts that climate change is expected to cause 250,000 additional deaths per year between 2030 and 2050 due to malaria, malnutrition, diarrhoea and heat stress.[78]

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[73] UNEP, "Impact of summer 2003 heatwave in Europe", 2014, Environment Alert Bulletin, unisdr.org/files/1145_ewheatwave.en.pdf Although there are no official consolidated statistics, a study estimated that the death toll could have exceeded 70,000. See, J.-M. Robine and others, "Death toll exceeded 70,000 in Europe during the summer of 2003", February 2008, Comptes Rendus Biologie, Volume 331, Issue 2, sciencedirect.com/science/article/pii/S1631069107003770

[74] International Federation of Red Cross and Red Crescent Societies (IFRC), *Philippines: Typhoon Haiyan Emergency Appeal Final Report (MDRPH014)*, 5 October 2017, reliefweb.int/report/philippines/philippines-typhoon-haiyan-emergency-appeal-final-report-mdrph014

[75] Office for the Coordination of Humanitarian Affairs (OCHA), "Southern Africa: Cyclones Idai and Kenneth snapshot as of 10 July 2019", reliefweb.int/sites/reliefweb.int/files/resources/SA_Cyclone_and_Flooding_Snapshot_10072019.pdf

[76] World Resources Institute, "2018: A year of climate extremes", 27 December 2020, wri.org/blog/2018/12/2018-year-climate-extremes. See also T. Brown and others, "The Northern California 2018 extreme fire season", January 2020, in S.C. Herring and others (editors), Explaining Extreme Events in 2018 from a Climate Perspective, Special Supplement to the Bulletin of American Meteorological Society, Volume 101, Issue 1, ametsoc.org/ams/index.cfm/publications/bulletin-of-the-american-meteorological-society-bams/explaining-extreme-events-from-a-climate-perspective/; National Geographic, "Are Europe's historic fires caused by climate change?", 31 July 2018, nationalgeographic.com/environment/2018/07/are-fires-in-europe-the-result-of-climate-change-/

[77] DARA and the Climate Vulnerable Forum, *Climate Vulnerability Monitor 2nd Edition: A Guide to the Cold Calculus of a Hot Planet*, 2012, daraint.org/wp-content/uploads/2012/09/CVM2ndEd-FrontMatter.pdf

[78] WHO, *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s*, 2014, apps.who.int/iris/bitstream/10665/134014/1/9789241507691_eng.pdf, p. 1; WHO, "Climate change and health – key facts", 1 February 2018, who.int/news-room/fact-sheets/detail/climate-change-and-health

In recognition of such threats, the UN Human Rights Committee concluded in 2018 in its revised General Comment on the right to life that protecting this right requires states to take appropriate measures to address environmental degradation. The Committee also stated that "the obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken to preserve the environment and protect it against harm, pollution and climate change caused by both public and private actors".[79]

3.2 OTHER CIVIL AND POLITICAL RIGHTS

As pointed out by the UN Special Rapporteur on extreme poverty and human rights, the impact of climate change on civil and political rights other than the right to life has generally been overlooked.[80] And yet, there are a number of direct or indirect ways in which climate change-related impacts negatively affect or risk having serious consequences for the enjoyment of numerous civil and political rights, such as the rights to physical integrity, privacy, freedom of expression, association and peaceful assembly, and participation in public affairs. For example, the UN Human Rights Committee has stated that, without robust national and international efforts, the effects of climate change may expose individuals to a violation of their rights to life and freedom from torture and other cruel, inhuman and degrading treatment and that the conditions of life in countries at risk of becoming submerged under water "may become incompatible with the right to life with dignity before the risk is realized".[81]

Climate change-related impacts can also adversely affect individuals' capacity to enjoy their homes and their private and family life, thus limiting their enjoyment of the right to privacy.[82] This has been argued in several climate-related legal cases brought to national courts or international human rights bodies.[83] In the case of *Urgenda Foundation v. State of the Netherlands,* the Dutch Court of Appeal and the Supreme Court found that the government of the Netherlands has the positive obligation to take adequate climate mitigation measures to protect the rights to life and to private and family life, as guaranteed by Articles 2 and 8 of the European Convention for the Protection of Human Rights and Fundamental Freedoms (ECHR).[84]

As the impacts of climate change become more visible and governments' actions remain insufficient, greater numbers of people are mobilizing, taking to the streets, speaking out or engaging in acts of non-violent direct action and civil disobedience to demand an adequate response to the urgency of the problem. In many countries, defending human rights and the environment has long been a dangerous activity, and many human rights defenders (HRDs) face serious human rights violations, including criminalization and attacks ranging from threats and intimidation to murder, particularly as their demands clash with powerful interests (see section 8.4).[85] Even in countries with a stronger tradition of respect for freedoms of expression, association and peaceful assembly, protest and dissent have been under increasing attack, leading for

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[79] UN Human Rights Committee (HRC), General Comment 36: Article 6: Right to life, UN Doc. CCPR/C/GC/36, 3 September 2019, para. 62.
[80] UN Special Rapporteur on extreme poverty and human rights, Report, 25 June 2019, UN Doc. A/HRC/41/39, para. 65.
[81] UN Human Rights Committee, Views: *Ioane Teitiota v. New Zealand*, adopted on 24 October 2019, UN Doc. CCPR/C/127/D/2728/2016, para. 9.11.
[82] Article 12, Universal Declaration of Human Rights; Article 17, ICCPR. For a full list of international and regional instruments recognizing the right to privacy, see ohchr.org/EN/Issues/Privacy/SR/Pages/Internationalstandards.aspx
[83] See complaint in *Duarte Agostinho and others v. Portugal and others,* 2020, climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2020/20200902_3937120_complaint.pdf; petition of Torres Strait Islanders to the UN Human Rights Committee alleging violations stemming from Australia's inaction on climate change, 2019, clientearth.org/human-rights-and-climate-change-world-first-case-to-protect-indigenous-australians/; *Friends of the Irish Environment v. Ireland*, 2018, climatecasechart.com/climate-change-litigation/non-us-case/friends-of-the-irish-environment-v-ireland/; *Notre Affaire à Tous and Others v. France* (2018), climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2019/20190314_NA_complaint-1.pdf; *Union of Swiss Senior Women for Climate Protection v. Swiss Federal Council and Others "Verein KlimaSeniorinnen Schweiz v. Bundesrat"* (2016), climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2016/20161025_No.-A-29922017_petition-2.pdf; *VZW Klimaatzaak v. Kingdom of Belgium & Others*, 2014, climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2014/20141201_2660_summons.pdf
[84] Supreme Court of the Netherlands, *Case between the State of the Netherlands and the Urgenda Foundation*, 20 December 2019, urgenda.nl/wp-content/uploads/ENG-Dutch-Supreme-Court-Urgenda-v-Netherlands-20-12-2019.pdf See also urgenda.nl/en/themas/climate-case/ and ejiltalk.org/a-new-classic-in-climate-change-litigation-the-dutch-supreme-court-decision-in-the-urgenda-case/
[85] Amnesty International, *Deadly But Preventable Attacks* (Index: ACT 30/7270/2017), 5 December 2017, amnesty.org/en/documents/act30/7270/2017/en/; Global Witness, *Defending Tomorrow: The Climate Crisis and Threats Against Land and Environmental Defenders*, 2020, globalwitness.org/en/campaigns/environmental-activists/defending-tomorrow/; 350.org, *Human Rights Abuses by Fossil Fuel Companies*, 2020, 350.org/press-release/climate-crisis-is-aggravating-human-rights-violations-caused-by-the-fossil-fuel-industry-alerts-350-org-report/; J. H. Knox, *Environmental Human Rights Defenders: A Global Crisis*, 2017, universal-rights.org/urg-policy-reports/environmental-human-rights-defenders-ehrds-risking-today-tomorrow/; UN Special Rapporteur on the situation of human rights defenders, Report, 3 August 2016, UN Doc. A/71/281.

example to unlawful bans on protests[86] and the unlawful criminalization of HRDs.[87] In this context, it is not difficult to foresee that human rights violations could escalate as more people mobilize in the name of a safe climate. There is also the risk that governments could use the climate emergency as a pretext to unlawfully increase their powers and restrict some rights.[88]

[86] Amnesty International UK, "Extinction Rebellion blanket ban chilling and unlawful", 15 October 2019, amnesty.org.uk/press-releases/extinction-rebellion-blanket-ban-chilling-and-unlawful
[87] See for example Amnesty International, *Arrested for Protest: Weaponizing the Law to Crackdown on Peaceful Protesters in France* (Index: EUR 21/1791/2020), 29 September 2020, amnesty.org/en/documents/eur21/1791/2020/en/
[88] UN Special Rapporteur on extreme poverty and human rights, Report, 25 June 2019, UN Doc. A/HRC/41/39, para. 65.

CLIMATE CHANGE AND CONFLICTS

The relationship between the environment and conflict is inherently complex. The effects of climate change and environmental degradation are felt harder by communities that are already affected by conflict and its consequences. Armed conflict weakens government institutions and their capacity to respond to disasters and to address climate change and environmental degradation. It also weakens their ability to take preventive measures to protect people from disasters and displacement. The International Commitee of the Red Cross (ICRC) estimated in 2020 that, of the 20 countries most vulnerable to climate change, the majority were at war.[89]

Co-operation around environmental resources can prevent conflicts or form a path to conflict resolution. On other occasions, conflicts over local natural resources can turn violent. Natural resources can be a root cause of conflict and also provide combatants with incentives and financing that increase the intensity and duration of fighting.

The mechanisms that link the environment, including the effects of climate change, to conflict are not yet fully understood, but some studies suggest that hotter temperatures and reduced rainfall lead to more conflicts.[90] While a simple equation between resource scarcity induced by climate change and conflicts is contested, worsening climatic conditions are considered as a threat multiplier, exacerbating existing social, economic and environmental factors that may increase the risk of conflict and the human rights violations associated with it.[91]

For example, competition over resources exacerbated by rising temperatures and variable rainfall contributes, together with other factors, to violence between cattle herders and agricultural farmers in Nigeria and across the Sahel.[92]

As pressures around scarce resources intensify, the environmental dimensions of armed conflict will grow in visibility and importance. Risks that local-level conflicts tip over into wider violence will increase. As environmental resources become increasingly valuable, the environment will more frequently be used for strategic advantage during armed conflict.

Ultimately, reducing the ways in which natural resource scarcity and environmental degradation fuel armed conflict requires limiting the extent of global warming. But as a degree of anthropogenic global warming has already occurred – and temperatures will continue to warm for the foreseeable future – it is also important to scale up work on enhancing environmental protections before, during and after armed conflict.

3.3 RIGHT TO HEALTH

According to the Lancet Commission on Health and Climate Change, climate change threatens to undermine the last half century of gains in development and global health.[93] Any increase in global warming is expected to negatively affect human health,[94] and current projected levels "would challenge the maintenance of acceptable global health systems and escalate to repetitive humanitarian crises, including for the

[89] ICRC, "Climate change and conflict are a cruel combo that stalks the world's most vulnerable", 9 July 2020, icrc.org/en/document/icrc-report-climate-change-and-conflict-are-cruel-combo-stalk-worlds-most-vulnerable

[90] See for example S.M. Hsiang and M. Burke, "Climate, conflict, and social stability: What does the evidence say?", 2014, Climatic Change, Volume 123, Issue 1; C.S. Hendrix and I. Salehyan, "Climate change, rainfall, and social conflict in Africa", 2012, Journal of Peace Research, Volume 49, Issue 1.

[91] P. Huntjens and K. Nachbar, "Climate Change as a threat multiplier for human disaster and conflict", 2015, The Hague Institute for Global Justice, Working Paper 9, thehagueinstituteforglobaljustice.org/wp-content/uploads/2015/10/working-Paper-9-climate-change-threat-multiplier.pdf

[92] International Crisis Group, *The Central Sahel: Scenes of New Climate Wars?*, 24 April 2020, crisisgroup.org/africa/sahel/b154-le-sahel-central-theatre-des-nouvelles-guerres-climatiques On the human rights violations associated to the conflict, see Amnesty International, "Nigeria: Government failures fuel escalating conflict between farmers and herders as death toll nears 4,000", 17 December 2018, amnesty.org/en/latest/news/2018/12/nigeria-government-failures-fuel-escalating-conflict-between-farmers-and-herders-as-death-toll-nears-4000/

[93] Lancet Commission on Health and Climate Change, "Health and climate change: policy responses to protect public health", 2015, thelancet.com/journals/lancet/article/PIIS0140-6736(15)60854-6/fulltext

[94] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 11.

increasingly urban populations".[95] Children under the age of five bear a disproportionate burden of climate-related disease globally, with 88% of climate-exacerbated diseases affecting the under-fives.[96]

The main health impacts of climate change include:

- greater risk of injury, disease and death due to more intense heatwaves and fires, especially for older people and for manual workers who work outdoors or in poorly climate-controlled conditions;[97]
- rise in undernutrition resulting from diminished food production in poor regions,[98] with children particularly affected;
- increased risks of food and waterborne diseases such as cholera and other diarrheal illnesses and vector-borne diseases[99] such as malaria, zika and particularly dengue fever, which has reported a thirtyfold increase in global incidence that is largely attributable to climate change.[100] By 2050, 200 million more people will be at risk of malaria if disease control efforts are undermined by higher temperatures and shifts in rainfall patterns;[101]
- increased injury and ill-health triggered by extreme weather events, also due to destruction and damage of essential health-care infrastructure and services;[102]
- respiratory illness, heart disease, stroke, lung cancer and adverse birth outcomes such as preterm birth, low birth weight linked to air pollution exacerbated by climate change or caused by the same sources such as burning fossil fuels for electricity, industrial processes, mining, inefficient agricultural practices and transportation. Combined with household pollution, this contributes to 7 million premature deaths annually, 600,000 of which are of children;[103]
- severe impacts on mental health, including for children, such as post-traumatic stress disorder, anxiety and depression triggered by loss of family members, property or livelihoods as a consequence of extreme weather events;[104]
- disproportionate impacts on the health of women, for example when food supplies are reduced due to extreme weather and climate events and men's and children's nutritional needs are prioritized. Women's access to health care including sexual and reproductive health services can also be impaired because of infrastructure damage in the aftermath of disasters.[105]

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[95] Lancet Countdown Project and Médecins Sans Frontières, *Climate Change and Health: An Urgent New Frontier for Humanitarianism*, November 2018, doctorswithoutborders.ca/sites/default/files/2018-lancet-countdown-policy-brief-msf.pdf, p. 6.
[96] WHO, *Global Climate Change & Child Health*, 2009, who.int/ceh/capacity/climatechange.pdf, p. 46. On the disproportional impacts of climate-related diseases on children, see also The Lancet, "Countdown on health and climate change: Ensuring that the health of a child born today is not defined by a changing climate", 2019, thelancet.com/journals/lancet/article/PIIS0140-6736(19)32596-6/fulltext
[97] IPCC, *Fifth Assessment Report: Report of Working Group II*, 2014, ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-PartA_FINAL.pdf, p. 713; OHCHR, *Analytical Study on the Relationship Between Climate Change and the Human Right of Everyone to the Enjoyment of the Highest Attainable Standard of Physical and Mental Health*, 6 May 2016, UN Doc. A/HRC/32/23.
[98] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 713.
[99] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 713; WHO, "Climate change and infectious diseases", 2003, who.int/globalchange/climate/en/chapter6.pdf; The Lancet, "Countdown on health and climate change: Ensuring that the health of a child born today is not defined by a changing climate" (previously cited).
[100] UN Special Rapporteur on human rights and the environment, Report, 4 October 2019, UN Doc. A/74/161, para. 31.
[101] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 725.
[102] Lancet Countdown Project and Médecins Sans Frontières, *Climate Change and Health: An Urgent New Frontier for Humanitarianism*, November 2018 (previously cited), p. 11. See also Amnesty International, "Puerto Rico a year after hurricane Maria", 2018, amnesty.org/en/latest/research/2018/09/puerto-rico-a-year-after-hurricane-maria/
[103] UN Special Rapporteur on human rights and the environment, Report, 8 January 2019, UN Doc. A/HRC/40/55, paras 18-26.
[104] OHCHR, *Analytical Study on Climate Change and Health* (previously cited), para. 21; OHCHR, *Analytical Study on the Relationship Between Climate Change and the Full and Effective Enjoyment of the Rights of the Child*, 4 May 2017, UN Doc. A/HRC/35/13, para. 21.
[105] UN Committee on the Elimination of Discrimination against Women (CEDAW), General Recommendation 37: Gender-related Dimensions of Disaster Risk Reduction in the Context of Climate Change, 7 February 2018, UN Doc. CEDAW/C/GC/37, paras 65-67; OHCHR, *Analytical Study on Gender-Responsive Climate Action For the Full and Effective Enjoyment of the Rights of Women*, 1 May 2019, UN Doc. A/HRC/41/26, paras 13-15.

3.4 RIGHT TO ADEQUATE FOOD

Climate change threatens the right to food for millions of people. It negatively affects all the components of the right to food.[106] It affects food availability, as erratic climate patterns severely impact subsistence farming and directly reduce or alter crop, livestock, fisheries and aquaculture productivity and result in loss or alterations in both terrestrial and marine biodiversity.[107] Climate change also leads to an increase in agricultural pests,[108] as locust swarms devastating the Horn of Africa in 2020 illustrated.[109] Sudden reduction in food production contributes to increased food prices, affecting accessibility of food and leading to food insecurity, especially for people living in poverty.[110] The Intergovernmental Panel on Climate Change (IPCC) projected that global food prices could increase by 84% by 2050.[111] Climate impacts also affect food adequacy,[112] for example as rising carbon emissions lower the nutritional quality of food, notably reducing protein, zinc and iron contents.[113]

The statistics are frightening. The World Food Programme (WFP) projects that climate change could lead to 20% more people suffering hunger and malnutrition by 2050.[114] It also calculated that with a global warming level of 2°C, 189 million people could experience levels of vulnerability to food insecurity greater than in the present day, while the figure would rise to 1.8 billion people with a 4°C increase in the global average temperature.[115]

Certain groups are disproportionately affected by the impacts of climate change on their right to food. These include many Indigenous Peoples and other rural communities, and particularly women within these communities, due to their reliance on natural ecosystems and natural resources for their livelihoods.[116] Children are also particularly hit, with an estimated additional 7.5 million children under the age of five moderately or severely stunted by 2030, rising to 10 million by 2050.[117] The increase of food insecurity due to climate change will be felt unequally across regions, with Sub-Saharan Africa and South Asia more affected because they have a high economic dependence on agriculture, fisheries and livestock production, and fewer resources available for adaptation measures.[118] For example, by 2050, severe child stunting could increase by 23% in Sub-Saharan Africa and by 62% in South Asia due to climate change.[119]

3.5 RIGHTS TO WATER AND SANITATION

Due to a combination of factors such as melting snow and ice, reduced rainfall, higher temperatures and sea-level rise, climate change is affecting and will continue to affect the availability, quality, accessibility, affordability and acceptability of water resources.[120] Access to sanitation infrastructure can also be severely undermined by climate impacts. For example, extreme weather events such as tropical storms and floods affect water and sanitation infrastructure, reducing access to safe water and sanitation services, and thus contributing to the spread of water-borne diseases.[121] In some regions, droughts and changes in rainfall patterns contribute to water scarcity, often with serious implications for women who in many societies bear the burden of collecting water. As a consequence of rising sea-levels, saltwater intrusion in groundwater

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[106] In its General Comment 12 (1999) on the right to adequate food, the UN Committee on Economic, Social and Cultural Rights defined the necessary elements required for the right to food (that is, the possibility either to feed oneself directly from productive land or other natural resources or to purchase food) as availability, accessibility and adequacy. See UN Doc. E/C.12/1999/5.
[107] UN Special Rapporteur on the right to food, Report, 15 August 2015, UN Doc. A/70/287, paras 7-11.
[108] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers*, 2019, ipcc.ch/srccl/chapter/summary-for-policymakers/, p. 9.
[109] UNEP, "Locust swarms and climate change", 6 February 2020, unenvironment.org/news-and-stories/story/locust-swarms-and-climatechange#:~:text=Studies%20have%20linked%20a%20hotter,countries%20globally%20are%20in%20Africa.&text=Widespread%2C%20above%20average%20rain%20that,cent%20above%20normal%20rainfall%20amount.
UN Special Rapporteur on the right to food, Report, 15 August 2015, UN Doc. A/70/287, paras 12-14.
[111] IPCC, *Special Report on Global Warming of 1.5°C*, ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_Low_Res.pdf, p. 239.
[112] UN Special Rapporteur on the right to food, Report, 15 August 2015, UN Doc. A/70/287, paras 15-18.
[113] IPCC, *Special Report on Climate Change and Land*, ipcc.ch/srccl/, Chapter 5, p. 41.
[114] World Food Programme, "Two minutes on climate change and hunger", 1 November 2018, docs.wfp.org/api/documents/WFP-0000009143/download/
[115] World Food Programme, "What a 2°C and 4°C warmer world could mean for global food insecurity", 2017, wfp.org/publications/2017-2-and-4-degrees-infographic
[116] UN Special Rapporteur on the right to food, Report, 15 August 2015, UN Doc. A/70/287, para. 32.
[117] WHO, *Quantitative Risk Assessment of the Effects of Climate Change on Selected Causes of Death, 2030s and 2050s* (previously cited), p. 80.
[118] UN Special Rapporteur on human rights and the environment, Report, 15 July 2019, UN Doc. A/74/161, para. 36.
[119] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 1056.
[120] These are the components of the right to water, as determined by the UN Committee on Economic, Social and Cultural Rights in General Comment 15. See also UNEP, *Climate Change and Human Rights*, December 2015 (previously cited), p. 3; OHCHR, *Climate Change and the Human Rights to Water and Sanitation, Position Paper*, ohchr.org/Documents/Issues/Water/Climate_Change_Right_Water_Sanitation.pdf
[121] See for example UNICEF at unicef.org/wash/3942_4472.html

aquifers reduces the availability of drinking water.[122] Physical accessibility of water sources and sanitation facilities is also affected, for example when extreme weather events hinder access.[123] About 785 million people do not have access to a source of water or sanitation that is likely to be safe.[124] Due to climate impacts, the deterioration of water availability and quality can result in higher operating costs and consequently rising prices of domestic water and sanitation, with low-income and marginalized households unable to afford those services.[125]

Reduced water availability will result in increased competition between sectors such as domestic, agricultural and industrial water use[126] and affecting regional water, energy and food security in most dry subtropical regions.[127] Even at an individual level, populations affected by water scarcity are often forced to use the limited amount of available water for drinking and cooking purposes, sacrificing personal hygiene, with the consequence of developing "water-washed diseases" such as fungal skin diseases or increasing their exposure to infectious diseases such as COVID-19.[128]

With global warming of 2°C, 14% of the global population – or more than 1 billion people - could suffer from a severe reduction in water resources.[129] Limiting this rise to no more than 1.5°C could reduce the number of people exposed to climate-induced water stress by 50%, compared with a 2°C rise.[130] In 2012, the Organisation for Economic Co-operation and Development (OECD) projected that about 1.4 billion people will be without access to basic sanitation in 2050 under a business-as-usual climate scenario.[131] As a consequence of climate-induced floods, droughts and unpredictable weather patterns, around 5 billion people are predicted to be living in water scarce areas by 2050.[132]

3.6 RIGHT TO ADEQUATE HOUSING

Climate change threatens people's right to adequate housing in different ways. People living in poverty, particularly those who live in informal and underserviced settlements,[133] are particularly at risk from the impacts of climate change.[134] As underserviced areas, informal settlements are at risk of flooding, mudslides, rises in sea levels and other environmental hazards. Residents of these areas often have no option but to continue to live in precarious conditions. Currently, it is estimated that 1.8 billion people live in inadequate housing conditions, informal settlements, overcrowded homes, homelessness, and unstable housing conditions.[135] Flooding and landslides, caused by heavy rainfall, storm surges in coastal areas and sea-level rise, can destroy or severely damage houses, especially precarious and inadequate dwellings. The right to adequate housing is also undermined when the erosion of livelihoods and water or food scarcity, exacerbated by climate-related impacts such as drought, salinification and soil erosion, compel people to leave their homes.

In both circumstances, a lack of adequate support measures often leaves displaced people with no option but to live in precarious housing conditions that are highly inadequate, marred by overcrowding and lack of access to water and sanitation and therefore not compliant with the requirements under the right to adequate housing. Often these sites are located in hazardous and low lying areas, particularly at risk of

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[122] OHCHR, *Climate Change and the Human Rights to Water and Sanitation* (previously cited).
[123] OHCHR, *Climate Change and the Human Rights to Water and Sanitation* (previously cited).
[124] UNICEF and others, *Progress on Household Drinking Water, Sanitation and Hygiene 2000-2017*, 2019, who.int/water_sanitation_health/publications/jmp-2019-full-report.pdf These figures track whether people have access to a source of water likely to be safe, but do not track affordability of water nor actual quality of the water, and therefore do not fully express the lack of access to safe water.
[125] OHCHR, *Climate Change and the Human Rights to Water and Sanitation* (previously cited).
[126] OHCHR, *Climate Change and the Human Rights to Water and Sanitation* (previously cited).
[127] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 232.
[128] WHO, *Gender, Climate Change and Health*, 2014, who.int/globalchange/GenderClimateChangeHealthfinal.pdf, p. 14.
[129] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 250.
[130] IPCC, *Special Report on Global Warming of 1.5°C* (previously cited), p. 179.
[131] OECD, *OECD Environmental Outlook to 2050: The Consequences of Inaction*, 2012, cited in IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 720.
[132] WaterAid, "Brief for COP 2018", 2018, washmatters.wateraid.org/publications/climate-change-brief-what-wateraid-is-calling-for-at-cop24, p. 1.
[133] In 2018, it was estimated that over a billion people live in informal settlements. See unstats.un.org/sdgs/report/2019/goal-11/ Informal settlements are often clusters of low-income housing in unplanned areas. In many cases, residents of informal settlements do not have a legally recognised right to live on the land they occupy and therefore lack security of tenure. Living conditions in informal settlements are generally dire. Residents often live in overcrowded and insecure dwellings, are at risk of forced evictions and lack essential services such as access to adequate and safe water, sanitation, sewage systems, electricity, health care and education.
[134] See for example, UN Special Rapporteur on the right to adequate housing, Report, 6 August 2019, UN Doc. A/64/255; UN Special Rapporteur on extreme poverty and human rights, Report, 25 June 2019, UN Doc. A/HRC/41/39.
[135] UN-Habitat, Statement by UN-Habitat Executive Director Maimunah Mohd Sharif on World Habitat Day, 2 October 2020, unhabitat.org/statement-by-un-habitat-executive-director-maimunah-mohd-sharif-world-habitat-day-2020

flooding or landslides, with the result that people displaced in relation to climate change and other natural disasters can be caught in a cycle of displacement or continued exposure to severe threats (see also section 4.7).[136] In 2020, 30 million people were internally displaced by weather-related events.[137] The World Bank estimated that by 2050, climate change could contribute to the internal displacement of 140 million people in Sub-Saharan Africa, South Asia and Latin America alone.[138]

Climate adaptation measures are crucial to protect the right to adequate housing. The IPCC stressed that "good quality, affordable, well-located housing provides a strong base for city-wide climate change adaptation minimizing current exposure and loss".[139] The same adaptation strategies should be applied for people living in rural areas as well.

3.7 RIGHTS TO WORK AND TO AN ADEQUATE STANDARD OF LIVING

Climate change, both through extreme weather events and slow-onset events, impacts the rights to work and to an adequate standard of living, especially of people whose livelihoods are closely linked to fragile ecosystems, such as small-scale farmers practising rain-fed agriculture, seasonal workers in agriculture, fisherfolk, pastoralists and people employed in the tourist industry. It is estimated that in 2014, around 1.2 billion jobs, or 40% of world employment, were in sectors that depended heavily on natural processes.[140] Women are disproportionately affected, for example with more than 60% of working women in South Asia and Sub-Saharan Africa occupied in agriculture. Indigenous Peoples, migrant workers and people living in poverty are also particularly hit (see section 4 on equality and non-discrimination).

Yet jobs that are not strictly climate-sensitive can also be lost or livelihoods affected as the result of extreme weather events, increasing temperatures and other climate change-related events. People dependent on informal livelihoods or wage labour in poor urban settlements are particularly affected, and this is often compounded by the lack of adequate social protection.[141] The International Labour Organization (ILO) calculated that between the years 2000 and 2015, 23 million working-life years were lost annually as a result of "different environmentally-related hazards caused or enhanced by human activity".[142] Heat stress reduces the hours that people can work and leads to occupational health issues and workplace injuries, especially for those who work outdoors or in places with limited adaptive capacity, such as factories with no cooling system.[143] The health impacts of climate change also affect the capacity of people to work.

Jobs and livelihoods will, however, also be affected by the transition to a zero carbon economy. These include, for example, workers and communities reliant on the fossil fuel industry, aviation, car manufacturing and industrial agriculture. It is therefore essential that governments and companies provide for a just transition to a zero-carbon economy that fully respects, protects and fulfils human rights, including labour rights. Among other elements, this entails ensuring that affected workers are reskilled and have access to alternative decent jobs, and that communities can thrive and enjoy an adequate standard of living (see section 7).

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[136] International Alliance of Inhabitants, "The nexus between the right to housing and climate change – insights from the climate Conference COP24 in Katowice, Poland", 10 January 2019, habitants.org/news/global_info/the_nexus_between_the_right_to_housing_and_climate_change_insights_from_the_climate_conference_cop24_in_katowice_poland

[137] Internal Displacement Monitoring Centre, *Global Report on Internal Displacement 2021*, May 2021, internal-displacement.org/global-report/grid2021/

[138] World Bank, "Groundswell: Preparing for internal climate migration", 19 March 2018, worldbank.org/en/news/infographic/2018/03/19/groundswell---preparing-for-internal-climate-migration

[139] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 539.

[140] ILO, *The Future of Work in a Changing Environment: Climate Change, Degradation and Sustainability*, 2018, ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_644145.pdf, p. 7.

[141] IPCC, "Livelihoods and poverty" in *Fifth Assessment Report: WGII* (previously cited), ipcc.ch/site/assets/uploads/2018/02/WGIIAR5-Chap13_FINAL.pdf, p.798.

[142] ILO, *World Employment and Social Outlook 2018: Greening with Jobs*, ilo.org/global/publications/books/WCMS_628654/lang--en/index.htm

[143] IPCC, *Special Report on Climate Change and Land*, 8 August 2019, ipcc.ch/site/assets/uploads/sites/4/2020/02/SRCCL-Chapter-5.pdf, Chapter 5, p. 447; ILO, *World Employment and Social Outlook 2018: Greening with Jobs* (previously cited), p. 26.

3.8 RIGHT TO SELF-DETERMINATION

Human rights law recognizes that "all peoples have the right of self-determination. By virtue of that right they freely determine their political status and freely pursue their economic, social and cultural development".[144] An important aspect of the right to self-determination is the right of a people not to be deprived of its own means of subsistence.

The climate crisis not only poses a threat to the lives of individuals, but also to the survival of entire peoples. The right to self-determination is most imminently at risk for peoples of low-lying island states whose territorial existence, sovereignty and cultural survival is threatened by the direct and indirect effects of climate change.[145] Many other states could also become uninhabitable under the worst-case scenarios, forcing their entire people to relocate.[146] Climate change also threatens the right to self-determination of many Indigenous Peoples[147] as a consequence of the loss of their traditional territories, control over natural resources and sources of livelihoods. The implementation of climate change mitigation and adaptation programmes, including those funded through international climate finance mechanisms, on the territories of Indigenous Peoples without their free, prior and informed consent also severely threatens their right to self-determination.[148]

3.9 RIGHT TO DEVELOPMENT

The right to development establishes an entitlement for "every human person and all peoples to participate in, contribute to and enjoy economic, social, cultural and political development, in which all human rights and fundamental freedoms can be realized."[149] The International Covenant on Economic, Social and Cultural Rights (ICESCR) and other human rights treaties provide a legally binding basis for most of the prescriptions in the Declaration on the Right to Development, which includes requirements that states act individually and collectively to: eliminate obstacles to development; create international conditions favourable to the realization of the right to development; formulate development policies oriented to the fulfilment of this right; and promote, encourage and strengthen universal respect for and observance of all human rights.[150] The Rio Declaration on Environment and Development clarified that the right to development has an environmental component[151] by stating that "the right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations".[152]

Climate change represents a major threat to the right to development, deepening inequalities among countries. Many developing countries are forced to divert financial and human resources away from development priorities like health, education and agrarian support to confront climate change and its impacts.[153] Wealthy industrialized countries have historically benefited from the use of fossil fuels, which has driven their development, leaving a very limited carbon budget to developing countries. On top of that, as a result of climate change, the economic output of the warmest countries has significantly reduced: for example, India's per capita GDP is 31% lower than it would likely have been without climate change. At the

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[144] Common Article 1, ICCPR and ICESCR.
[145] United Nations, "Climate change 'threatens self-determination' of citizens in island States, UN rights council told", 6 March 2015, un.org/apps/news/story.asp?NewsID=50257#.WDLyS7IrLIV
[146] By 2070, under the "business-as-usual scenario" for emissions, the area of the world that experiences extreme heat (mean average temperatures of over 29°C) would expand from 0.8% to 19% of the Earth's surface, affecting 3.5 billion people by 2070. See C. Xu and others, "Future of the human climate niche", 26 May 2020, 117 (21) PNAS, pnas.org/content/117/21/11350 and in particular Figure 3 (pnas.org/content/pnas/117/21/11350/F3.large.jpg) that shows the affected areas: large parts of the northern half of Africa, and the southern half of Asia and the northern half of South America (including much of the Amazon region).
[147] The right of Indigenous Peoples to self-determination is recognized in Article 3 of the UN Declaration on the Rights of Indigenous Peoples.
[148] OHCHR, *Report of the Office of the United Nations High Commissioner for Human Rights on the Relationship Between Climate Change and Human Rights*, 15 January 2009, UN Doc. A/HRC/10/61, para. 40; Report of the Special Rapporteur on the rights of Indigenous Peoples, 1 November 2017, UN Doc. A/HRC/36/46, paras 40-41.
[149] Article 1, Declaration on the Right to Development adopted by the UN General Assembly Resolution on 4 December 1986 (resolution 41/128).
[150] Articles 2-4 & 6, Declaration on the Right to Development; Committee on Economic, Social and Cultural Rights, *Poverty and the International Covenant on Economic, Social and Cultural Rights*, 2001 UN Doc. E/C.12/2001/10, para. 12; Committee on Economic, Social and Cultural Rights, *Statement on the Importance and Relevance of the Right to Development,* 2011, UN Doc. E/C.12/2011/2, para. 5.
[151] CIEL, *Climate Change and the Right to Development: International Co-operation, Financial Arrangements, and the Clean Development Mechanism,* 10 February 2010, ciel.org/Publications/Climate_Development_Jan10.pdf
[152] Principle 3, Rio Declaration on Environment and Development, 13 June 1992, UN Doc. A/CONF.151/26 (vol. I).
[153] OHCHR, *Understanding Climate Change and Human Rights, Submission to the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change*, 2015, ohchr.org/Documents/Issues/ClimateChange/COP21.pdf, p. 16.

same time, some of the coldest countries have benefited – for example, Norway by a 34% increase in economic output and the Netherlands by 7.9%.[154]

As stated by the UN Special Rapporteur on extreme poverty and human rights, "climate change threatens to undo the last fifty years of progress in development, global health, and poverty reduction".[155] The World Bank estimated that without immediate action, climate change could push 120 million more people into poverty by 2030.[156] The IPCC also predicts that climate change will "jeopardize sustainable development", with Sub-Saharan Africa and Southeast Asia being the most affected areas.[157] It also clarified that limiting global warming to 1.5°C rather than 2°C would help avoid greater setbacks in sustainable development, eradication of poverty and reduction of inequalities.[158] States agreed to include combating climate change among the Sustainable Development Goals[159] reflecting its importance to achieving sustainable development.

Based on the right to development and the duty of international co-operation, wealthier countries must provide financial resources, technology transfer, capacity-building support and other forms of co-operation to facilitate climate change mitigation and adaptation in developing countries, in order to allow them to pursue a sustainable development pathway and protect people in their countries from the worst impacts of climate change (see section 10).[160]

3.10 RIGHT TO A SAFE, CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

Climate change, in combination with other contributors to environmental degradation, represents a huge challenge to the enjoyment of the right to a safe, clean, healthy and sustainable environment. The UN Special Rapporteur on human rights and the environment stated that "a safe climate is a vital element is a vital element of the right to a healthy environment and is absolutely essential to human life and well-being",[161] with other substantive components of this right being: clean air, healthy and sustainably produced food, access to safe water and adequate sanitation, non-toxic environments in which to live, work and play, healthy ecosystems and biodiversity.[162] As recently recognized by some national courts, states' failure to take adequate measures against climate change represents a violation of the right to a safe, clean, healthy and sustainable environment.[163]

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[154] N. Diffenbaugh and M. Burke, "Global warming has increased global economic inequality", 2019, PNAS, Volume 116, Issue 20, pnas.org/content/116/20/9808 -9813, pp. 9808. See also Stanford University, "Climate change has worsened global economic inequality", 22 April 2019, earth.stanford.edu/news/climate-change-has-worsened-global-economic-inequality#gs.lugnky

[155] UN Special Rapporteur on extreme poverty and human rights on climate change and poverty, Report, 25 June 2019, UN Doc. A/HRC/41/39, para. 13.

[156] World Bank Group, *Shock Waves – Managing the Impacts of Climate Change on Poverty*, 2016, openknowledge.worldbank.org/handle/10986/22787, p. 12.

[157] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 796.

[158] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 18.

[159] The 17 Sustainable Development Goals were adopted by all UN Member States in 2015, as part of the 2030 Agenda for Sustainable Development that set out a 15-year plan to achieve the Goals. Climate Action is Goal 13. See UN General Assembly, Resolution on Transforming Our World: The 2030 Agenda for Sustainable Development, 21 October 2015, UN Doc. A/RES/70/1.

[160] See UN Human Rights Council, Resolution 26/27, Human Rights and Climate Change, adopted on 27 June 2014, UN Doc. A/HRC/RES/26/27.

[161] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para 96.

[162] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 30 December 2019, UN Doc. A/HRC/43/53; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report: *Framework Principles on Human Rights and the Environment: The main human rights obligations related to the enjoyment of a safe, clean, healthy and sustainable environment*, 24 January 2018, UN Doc. A/HRC/37/59. In these reports the UN Special Rapporteur also clarified that the procedural elements of the right to a safe, clean, healthy and sustainable environment include access to environmental information, public participation in environmental decision-making, and access to justice with effective remedies.

[163] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para 44.

3.11 RIGHT TO CULTURE

Climate change is causing both irreversible and reversible destruction to cultural heritage around the world, starting with ancient sites at risk of being engulfed by rising sea levels.[164] The damage to and loss of ecosystems such as the Arctic, tropical and mountain forests, and semi-arid pastoralist areas, impact incalculably on the cultures of the peoples who live there, as a result of changes to and even complete destruction of livelihoods, which form an intrinsic part of culture, and loss of access to cultural heritage such as medicinal herbs and sites of cultural rites and ceremonies. As stated by the IPCC, "changing weather and climatic conditions threaten cultural practices embedded in livelihoods and expressed in narratives, world views, identity, community cohesion, and sense of place".[165] The UN Special Rapporteur on cultural rights has warned of a possible "catastrophic 'editing' process, in which much of the history and cultural traces of the biggest victims of climate change are allowed to disappear while the traces of those most responsible for it are more protected and more likely to survive."[166]

At the same time, culture can and must be part of the process of finding solutions to the climate emergency. Because of the unique way in which culture lies at the intersection of our internal imaginary world and our environments, "the arts and humanities support a fuller understanding of what it means to craft shared futures with others through 'conscious social transformations', or indeed to 'make and unmake futures that impact on all life on this planet'".[167]

Many cultures that have a longer history of interacting with nature, in which large-scale industrialized agriculture is absent, also offer a rich model for arriving at a more sustainable relationship with our environment. The UN Permanent Forum on Indigenous Issues has recommended that "States, United Nations agencies, bodies and funds, other multilateral bodies and financial institutions and other donors provide technical and financial support to protect and nurture indigenous peoples' natural resource management, environment-friendly technologies, biodiversity and cultural diversity and low-carbon, traditional livelihoods (pastoralism; rotational or swidden agriculture; hunting and gathering and trapping; marine and coastal livelihoods; high mountain agriculture; etc.)".[168] Indigenous technologies for managing forest fires may also help to stem devastating wildfires in the USA, Australia and elsewhere, but these technologies are being lost or in some cases have even been prohibited.[169] The cultural knowledge of Indigenous Peoples must be used with the peoples' free, prior and informed consent.

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[164] L. Reimann and others, "Mediterranean UNESCO World Heritage at risk from coastal flooding and erosion due to sea-level rise", 2018, Nature Communications, Volume 9, nature.com/articles/s41467-018-06645-9
[165] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 758.
[166] UN Special Rapporteur in the field of cultural rights, Report, 2020, UN Doc. A/75/298, para. 26.
[167] R. Tyszczuk and J. Smith, "Culture and climate change scenarios: the role and potential of the arts and humanities in responding to the '1.5 degrees target'", 2018, Current Opinion in Environmental Sustainability, Volume 31, p. 60 (cited in Report of the Special Rapporteur in the field of cultural rights, 2020, UN Doc. A/75/298).
[168] UN Permanent Forum on Indigenous Issues, *Report on the Seventh Session (21 April-2 May 2008)*, UN Doc. E/C.19/2008/13, para. 19.
[169] JStor Daily, "The global suppression of Indigenous fire management", 12 October 2020, daily.jstor.org/the-global-suppression-of-indigenous-fire-management/

4. EQUALITY AND NON-DISCRIMINATION

The climate emergency exacerbates pre-existing inequalities, reinforces neglect and exclusion, and increases vulnerabilities of at-risk and marginalized groups. Climate change triggers nuanced forms of discrimination and its effects undermine and disproportionately affect those with multiple and intersecting identities.

In its Fifth Assessment Report, the IPCC stated: "People who are socially, economically, culturally, politically, institutionally, or otherwise marginalized are especially vulnerable to climate change and also to some adaptation and mitigation responses. This heightened vulnerability is rarely due to a single cause. Rather, it is the product of intersecting social processes that result in inequalities in socioeconomic status, opportunities and income, as well as in exposure. Such social processes include, for example, discrimination on the basis of gender, class, ethnicity, age, and (dis)ability".[170]

As pointed out by the UN Special Rapporteur on extreme poverty and human rights, there is a very important risk that in the future "the wealthy pay to escape overheating, hunger, and conflict, while the rest of the world is left to suffer".[171] While this would certainly be accentuated in a world of 2°C, or even 1.5°C, warmer, it is already a reality in many contexts, whereby wealthier people can afford to take adaptive measures that are out of reach for disadvantaged people who are therefore left to suffer the worst consequences of climate impacts.

People who are at the frontline of climate impacts are also most often neglected and excluded from climate or disaster risk reduction decision making, despite the expertise and knowledge that they may have accumulated, the specific rights and needs they have, and the obligation to include them in decision-making processes. Their exclusion perpetuates indignity, oppression and injustices. It also means that climate change mitigation and adaptation projects and policies frequently lead to human rights violations and increased inequality, rather than improving the lives of the most at-risk (see section 7).

Addressing the climate crisis requires not only a reduction in greenhouse gas (GHG) emissions, but also the will to tackle the inequalities and injustices that underlie heightened risk of harm by climate change. This requires attention to the intersecting forms of discrimination and inequality that exacerbate the impact of climate hazards. It also requires that all people at the frontline of climate change, and the wider public, have sufficient information, access and opportunity to meaningfully participate in the design, planning, implementation and monitoring of climate change adaptation and mitigation policies and measures, including by respecting the rights of Indigenous Peoples to free, prior and informed consent (see sections 7 and 8). As stated by several UN human rights treaty bodies, people most impacted by climate change should not be seen only as victims, rather "they should be recognised as agents of change and essential partners in the local, national and international efforts to tackle climate change."[172]

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[170] IPCC, *Fifth Assessment Report: WGII: Summary for Policymakers* (previously cited), p. 6.
[171] UN Special Rapporteur on extreme poverty and human rights, Report, 25 June 2019, UN Doc. A/HRC/41/39, para. 50.
[172] OHCHR, "Five UN human rights treaty bodies issue a joint statement on human rights and climate change", 16 September 2019, ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=24998&LangID=E

4.1 GENDER

Women and girls overall are disproportionately affected by the adverse effects of climate change, as compared with men and boys. This is the result of pre-existing gender inequalities and intersecting forms of discrimination against, among others, women living in poverty, Indigenous women, women belonging to ethnic, racial and religious minorities, women from communities facing descent-based discrimination, LGBTI women, women with disabilities, women refugees and asylum-seekers, internally displaced, stateless and migrant women, rural women, single women, adolescents and older women.[173]

The disproportional impact of climate effects on women and girls is manifest in a variety of ways. Discrimination and gender inequality, patriarchal structures and systemic barriers mean that women are often confined to roles and jobs that make them more reliant on natural resources and therefore more exposed to climate impacts.[174] They also limit women's adaptive capacity, for example because women face barriers in accessing financial or technical resources to adapt to climate change or because lack of land ownership makes them unable to take the necessary adaptive measures.

In the aftermath of disasters, women and girls, particularly those with disabilities or living in poverty, face greater physical insecurity, including greater risk of sexual and gender-based violence, sexual exploitation and other violations of their sexual and reproductive rights.[175] There is also evidence that the impacts of climate change may increase the risk of forced and child marriage.[176] The unequal distribution of domestic and unpaid care work means that women are overburdened after disasters, especially in the lack of social protection and following the destruction of water and other infrastructures.[177] It also limits women's participation in consultation and decision-making processes and can hinder women's adaptation to the adverse effects of climate change by limiting the time available for non-domestic activities.[178]

While in many contexts it is mostly men who migrate because of the adverse effects of climate change, this can have important effects on women. For example, research showed that in northern Mali, when men migrated following crop failure due to prolonged drought, women's workload increased considerably, as they had to carry out the men's work in addition to their own tasks, and faced more hurdles in doing so, as they lacked the same rights as men to secure tenure or command over financial resources.[179]

When considering the gender-related dimensions of climate change, it is also important to take a wider view of gender equality, including transgender and other gender non-conforming people and those who might be discriminated against because of their sexual orientation or gender identity. The impacts of intersectional discrimination on individuals at risk of discrimination on multiple grounds such as sex, sexual orientation, gender identity, social or economic status, ethnicity and disability, must be recognized and the challenges, needs and rights of specific groups should be taken into account in the design and implementation of climate policies.[180]

Women often have a strong body of knowledge and expertise that can be used in climate change mitigation, adaptation and disaster reduction strategies. For example, women are usually first responders within their communities in the aftermath of a disaster. If provided with the same resources as men, the Food and Agriculture Organization (FAO) estimated they could increase yields on their farms by 20-30%, lifting 100-150 million people out of hunger.[181] Despite this, women are often excluded from decision-making processes, including those related to climate action, with the consequence of limiting the efficacity of the proposed measures and perpetuating gender inequalities.[182] Acknowledging this and considering their obligation to guarantee equality to women in political and public life, states must ensure women's effective

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[173] See for example UN CEDAW, General Recommendation 37 (previously cited), para. 2.
[174] OHCHR, *Analytical Study on Gender-Responsive Climate Action* (previously cited), para 5.
[175] OHCHR, *Analytical Study on Gender-Responsive Climate Action* (previously cited), paras 13-15; International Union for Conservation of Nature (IUCN), *Gender-based Violence and Environmental Linkages*, January 2020, portals.iucn.org/library/sites/library/files/documents/2020-002-En.pdf
[176] See for example C. McLeod and others, "Does climate change increases the risks of child marriage? A look at what we know and what we don't – with lessons from Bangladesh and Mozambique", 2019, Columbia Journal of Gender and Law, Volume 38, Issue 1.
[177] UN CEDAW, General Recommendation 37 (previously cited), para. 62.
[178] OHCHR, *Analytical Study on Gender-Responsive Climate Action* (previously cited), paras 8 & 29.
[179] UNFCCC, *Synthesis Report by the Secretariat: Differentiated Impacts of Climate Change on Women and Men; The Integration of Gender Considerations in Climate Policies, Plans and Actions; and Progress in Enhancing Gender Balance in National Climate Delegations*, 12 June 2019, UN Doc. FCCC/SBI/2019/INF.8, para. 21.
[180] Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women: General Recommendation on Gendered-Dimensions of Disaster Risk Reduction and Climate Change: Amnesty International's Preliminary Observations* (Index: IOR 40/3468/2016), 22 February 2016, amnesty.org/en/documents/ior40/3468/2016/en/
[181] FAO, "Smallholders and family farmers", factsheet, 2012, fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Factsheet_SMALLHOLDERS.pdf
[182] OHCHR, *Analytical Study on Gender-Responsive Climate Action* (previously cited).

participation in the design of all climate policies and measures at all levels (see section 8). This is also essential to ensure effective and truly gender-responsive and human rights-centred climate action.

The UN Human Rights Council has called on states to adopt a comprehensive, integrated and gender-responsive approach to climate change adaptation and mitigation policies, in the recognition that this will increase the effectiveness of climate change mitigation and adaptation.[183]

Measures to address climate change, including disaster response, should consider the specific needs of women. These include health needs such as those related to pregnancy and breast-feeding and to other sexual and reproductive rights.[184] During and in the aftermath of a disaster, states have a duty to protect against all forms of gender-based violence and provide remedies, including mental and physical health care. They should also carry out a gendered analysis of the relief efforts to identify potential threats to women's and girls' security and mitigate against these.

When transitioning away from fossil fuels, states must assess the implications of such measures from a gender perspective and carry out the transition in a manner that maximizes gender equality. For example, measures should be taken to ensure that carbon taxes or the elimination of fossil fuel subsidies do not disproportionally harm women, particularly rural women, those living in poverty or facing other forms of marginalization and intersecting discrimination. Barriers that prevent women accessing climate finance should be identified and removed, while adequate consideration should be given to gender issues when allocating funds for climate projects and programmes.[185] Policies and programmes should be developed to assess, reduce and redistribute the gendered burden of domestic and care work.[186]

Amnesty International welcomes the adoption of the new five-year Gender Action Plan, unanimously agreed by governments at COP25 in 2019, to promote gender-responsive climate action, facilitating women's participation in climate decision-making and gender mainstreaming within the UNFCCC.[187] It is also particularly encouraging that this new Gender Action Plan is the first document adopted in the context of UN climate negotiations to include references to discrimination and intersectionality.[188] However, Amnesty International notes that the document failed to include clearly defined indicators and targets for measuring progress on these objectives[189] and that the intersectional approach should be improved to ensure that people facing multiple and intersecting forms of discrimination and inequality are not left behind and are adequately included in climate change responses.

4.2 CLASS, CASTE, RACE AND MINORITY STATUS

People living in poverty are among the most vulnerable to the impacts of climate change. The UN Special Rapporteur on extreme poverty and human rights stated that "the greatest burden of climate change will fall on those living in poverty".[190] For example, people living in poverty are more likely to carry out manual and outdoor work that exposes them to higher risks from extreme weather events. They are most likely to live in informal settlements that are vulnerable to climate-related impacts, as described above, less likely to be able to access adequate health care, and more likely to have pre existing health conditions. Generally, they have fewer resources to prepare and adapt to climate change and face more difficulties in post-disaster recovery due to the lack of social protection and safety nets.[191] According to the IPCC, "climate-related hazards, including subtle shifts and trends to extreme events, affect poor people's lives directly through impacts on livelihoods, such as losses in crop yields, destroyed homes, food insecurity, and loss of sense of place, and indirectly through increased food price."[192]

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[183] UN Human Rights Council, Resolution 38/4, Human Rights and Climate Change, adopted on 5 July 2018, UN Doc. A/HRC/RES/38/4.
[184] UN CEDAW, General Recommendation 37 (previously cited), para. 68. See also Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women: General Recommendation on Gendered-Dimensions of Disaster Risk Reduction and Climate Change: Amnesty International's Preliminary Observations* Index: IOR 40/3468/2016 (previously cited).
[185] OHCHR, *Analytical Study on Gender-Responsive Climate Action* (previously cited).
[186] UN CEDAW, General Recommendation 37 (previously cited), para. 64(e).
[187] See UN Doc. FCCC/CP/2019/L.3.
[188] CIEL, *Report from the Madrid Climate Conference Promoting Human Rights in Climate Action at COP25*, January 2020, ciel.org/wp-content/uploads/2020/01/CIELreportCOP25_HumanRights.pdf, p. 4.
[189] Women and Gender Constituency, "Advances for gender equality at COP25", 13 December 2019, womengenderclimate.org/advances-for-gender-equality-at-cop25/
[190] UN Special Rapporteur on extreme poverty and human rights on climate change and poverty, Report, 25 June 2019, UN Doc. A/HRC/41/39, para. 1.
[191] See for example UN Special Rapporteur on extreme poverty and human rights on climate change and poverty, Report, 25 June 2019, Un Doc. A/HRC/41/39, para. 12.
[192] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 796.

The effects of climate change and fossil fuel-related pollution also run along lines of ethnicity, race, class and caste, perpetuating discrimination and inequalities. In India and Nepal, discrimination based on work and descent, combined with power, privilege and patriarchy, mean that communities belonging to low castes (Dalit), and women and girls in particular, face an unjust and unequal society and remain more susceptible to the negative impacts of climate change.[193] They are highly exposed by living in segregated and isolated housing based on caste lines and because they are often overlooked in humanitarian and rehabilitation responses and are persistently deprived of resources and opportunities to influence decisions concerning them.

In North America, air pollution disproportionately affects poorer communities of colour, whose neighbourhoods are more likely to be situated next to power plants, refineries and highways.[194] They experience markedly higher rates of respiratory illnesses and cancers, and African Americans are three times more likely to die of airborne pollution than the overall US population.[195] In Bulgaria, the first European country to lose a case in the European Court of Justice for its particularly poor air quality, the Roma community of Pernik lives next to a pollution-blighted illegal coal mine and many members of the community are forced due to poverty to engage in highly dangerous artisanal mining.[196] While these industries contribute to GHG emissions, climate change in turn aggravates the health impacts of pollution in these communities. For example, higher air temperatures caused by global warming trap air pollutants close to the ground, further reducing air quality and exacerbating existing health issues.[197]

Communities facing racial discrimination and ethnic, religious and linguistic minorities are more likely to be excluded from decision-making spaces.[198] With regard to policy and decisions on climate change, this means that their specific concerns, and their proposals for solutions, may be ignored. In some cases, they live in areas of ecological fragility and remoteness; having contributed, due to low levels of industrialization, very little to climate change, they are nevertheless experiencing some of the worst impacts. Minority women experience particular forms of intersectional discrimination, are disproportionately reliant on land-based livelihoods, and may be particularly vulnerable to the impacts of climate change. In the Marsh Arab community of southern Iraq, for example, "[t]he disappearance of fresh water, reeds and other natural resources has severely constrained the role of women in their society and reports suggest that, as a result, they are no longer passing traditional knowledge to the younger generations."[199]

People living in poverty and people facing discrimination on the grounds of race, ethnicity, work and descent are too often forgotten in the design, planning and implementation of climate change response measures, despite being among the most affected groups. States should analyse how climate change specifically impacts those groups and identify measures to reduce the impact of climate change on the enjoyment of their human rights. States should also provide members of these groups with equal and meaningful opportunities to participate and shape climate-related decisions. They should ensure that the needs and rights of members of these groups are given adequate consideration in the transition towards a zero-carbon economy and resilient society, avoiding climate measures that deepen inequalities and discrimination, and prioritizing initiatives that redress structural discrimination and inequality.

4.3 INDIGENOUS PEOPLES

Indigenous Peoples are frequently at the frontline of climate change impacts. They often maintain a close connection with the natural environment and their traditional lands on which their livelihoods and cultural identity depend.[200] In most cases, the worldviews and belief systems of Indigenous Peoples are founded on

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[193] S. Nazrul Islam and J. Winkel, *Climate Change and Social Inequality, DESA Working Paper No. 152*, 2017, un.org/esa/desa/papers/2017/wp152_2017.pdf

[194] Washington Post, "Pollution is segregated, too", 16 April 2014, washingtonpost.com/news/wonk/wp/2014/04/15/pollution-is-substantially-worse-in-minority-neighborhoods-across-the-u-s/?noredirect=on; Union of Concerned Scientists, *Inequitable Exposure to Air Pollution from Vehicles in the North-East and Mid-Atlantic*, 21 June 2019, ucsusa.org/resources/inequitable-exposure-air-pollution-vehicles

[195] Q. Di and others, "Air pollution and mortality in the Medicare population", June 2017, New England Journal of Medicine, nejm.org/doi/full/10.1056/nejmoa1702747

[196] Minority Rights Group, *Bulgaria: The Roma Community That Got Trapped in a Coal Pit*, 2019, minorityrights.org/bulgaria-the-roma-community/

[197] Climate Analytics, "Black Lives Matter: The link between climate change and racial justice", 22 June 2020, climateanalytics.org/blog/2020/black-lives-matter-the-link-between-climate-change-and-racial-justice/

[198] UN, Background document by the independent expert on minority issues, Gay McDougall, on minorities and effective political participation, 2009, UN Doc. A/HRC/FMI/2009/3.

[199] Minority Rights Group, *Iraq: Women Are the Backbone of the Marsh Arab Community – As the Effects of Climate Change Are Becoming More Visible, It is Becoming Clearer That Women are the First to Suffer*, 2019, minorityrights.org/iraq-women-are-the-backbone/

[200] See for example UN Special Rapporteur on the rights of Indigenous Peoples, Report: *The situation of the Sami People in the Sápmi Region of Norway, Sweden and Finland*, 6 June 2011, UN Doc. A/HRC/18/35/Add.2; UN Special Rapporteur on the rights of indigenous peoples, Report, 1 November 2017, UN Doc. A/HRC/36/46, paras 6-7.

the interrelation and interdependency of humans, flora and fauna, and environment. Indigenous Peoples have knowledge and experience of adapting to often dramatic changes in the natural environment of their territories and play a crucial role in the conservation of biodiversity, forests and natural resources.[201] For example, recent research from Amazon Basin countries suggests that Indigenous Peoples and traditional communities can play a significant role in keeping forests intact, thereby lowering carbon emissions from those areas. Where the traditional lands of Indigenous Peoples are primary forests, the demarcation of Indigenous territories can play a protective role against deforestation.[202]

Despite this, in many cases they are excluded from climate decision-making, including when climate-related initiatives encroach on their lives and territories. This often leads to other human rights violations, perpetrating the cycle of oppression and marginalization of Indigenous Peoples. It is vital that they have the opportunity to participate in decision-making and share – with their free, prior and informed consent – their experiences and technical expertise.[203]

Due to a close interrelationship with the natural world, as well as in some cases a history of expropriations and forced evictions, Indigenous Peoples often live in ecosystems, including arid, mountainous and tropical forest areas, that are particularly sensitive to alterations in climate. Because of long-standing discriminatory policies and practices, they are disproportionately represented among people living in poverty, with 33% of people living in extreme rural poverty globally coming from Indigenous communities.[204] This situation can leave Indigenous Peoples with limited resources to protect themselves from extreme weather events and other climate change-related impacts.

With considerable international funding being made available for renewable energy and climate change mitigation projects, there are concerns that states are seeking to benefit from such funds at the expense of Indigenous Peoples, instituting projects on their lands without their free, prior and informed consent, and without sharing the benefits with the affected peoples. Such projects are also less likely to be effective if not implemented with the participation and expertise of the affected people.[205]

States must ensure that Indigenous Peoples are provided with the opportunity to meaningfully contribute to the design, planning, implementation and monitoring of climate-related laws, policies and measures at the local, national, regional and international level, including in all decisions related to climate finance. They must also consult with and obtain the free, prior and informed consent of Indigenous Peoples at all stages in the development of climate change initiatives that may affect their rights. States should also ensure that the transition towards a zero-carbon economy and resilient society contributes to respecting, protecting and fulfilling Indigenous Peoples' rights, including to land, territory and resources, and provides equal opportunities to Indigenous Peoples to access decent jobs.[206]

At the UNFCCC level, the Local Communities and Indigenous Peoples Platform (LCIPP) was established in 2015[207] to promote and strengthen the knowledge of Indigenous Peoples and local communities related to addressing and responding to climate change, as well as to foster Indigenous Peoples' and local communities' engagement in the UNFCCC process and facilitate the integration of Indigenous Peoples' and local communities' knowledge and perspectives in international and national actions, programmes and policies on climate change. It also aims to facilitate mutual capacity-building efforts, from Indigenous Peoples to government and from government to Indigenous Peoples.[208] The International Indigenous Peoples Forum on Climate Change, the main body representing Indigenous Peoples within the UNFCCC, has been advocating for the full and effective participation of Indigenous Peoples at the decision making bodies of the UNFCCC and for increased coherence between actions at the international, national and local levels. The Forum is advocating strongly for the human rights of Indigenous Peoples to be respected – in particular

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[201] See for example A. Ramos-Castillo and others, "Indigenous peoples, local communities and climate change mitigation", 2017, Climatic Change, Volume 140, Issue 1, researchgate.net/publication/312416212_Indigenous_peoples_local_communities_and_climate_change_mitigation.

[202] W.S. Walker and others, "The role of forest conversion, degradation, and disturbance in the carbon dynamics of Amazon indigenous territories and protected areas", 2020, Proceedings of the National Academy of Sciences, Volume 117, Issue 6.

[203] UN Special Rapporteur on the rights of indigenous peoples, Report, 1 November 2017, UN Doc. A/HRC/36/46, paras 44-50. The right to free, prior and informed consent is protected under the International Labour Organization Convention 169 and the UN Declaration on the Rights of Indigenous Peoples, where it is specifically mentioned five times (Articles 10, 11, 19, 28 & 29).

[204] UN Special Rapporteur on the rights of indigenous peoples, Report, 1 November 2017, UN Doc. A/HRC/36/46, para. 7.

[205] See for example the case of Barro Blanco reservoir project in Panama described in footnote no. 318.

[206] ILO, *Indigenous Peoples and Climate Change: From Victims to Change Agents through Decent Work*, 21 April 2017, ilo.org/global/topics/indigenous-tribal/WCMS_551189/lang--en/index.htm

[207] See UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 135.

[208] See unfccc.int/LCIPP. The LCIPP established a Facilitative Working group (FWG) in 2018 with equal representation from Indigenous Peoples and from governments. The 14 members are nominated for a mandate of three years. A work plan of two years was elaborated to implement the activities of the FWG but the implementation of some of the activities was delayed due to the COVID-19 pandemic.

their right to free, prior and informed consent – when discussing the integration of their knowledge systems in climate adaptation and mitigation efforts, as the activities of the LCIPP work plan are implemented.

4.4 PERSONS WITH DISABILITIES

There are roughly 1 billion persons with disabilities worldwide.[209] Many are particularly at risk from climate change, compared with people without disabilities.[210]

For example, persons with disabilities are more likely to die or be injured following an extreme weather event.[211] A recent survey found that almost 80% of people with disabilities would not be able to evacuate immediately without difficulty following a disaster.[212] Migration and displacement might also pose additional barriers to persons with disabilities, for example due to the loss of support networks. Climate change impacts also put an additional burden on persons with disabilities, who in many contexts already face barriers in accessing adequate housing, education, health care, food, water and sanitation.[213]

Despite the fact persons with disabilities face multiple risks due to underlying multiple and intersecting discrimination and inequalities, and despite the obligation to protect persons with disabilities in the occurrence of natural disasters,[214] persons with disabilities are often not included in the planning of climate change adaptation and disaster risk reduction strategies, with the consequence that reasonable accommodations are often not included and their specific needs are often overlooked, or they are treated as a single group rather than in line with their individual needs and capabilities.[215] This results, for example, in barriers in accessing information about emergency plans, a lack of accessible shelter and limited access to other forms of aid, including food and water. Similarly, climate change mitigation policies and measures are often designed and adopted without taking into consideration the rights and requirements of persons with disabilities or without assessing the differential negative impacts that these can have on this group.[216] At the UNFCCC level, the rights of people with disabilities have so far received little attention.[217]

As stated by the UN Human Rights Council, states must adopt a disability-inclusive approach to climate action to, among other aims, "support the resilience and adaptive capacities of persons with disabilities both in rural and urban areas to respond to the adverse impacts of climate change".[218] For example, when designing climate mitigation and adaptation policies and measures, as well as disaster risk reduction strategies and disaster responses, states must consider the specific requirements of persons with disabilities, avoiding a one-size-fits-all approach and acknowledging the different identities, experiences and needs that persons with disabilities have.[219] States must ensure that persons with disabilities have access to information in a suitable format about climate change and its impacts, as well as planned response measures and policies.[220] They should also foster the meaningful, informed and effective participation of persons with disabilities in climate change decision-making at the local, national, regional and international level, including within the UNFCCC bodies and processes.[221]

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[209] WHO and the World Bank, *World Report on Disability,* 2011, p. 29. The report also explains that the number of people with disabilities is increasing due to ageing populations and the higher risk of disability in older people as well as the global increase in chronic health conditions such as diabetes, cardiovascular disease, cancer and mental health disorders.
[210] See UN Human Rights Council, Resolution 41/21, Human Rights and Climate Change, adopted on 12 July 2019, UN Doc. A/HRC/RES/41/21.
[211] OHCHR, *Analytical Study on the Promotion and Protection of the Rights of Persons with Disabilities in the Context of Climate Change*, 22 April 2020, UN Doc. A/HRC/44/30, para. 5.
[212] UN, *Disability and Development Report,* 2018, un.org/development/desa/disabilities/wp-content/uploads/sites/15/2019/10/UN-flagship-report-on-disability-and-development.pdf
[213] OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited), paras. 9, 16-17.
[214] Article 11, Convention on the Rights of Persons with Disabilities. Another relevant international standard-setting document is the 2015 Sendai Framework for Disaster Risk Reduction, which emphasizes the importance of inclusion and accessibility, and recognizes the need for the involvement of people with disabilities and their organizations in the design and implementation of disaster risk reduction policies. See paras 7, 32 & 36 at preventionweb.net/files/43291_sendaiframeworkfordrren.pdf. Also important is the 2019 Inter-Agency Standing Committee's Guidelines on the inclusion of people with disabilities in humanitarian action, see interagencystandingcommittee.org/iasc-task-team-inclusion-persons-disabilities-humanitarian-action/documents/iasc-guidelines
[215] See for example Overseas Development Institute, *Disability Inclusion and Disaster Risk Reduction – Overcoming barriers to progress,* 2018, cdn.odi.org/media/documents/12324.pdf, p. 4.
[216] S. Jodoin and others, "A Disability Rights Approach to Climate Governance", 2020, Ecology Law Quarterly, Volume 47, Issue 1, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3610193
[217] International Disability Alliance, *Persons with disabilities and climate action: how can we be more inclusive?,* 4 May 2021, internationaldisabilityalliance.org/hnpw-2021
[218] UN Human Rights Council, Resolution 41/21, (previously cited), para. 5.
[219] CBM, *Climate Change: This Century's Defining Issue*, internationaldisabilityalliance.org/sites/default/files/climate_change_report.pdf, p. 25.
[220] OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited), para. 61 (c).
[221] OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited), paras 61(b), 62.

4.5 CHILDREN

Climate change severely undermines the human rights of children and young people by harming them in the present and by reducing their chances to be able to enjoy their human rights in the future.

The UN Human Rights Council had recognized that children are among the most vulnerable groups to climate change.[222] They are particularly affected because of their specific metabolism, physiology and developmental needs.[223] For example, shortages of safe water and food staples can result in long-lasting and even irreversible impacts on the cognitive and physical growth of children.[224] Extreme weather events may force children into displacement. Children may become orphaned or separated from their families, leaving them at greater risk of becoming victims of violence, physical abuse, child labour, trafficking and exploitation.[225] Children exposed to traumatic events such as disasters can suffer from post-traumatic stress disorders.[226] Climate-related impacts also create a barrier to children's enjoyment of the rights to education, health, housing, food, water and sanitation, for example where services are suspended or houses and infrastructure are destroyed or severely damaged in an emergency.

Two recent WHO reports found that one in four deaths of children are attributable to an unhealthy environment, many of which are preventable.[227] The top four causes of death in children linked to environmental factors are respiratory infections, diarrheal diseases, malaria and other infectious diseases.[228]

Not all children are and will be affected equally by climate change. For example, the health burden of climate change is primarily borne by children in developing countries.[229] Children affected by intersecting forms of discrimination such as those living in poverty, children with disabilities, Indigenous children and children discriminated on the basis of work and descent – and in particular girls in each of these groups – suffer the worst consequences of climate change.[230]

According to the Executive Director of the UN Children's Fund (UNICEF), "there may be no greater, growing threat facing the world's children – and their children – than climate change.[231] The UN Committee on the Rights of the Child stated that climate change should be addressed as "one of the biggest threats to children's health, causing and severely exacerbating health disparities".[232] The UN Special Rapporteur on human rights and the environment stated that "no group is more vulnerable to environmental harm than children".[233] In the resolution on "realising the rights of the child through a healthy environment", adopted in October 2020, the UN Human Rights Council expressed profound concern for the adverse impact of environmental harm, including climate change, on children.[234]

As a result, states should put children's rights at the heart of climate action. The UN Committee on the Rights of the Child urged states to "put children's health concerns at the centre of their climate change adaptation and mitigation strategies".[235] The UN Human Rights Council called upon states "to develop ambitious mitigation measures to minimize the future negative impacts of climate change on children to the greatest extent possible" and "to consider their respective obligations regarding the rights of the child and intergenerational equity in their climate change adaptation and mitigation and environmental strategies".[236]

Children and youth must have the opportunity to be engaged in efforts to mitigate and adapt to climate change, provided with the necessary information and education to meaningfully participate in such

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[222] UN Human Rights Council, Resolution 32/33, Human Rights and Climate Change, adopted on 1 July 2016, UN Doc A/HRC/RES/32/33.
[223] WHO, *Inheriting a Sustainable World? Atlas on Children's Health and the Environment,* 2017, who.int/publications/i/item/9789241511773
[224] OHCHR, *Analytical Study on Climate Change and the Rights of the Child* (previously cited), para. 13.
[225] UNICEF, *Climate Change and Children: A Human Security Challenge,* 2008, unicef-irc.org/publications/pdf/climate_change.pdf ; OHCHR, *Analytical Study on Climate Change and the Rights of the Child* (previously cited), para. 19.
[226] WHO, *Don't Pollute My Future! The Impact of the Environment on Children's Health,* 2017, who.int/ceh/publications/don-t-pollute-my-future/en/ p. 7.
[227] WHO, *Inheriting a Sustainable World? Atlas on Children's Health and the Environment* (previously cited); WHO, *Don't Pollute My Future!* (previously cited).
[228] WHO, *Don't Pollute My Future!* (previously cited).
[229] OHCHR, *Analytical Study on Climate Change and the Rights of the Child* (previously cited), paras 5 and 20.
[230] OHCHR, *Analytical Study on Climate Change and the Rights of the Child* (previously cited), paras 20-27.
[231] UNICEF, *Unless We Act Now: The Impact of Climate Change on Children,* 2015, unicef.org/reports/unless-we-act-now-impact-climate-change-children, p. 6.
[232] UN Committee on the Rights of the Child (CRC Committee), General Comment 15: The right of the child to the enjoyment of the highest attainable standard of health (Art. 24), 17 April 2013, UN Doc. CRC/C/GC/15, para. 50.
[233] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/58, para. 15.
[234] UN Human Rights Council, Resolution 45/30, Rights of the child: Realizing the rights of the child through a healthy environment, adopted on 7 October 2020, UN Doc. A/HRC/RES/45/30.
[235] CRC Committee, General Comment 15 (previously cited), para. 50.
[236] UN Human Rights Council, Resolution 45/30 (previously cited).

discussions, be included in decision-making that directly affects them, and be provided with access to remedies when the state fails to fulfil its duties to protect children at risk.[237]

4.6 OLDER PERSONS

Older persons are among the most adversely affected in emergencies and disasters. This can be caused by a number of factors such as pre-existing health conditions or increased susceptibility to diseases, reduced mobility, and, in certain contexts, social exclusion and reduced financial independence. These factors leave older persons, and especially older women, those with disabilities, those living in poverty or others facing intersecting forms of discrimination, greatly exposed to the adverse impacts of climate change.[238] This is also aggravated by ageism, which leads to the rights and needs of older people being overlooked in laws and policies.[239]

Older people are among those most affected by heatwaves and have higher mortality rates in extreme weather events.[240] It has been calculated that the number of people over 65 years old who died due to heat stress between 2014 and 2018 had increased by 53.7% compared with 2000-2004.[241] In the aftermath of an extreme event, older people can experience more difficulties in accessing food, water and shelter, and are more likely to become isolated and be deprived of adequate care following loss of family members or community ties and disruption of social services.[242] Older people are also often more susceptible to the health impacts of climate change, such as those related to water and food scarcity or water- or vector-borne diseases.[243]

Acknowledging the specific needs and protecting the rights of older people is particularly important considering that the world's population is ageing. By 2050, more than 21% of the global population is expected to be aged 60 or over,[244] with 80% of older people projected to live in low- and middle-income countries.[245] The combination of heightened climate risks and an ageing population will leave an increasing number of people exposed to the worst effects of the climate crisis. For example, in 2015 the Lancet Commission estimated that by the end of this century, the number of times in which older people would experience heatwaves would reach 3 billion each year.[246]

The UN Human Rights Council has called on states to adopt an age-inclusive approach to climate action with the aim, among others, to "support the resilience and adaptive capacities of older persons, both in rural and urban areas, to respond to the adverse impact of climate change".[247] This requires, for example, that older persons are provided with access to updated and relevant information about climate change impacts and planned response measures – for example, heatwave awareness or accessible information in preparation for tropical storms. States should also ensure that older persons can meaningfully participate and shape climate-related decisions at all levels, as well as disaster risk management and emergency relief efforts.

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[237] Many children from around the world are claiming their right to remedy in relation to human rights violations linked to climate change, including by engaging in strategic litigation. See for example the cases of *Juliana v. United States*, ourchildrenstrust.org/juliana-v-us; the case of 25 Colombian children who sued the government for failure to protect their rights to life and a healthy environment, dejusticia.org/en/en-fallo-historico-corte-suprema-concede-tutela-de-cambio-climatico-y-generaciones-futuras/. See also the case brought by children at the European Court of Human Rights mentioned in footnote no. 675 and the petition by 16 children to the Human Rights Committee included in footnote no. 676.

[238] See OHCHR, "Climate resilience and older refugees", ohchr.org/EN/Issues/OlderPersons/IE/Pages/ClimateResilience.aspx

[239] OHCHR, *Analytical study on the promotion and protection of the rights of older people in the context of climate change*, 30 April 2021, UN Doc. A/HRC/47/46, para. 7.

[240] HelpAge, *Climate Change in an Ageing World*, 2015, reliefweb.int/sites/reliefweb.int/files/resources/COP21_HelpAge_PositionPaper_Final_0.pdf

[241] The Lancet Countdown on Health and climate change: responding to convergent crises, 2020, thelancet.com/journals/lancet/article/PIIS0140-6736(20)32290-X/fulltext, p. 136.

[242] HelpAge, *Climate Change in an Ageing World* (previously cited); OHCHR, *Analytical study on the promotion and protection of the rights of older people in the context of climate change* (previously cited), para 26.

[243] N. Watts and others, "Health and climate change: Policy responses to protect public health", 2015, Lancet, Volume 386.

[244] HelpAge, *Climate Change in an Ageing World* (previously cited).

[245] OHCHR, *Human Rights of Older Persons*, ohchr.org/EN/Issues/OlderPersons/Pages/OlderPersonsIndex.aspx

[246] N. Watts and others, "Health and climate change: Policy responses to protect public health" (previously cited), Figure 4 at p. 1869 and p. 1871.

[247] UN Human Rights Council, Resolution 44/7, Human Rights and Climate Change, adopted on 16 July 2020, UN Doc. A/HRC/RES/44/7, para. 4.

4.7 MIGRANTS AND REFUGEES

The impacts of the climate crisis can contribute to the forced displacement and migration[248] of people both within their own countries (internal displacement) and across borders (see section 11). People displaced across borders in the context of climate change may face barriers in obtaining protection, if they need it. Along with many other migrants and refugees who do not have access to safe and regular migration and asylum pathways, they may face human rights risks during their journeys, and discrimination, marginalization and exploitation in countries of transit and destination.[249]

Regardless of their reasons for leaving home, climate change poses an additional challenge for people on the move. Many displacement emergencies develop in border areas that are particularly vulnerable to the effects of climate change.[250] For example, Rohingya refugees fleeing violence and persecution in Myanmar have been hosted since 2017 in the border district of Cox's Bazar in Bangladesh, which the World Bank predicts will be the district worst hit by climate change in all of South Asia by 2050.[251] In 2020, Bangladesh's government began carrying out its plan to relocate up to 100,000 refugees to Bhasan Char, a previously uninhabited low-lying island in the Bay of Bengal, putting the refugees at high risk of flooding and other extreme weather events.[252]

According to the office of the UN High Commissioner for Refugees (UNHCR), the majority of displaced people around the world are situated in "climate change hotspots"[253] and an increasing number of camps for refugees and internally displaced people are affected by extreme weather events.[254] This leaves displaced people exposed to secondary or repeated displacement.

Refugees and migrants also face specific challenges following extreme weather events, such as barriers to accessing crucial or even life-saving information and disaster relief, loss of identity documents necessary to prove regular status or support their asylum application and disruption of specific services.[255]

Despite migrants and refugees being among the groups most affected by disasters, including those related to climate change, they face important barriers to inclusion and participation in decision-making processes in general, and more specifically to those related to disaster reduction and climate change mitigation and adaptation. States should ensure the meaningful, effective and informed participation of all migrants and refugees, in particular women and those experiencing intersecting forms of discrimination, in decision-making processes related to climate change and human mobility. Recently adopted policy frameworks, such as the Sendai Framework for Disaster Risk Reduction and the Global Compact on Refugees, have recognized this challenge and called for greater inclusion of refugees and migrants in disaster risk reduction strategies.[256]

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[248] "Forced displacement" is understood as primarily forced movements, while migration is used to indicate primarily voluntary movements.
[249] OHCHR, *Addressing Human Rights Protection Gaps in the Context of Migration and Displacement of Persons Across international Borders Resulting from the Adverse Effects of Climate Change and Supporting the Adaptation and Mitigation Plans of Developing Countries to Bridge the Protection Gaps*, 23 April 2018, UN Doc. A/HRC/38/21, para. 15.
[250] See UNHCR, "Climate change and forced migration hotspots – From humanitarian response to area-wide adaptation", 2009, unhcr.org/uk/protection/environment/4a1e4e342/presentation-climate-change-forced-migration-hotspots-humanitarian-response.html
[251] World Bank Group, *South Asia's Hotspots – The Impact of Temperature and Precipitation Changes on Living Standards*, 2018, openknowledge.worldbank.org/bitstream/handle/10986/28723/9781464811555.pdf
[252] Amnesty International UK, "Fears for a 'lost generation' of Rohingya children in Bangladesh – new briefing", 29 August 2019, amnesty.org.uk/press-releases/fears-lost-generation-rohingya-children-bangladesh-new-briefing; Human Rights Watch, "Bangladesh: Protesting Rohingya refugee beaten", 1 October 2020, hrw.org/news/2020/10/01/bangladesh-protesting-rohingya-refugees-beaten. Amnesty International, along with other human rights organizations, has been advocating for Bangladeshi authorities not to relocate Rohingya refugees to the island before a United Nations' assessment for safe habitation is completed. See Amnesty International, "Rohingya refugees' safety must be ensured amid violent clashes in Cox's Bazaar", 9 October 2020, amnesty.org/en/latest/news/2020/10/bangladesh-rohingya-refugees-safety-must-be-ensured-amid-violent-clashes-in-coxs-bazaar/
[253] UNHCR, *UNHCR, The Environment and Climate Change*, October 2015, unhcr.org/540854f49.pdf
[254] BBC, "Refugees at 'increased risk' from extreme weather", 10 December 2019, bbc.co.uk/news/science-environment-50692857
[255] See for example Grantmakers Concerns with Immigrants and Refugees, "The impact of natural disasters on immigrants and refugees in the United States: What funders need to know in the immediate term", 2017, gcir.org/sites/default/files/resources/GCIR-Impact-Natural-Disasters-on-Immigrants-Brief.pdf; Migrants in Countries in Crisis (MICIC) Initiative, *Migrants in Disaster Risk Reduction – Practices for Inclusion*, 2017, rm.coe.int/migrants-in-drr-web-final/1680716585
[256] United Nations, Sendai Framework for Disaster Risk Reduction 2015-2030, preventionweb.net/files/43291_sendaiframeworkfordrren.pdf, paras 7, 27(h) and 36(a)(vi). Report of the United Nations High Commissioner for Refugees, Global Compact on Refugees, UN Doc. (A/73/12 (Part II), para. 79. For more information about the Sendai Framework, see footnote no. 578, and about the Global Compact on Refugees see section 11.2.

5. PROTECT PEOPLE BY URGENTLY PHASING OUT GREENHOUSE GAS EMISSIONS

Under international human rights law, states have obligations to protect the enjoyment of human rights from environmental harm caused by conduct or omissions within their territory or jurisdiction, whether committed by state or non-state actors, including businesses. The foreseeable adverse effects of climate change on the enjoyment of human rights give rise to states' duties to prevent this harm by mitigating climate change, and specifically by tackling its cause: emissions of greenhouse gases (GHGs) and the accumulation of GHGs in the atmosphere.[257] **States therefore must minimize the harmful effects of climate change on human rights by taking all feasible steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time-frame, both nationally and through international co-operation.**

The negative consequences of climate change for human rights have been known to states for several decades. Consequently, it has been foreseeable to states that failure to limit emissions and to take all other appropriate measures to mitigate and prevent the negative impact of climate change can undermine the protection and full realization of human rights. Each state that fails to take all feasible steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time-frame therefore violates its human rights obligations and is bound to ensure access to effective remedies to people whose rights have been violated (see section 8.3).[258]

Given the global dimension of climate change and the role of GHG-emitting activities by states and businesses in producing transboundary environmental harm with serious consequences on the enjoyment of human rights, states' compliance with their extraterritorial obligations (ETOs) is of critical importance to protect human rights in the face of the climate crisis (see section 2.2).[259]

The transboundary nature of climate change requires all countries to reduce emissions and to achieve zero carbon emissions as soon as possible to the full extent of their abilities. However, countries are not equally responsible for the climate crisis. G20 countries[260] are responsible for 78% of current global annual

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[257] UN CEDAW, General Recommendation 37 (previously cited), paras 43 & 46(a); OHCHR, "Treaty bodies' joint statement on human rights and climate change, 2019".
[258] ESCR Committee, "Committee releases statement on climate change and the Covenant", 8 October 2018; OHCHR, "Treaty bodies' joint statement on human rights and climate change, 2019".
[259] ETO Consortium and others, *Written Submission to the European Court of Human Rights in the Case of Duarte Agostinho and Others v. Portugal and Others*, 2021 (previously cited).
[260] The Group of Twenty, or the G20, is the premier forum for international economic co-operation. The G20 brings together the leaders of both developed and developing countries from every continent. Collectively, G20 members represent around 80% of the world's economic output, two-thirds of global population and three-quarters of international trade. Throughout the year, representatives from G20 countries gather to discuss financial and socio-economic issues.

emissions,[261] with some having a heightened responsibility because of the emissions they have historically produced since the beginning of the industrial revolution. In addition, all of the highest historical emitters are also among the wealthiest states. As a consequence, according to the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC – see Definitions), a principle that is also implicitly reflected in international human rights law,[262] wealthier countries must take the lead in climate mitigation efforts.[263] In particular, they have obligations to decarbonize their economies faster than developing countries, including by stopping the expansion of fossil fuel production, and to provide assistance, including through funding and technology transfer, to developing countries to meet their climate mitigation targets (see section 10).[264]

As recognized by the Committee on the Elimination of All Forms of Discrimination against Women (CEDAW Committee), limiting fossil fuel use and GHG emissions are crucial steps in mitigating the negative human rights impact of climate change and disasters, including addressing the disproportionate effects of climate change on women and girls, and its detrimental impact on gender equality.[265]

Taking into account that harms produced by climate change disproportionally affect marginalized groups and people already facing discrimination, states have additional obligations to protect the rights of groups particularly at risk of environmental harm. For example, the duties to ensure substantive equality between men and women and to take "all appropriate measures" to guarantee the full development and advancement of women on the basis of equality with men[266] require states to reduce GHG emissions to the greatest feasible extent. This is to prevent and mitigate the foreseeable effects of climate change, which have a disproportionate effect on women and girls, and can hamper, and in some contexts potentially reverse, progress towards achieving substantive gender equality and the protection of women's and girls' rights (see section 4.1).[267] Equally, the obligation to respect the right to self-determination (see section 3.8) requires states to take action to avert climate change since it threatens the cultural and social identity of Indigenous Peoples, after consulting with Indigenous Peoples and obtaining their free, prior and informed consent. Generally, the obligation to ensure equality and non-discrimination entails that states must take all feasible steps to the full extent of their abilities to reduce emissions, hence limiting the impacts of climate change on all persons, and particularly on groups that are disproportionately affected.

5.1 MAXIMUM LEVEL OF GLOBAL WARMING

Under the Paris Agreement, states committed to: "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change".[268] Both targets are to be achieved by the end of this century. The target of 1.5°C, included due to insistence from the countries most vulnerable to climate impacts, was expressed as an aspiration, rather than an obligation.

In a special report issued in October 2018,[269] the Intergovernmental Panel on Climate Change (IPCC) showed the difference that limiting global warming to 1.5°C will make to peoples' lives and ecosystems, compared with a 2°C rise.[270] Analysing new scientific evidence that had been made available since their last assessment report in 2014, the IPCC showed that an increase in the global average temperature of 2°C above pre-industrial levels would be much more dangerous than had been believed in 2015 when states

[261] UNEP, *Emission Gap Report 2020* (previously cited).
[262] Under human rights law implicitly, responsibilities are differentiated in that states in a position to do so are required to provide international assistance where required for the realization of human rights (Article 2(1), ICESCR). Nevertheless, lack of sufficient international assistance does not excuse any state from complying with its human rights obligations, and in the case of economic, social and cultural rights, from realizing these rights to the maximum of available resources. See also UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 46.
[263] Article 4.4, Paris Agreement.
[264] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, paras 14, 26 and 68.
[265] UN CEDAW, General Recommendation 37 (previously cited), para. 14. See also Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women: General Recommendations on Gendered-Dimensions of Disaster Risk Reduction and Climate Change: Amnesty International's Preliminary Observations* (Index: IOR 40/3468/2016) (previously cited).
[266] Articles 2 and 3, CEDAW.
[267] Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women: General Recommendations on Gendered-Dimensions of Disaster Risk Reduction and Climate Change: Amnesty International's Preliminary Observations* (Index: IOR 40/3468/2016) (previously cited); UN CEDAW, General Recommendation 37 (previously cited), para. 46(a).
[268] Article 2(1)(a), Paris Agreement.
[269] The report was requested by states at the time of the adoption of the Paris Agreement. See UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 21.
[270] IPCC, *Special Report on Global Warming of 1.5°C* (previously cited).

adopted the Paris Agreement. In particular, the IPCC stressed that while an increase of 1.5°C will still have very serious effects, these would be far less devastating to human health, livelihoods, food security, water supply, human security and economic growth than an increase of 2°C.[271]

For example, disadvantaged groups, Indigenous Peoples and communities dependent on agricultural or coastal livelihoods, who will disproportionally suffer the impacts of an increase of 1.5°C, would face even more dramatic effects at 2°C.[272] Holding the increase in the global average temperature to 1.5°C could – compared with 2°C – reduce the risk of coastal flooding by up to 80% for small island developing states.[273] Around 420 million fewer people would be frequently exposed to extreme heatwaves, compared with 2°C.[274] Limiting global heating to 1.5°C would also make the UN Sustainable Development Goals (SDGs)[275] more achievable than an increase of 2°C. This analysis confirmed that limiting global warming to below 1.5°C must be an absolute imperative to avoid the worst consequences for human rights in the coming years.[276]

In light of the grave threat that global warming poses to human rights, **states must adopt and implement all feasible steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time-frame and in a manner compatible with the imperative of keeping the global average temperature rise as low as possible and no higher than 1.5°C above pre-industrial levels.** Given the extensive knowledge about the causes and harms of climate change, a failure to take such action will make states legally responsible for serious harms to human rights. An increase of 1.5°C is not a ceiling for what is required under human rights law; the current global temperature rise of 1.1°C is already causing major detriment to people's human rights. Rather, the 1.5°C threshold represents a difficult but yet feasible limit that states can still meet under current circumstances, provided that urgent and wide-ranging measures are taken. Once carbon emissions are reduced to zero, states will need to establish a further, lower threshold for the global average temperature that reduces even further the harmful impacts on human rights that have occurred even at the current global average temperature.

5.2 NATIONAL EMISSION REDUCTION TARGETS AND PLANS

To comply with their human rights obligations, states must set and enforce limits on their GHG emissions in a manner that contributes to effectively protecting people's rights from the harmful effects of climate change.

While the Paris Agreement establishes a global temperature goal and a number of procedural obligations, it does not set legally binding emission reduction targets for every country. However, every five years states are bound to set and communicate to the UN Framework Convention on Climate Change (UNFCCC) Secretariat their national mitigation goals (known as nationally determined contributions – NDCs) and to "pursue domestic mitigation measures" aimed at achieving their NDCs.[277] States are obliged to enhance their commitments in any new NDC and to ensure these reflect their "highest possible ambition".[278] While states have the obligation to regularly report on their emissions and on progress in implementing their NDCs,[279] they are not legally bound to achieve their NDCs. This means that, under the Paris Agreement, there is no mechanism to sanction countries for not meeting their emission reduction targets.

The NDCs include emission reduction targets with a time-frame of either 2025 or 2030. In addition, states are mandated to communicate to the UNFCCC Secretariat by 2020 their mid century, long term strategies for emission reductions.[280]

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[271] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 9.
[272] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 9.
[273] IPCC, *Special Report on Global Warming of 1.5°C* (previously cited), Chapter 3, p. 260.
[274] IPCC, *Special Report on Global Warming of 1.5°C,* (previously cited), Chapter 3, pp. 177-178.
[275] The SDGs are a collection of 17 interlinked goals designed to be a "blueprint for peace and prosperity for people and the planet, now and into the future". The SDGs were set in 2015 by the United Nations General Assembly and are intended to be achieved by the year 2030. See UN General Assembly, Resolution 70/1, Tran the 2030 Agenda for Sustainable Development, adopted on 25 September 2015, UN Doc A/RES/70/1. For more information, see sdgs.un.org/goals.
[276] Several scientists have pointed out that the IPCC findings were conservative and that future impacts could be much worse, even with a level of global heating of 1.5°C. While the IPCC is an authoritative body, this claim is not without foundations, given the fact that the *Summary for Policymakers* is subject to negotiations among states. See Civil Society Review, "After Paris: Inequality, fair shares and the climate emergency", December 2018, civilsocietyreview.org/report2018/, p. 2 and footnotes 3-4.
[277] Article 4.2 and 4.9, Paris Agreement.
[278] Article 4.3, Paris Agreement.
[279] Article 13, Paris Agreement.
[280] Article 4.19, Paris Agreement. See also UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 35.

The first round of NDCs[281] were extremely unambitious and utterly insufficient to meet the Paris Agreement's goals, as they would lead to a temperature increase of at least 3°C by the end of the century.[282] It has been estimated that the level of NDC ambition needs to be increased fivefold to be in line with the 1.5°C goal.[283] The current emission gap is a major concern from a human rights perspective, as the impacts associated with the predicted level of global warming would be catastrophic for the enjoyment of human rights.

It has been estimated that the carbon budget (see Definitions) associated with 1.5°C degrees of global warming will be exhausted in 2028 if emissions remain at the current level of the late 2010s.[284] However, the IPCC has shown that it is feasible for states to collectively reduce GHG to a level that would keep the global average temperature increase to no more than 1.5°C. This requires that GHG emissions are reduced by 45% globally from 2010 levels by 2030, and to net-zero by 2050.[285] UNEP has estimated that to meet the 1.5°C goal, global emissions must be cut by 7.6% per year on average from 2020 to 2030.[286] However, based on the principle of CBDR-RC, countries are not expected to cut emissions at the same pace, but rather have to do so on the basis of their responsibility for the climate crisis and their level of resources.[287]

States parties to the Paris Agreement were due to submit new, more ambitious NDCs by 2020. However, due to the COVID-19 pandemic and the postponement of COP26,[288] by the end of 2020 only 48 countries and the European Union – overall 75 countries responsible for about 30% of global emissions – had submitted an updated NDC.[289] By 30 May 2021, only another 16 states had submitted new NDCs.[290] Of the G20 countries, which collectively account for 78% of global GHG emissions and are currently not on track to meet their existing insufficient targets for 2030, the majority have either to still submit a new NDC or had failed to set an emission reduction target for 2030 aligned with their level of responsibility and capacity or compatible with the imperative to keep the increase of global average temperature as low as possible and no higher than 1.5°C above pre-industrial levels.[291] The Secretariat of the UNFCCC calculated that, based on the new pledges received by 31 December 2020, countries would only emit 0.3% less in 2025 and 2.8% less in 2030 than under the old plans, and would overall reduce global emissions by less than 1% by 2030 compared with 2010 levels.[292] This is extremely alarming, considering how far that is from the 45% cuts needed by 2030 according to the IPCC. Patricia Espinosa, Executive Secretary of the UNFCCC, described the lack of sufficient climate action as "collectively wandering into a minefield blindfolded".[293] According to Climate Action Tracker, pledges and targets made by states as of April 2021, including NDCs and some long-term and zero-net strategies, would limit warming to about 2.4-2.6°C above pre-industrial levels.[294]

Meanwhile on the subject of long-term emission reduction plans and strategies, while 126 countries had announced net-zero emission targets by December 2020,[295] the majority are yet to formalize such

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[281] Most states parties to the UNFCCC submitted Intended National Determined Contributions (INDC) in preparation for the adoption of the Paris Agreement and with a timeframe of either 2025 or 2030. At the moment of ratifying or acceding the Agreement, a state's INDC was converted into its first NDC, unless they chose to submit a revised NDC. See World Resource Institute, "Insider: What's changing as countries turn INDCs into NDCs? 5 Early insights", 18 April 2018, wri.org/blog/2018/04/insider-whats-changing-countries-turn-indcs-ndcs-5-early-insights

[282] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 18; WMO and others, "United in science" (previously cited), 2020, p. 18.

[283] UNEP, *Emission Gap Report 2019, Executive Summary,* unenvironment.org/resources/emissions-gap-report-2019

[284] Mercator Research Institute on Global Commons and Climate Change, "That's how fast the carbon clock is ticking", mcc-berlin.net/en/research/co2-budget.html

[285] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 12.

[286] UNEP, *Emission Gap Report 2019, Executive Summary* (previously cited).

[287] A coalition of civil society organizations have developed a methodology to determine each country's fair share of domestic emissions reductions and support for emission reduction measures abroad, reflecting their historical emissions and their capacity. States should seriously consider this methodology in developing their mitigation targets. See climatefairshares.org/methodology

[288] COP26 is the 26th Conference of the Parties of the UNFCCC. It was scheduled to be held in November 2020 but was postponed to 1-12 November 2021, due to the COVID-19 pandemic.

[289] UNFCCC, *Nationally Determined Contributions Under the Paris Agreement, Synthesis Report by the Secretariat*, 26 February 2021, UN Doc. FCCC/PA/CMA/2021/2, para. 2 and footnote no. 19.

[290] See www4.unfccc.int/sites/ndcstaging/Pages/LatestSubmissions.aspx. To keep track of NDC submissions, see www4.unfccc.int/sites/ndcstaging/Pages/LatestSubmissions.aspx, climatewatchdata.org/2020-ndc-tracker and thecvf.org/midnight-climate-survival/#survival-tracking. For an analysis of the new round of NDCs, see climateactiontracker.org/climate-target-update-tracker/

[291] As of 4 May 2021, Argentina, the EU (which binds individual member states – and therefore France, Germany and Italy), the UK and the USA had submitted a new NDC with an enhanced emission reduction target for 2030. However, the 2030 targets set by the EU, the UK and the USA, although a much higher than the previous ones, are still not aligned with their level of responsibility and capacity, and, in the case of the EU and the USA, not compatible with the imperative to keep the increase of global average temperature as low as possible and no higher than 1.5°C above pre-industrial levels. Canada, China, Japan, South Africa and South Korea had pledged to submit an enhanced NDC but not yet done so. Australia, Brazil and Russia had submitted a new NDC but failed to enhance their 2030 emission reduction target compared with their previous NDC. Turkey, Indonesia, Saudi Arabia and India had not even pledged to update their NDC.

[292] UNFCCC, *Nationally Determined Contributions Under the Paris Agreement, Synthesis Report by the Secretariat*, 26 February 2021, UN Doc. FCCC/PA/CMA/2021/2.

[293] Climate Home News, "China, US urged to step up as UN warns world 'very far' from meeting climate goals", 26 February 2021, climatechangenews.com/2021/02/26/china-us-urged-step-un-warns-world-far-meeting-climate-goals/

[294] See https://climateactiontracker.org/global/temperatures/

[295] UNEP, *Emission Gap Report 2020, Executive Summary* (previously cited).

commitments in domestic laws or policies and in their long-term strategies due to be submitted to the UNFCCC Secretariat.[296] Net-zero emission targets, however, are to be considered with caution, since they aim to pursue carbon neutrality (see "net-zero emissions" in the Definitions section) – rather than zero emissions – through the use of carbon removal and off-setting mechanisms, many of which have serious implications for human rights (see sections 5.3 and 5.8).[297] In addition, with a few exceptions,[298] the vast majority of wealthy industrialized countries, including all G7 countries,[299] that have announced net-zero emission targets are only committing to reaching carbon neutrality by 2050 rather than demonstrating that they are taking all feasible steps to reach carbon neutrality before this period as they are required to do under human rights law, and thus are putting an excessive burden on developing nations and the most climate-vulnerable countries. Moreover, commitments to reach carbon neutrality by 2050 have little value if they are not matched by concrete and consistent emission reduction targets for 2030.

States parties to the Paris Agreement must adopt enhanced NDCs and long-term decarbonization targets and strategies ; ensure such plans reflect their level of responsibility and capacity; and are compatible with the imperative of keeping the average global temperature rise as low as possible and no higher than 1.5°C above pre-industrial levels.

Wealthy industrialized countries, which currently emit over a third of global emissions[300] and have substantial resources and technological capacity, must adopt emission reduction targets that would enable them to reduce GHG emissions by 50% well before 2030 and reach zero carbon emissions by 2030 or as soon as feasible after that while ensuring a just transition that enhances human rights.[301] Developing countries with greater capacity[302] must set emission reduction targets that would enable them to reduce GHG emissions by at least 45% from 2010 levels by 2030 or as soon as possible after that, and to reach zero by 2050, as the IPCC stated that these emission reduction targets at global level are needed to limit global warming to 1.5°C. Other developing countries should aim to reduce their emissions by levels consistent with a 1.5°C target as soon as possible in line with their own respective capacity. As mentioned above, under the obligations of international co-operation, wealthier countries are required to respond to developing countries' requests for assistance to meet their transition targets (see section 10 on international co-operation and assistance).[303]

Both NDCs and long-term strategies should prioritize measures to prevent and reduce emissions in order to avoid CO_2 removal mechanisms and other offsetting measures that violate people's human rights. They should indicate the measures taken to reduce emissions from all sectors,[304] including extraterritorial emissions, such as emissions generated by transport, emissions resulting from production of goods they import and emissions from combustion of fossil fuels after export, as well as emissions resulting from extra-territorial fossil fuel projects that receive financial support from the government.

Both NDCs and long-term strategies should contain clear references to human rights principles and standards and must be consistent with international human rights obligations and include relevant indicators, targets and benchmarks. They must also ensure that the measures taken to transition towards a zero carbon economy and a more resilient society are just, fair, human rights compliant, and reduce inequality instead of increasing it (see section 7). States should also ensure meaningful public participation,

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[296] See unfccc.int/process/the-paris-agreement/long-term-strategies

[297] See ActionAid and others, *Not Zero: How "Net Zero" Targets Disguise Climate Inaction,* October 2020, demandclimatejustice.org/wp-content/uploads/2020/10/NOT_ZERO_How_net_zero_targets_disguise_climate_inaction_FINAL.pdf; ActionAid, "Caught in the Net: How "net-zero" will delay real climate action and will drive land grabs", 2015, actionaid.org/sites/default/files/caught_in_the_net_actionaid.pdf

[298] See Climate Home News, "Which countries have a net-zero carbon goal?", 14 June 2019, climatechangenews.com/2019/06/14/countries-net-zero-climate-goal/

[299] The Group of 7, or G7, is a forum bringing together the heads of states or government of the world's largest industrial democratic states. Leaders meet annually to discuss political and economic issues affecting their countries and the international community. Supporting ministerial meetings are held throughout the year in preparation of the heads of states or government summit. G7 members are: Canada, France, Germany, Italy, Japan, UK, USA, plus the EU.

[300] This is based on the figures for production based emissions, see H. Ritchie and M. Roser, "CO2 emissions", https://ourworldindata.org/co2-emissions#co2-emissions-by-region (accessed on 4 June 2021). These countries have emitted approximately three fifths of historical cumulative emissions.

[301] See for example Amnesty International, *Recommendations to States on Steps to Protect Human Rights at the 25th Conference of the Parties of the United Nations Framework Convention on Climate Change* (Index: IOR 51/1446/2019), 25 November 2019, amnesty.org/en/documents/ior51/1446/2019/en/; Amnesty International, *COVID-19 Response Measures: Recommendations to G20 Finance Ministers on a Just Recovery with Climate at its Centre* (Index: IOR 30/2623/2020), 30 June 2020, amnesty.org/en/documents/ior30/2623/2020/en/

[302] This publication considers countries classified by the World Bank as "upper middle income" and which are also part of the G20 as "developing countries with greater capacity". These are China, South Africa, Argentina, Brazil, Mexico, South Korea, Indonesia.

[303] For an elaboration of the legal basis for such obligations, see O. De Schutter and others, "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights" (previously cited), pp. 1145-1159.

[304] According to the IPCC, the sectors that are major sources of GHG emissions globally are: electricity and heat production (25%); agriculture, forestry and other land use (24%); industry (21%); transportation (14%); other energy (10%); and buildings (6%). See IPCC, *Fifth Assessment Report, Summary for Policymakers,* ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_summary-for-policymakers.pdf, p. 9.

particularly of those individuals and groups most affected by the climate crisis and by the transition to a zero-carbon economy in the design, planning, implementation and monitoring of such plans (see section 8).

In assessing state conduct in setting and implementing emissions, analysis should also consider the following questions:

In assessing state conduct in setting and implementing emissions, analysis should consider the following questions, among others:

1. Has every feasible human-rights consistent step been taken by the state to reduce emissions?
2. Is the state subsidising emissions, disproportionately allocating resources to spending that does not benefit the public, or failing to take adequate steps to mobilise resources towards emissions reduction?
3. Is the climate plan reasonably ambitious in comparison to peer states at comparable levels of development?
4. Has there been a progressive increase in ambition and avoidance of any retrogression?
5. Are the state's plans to reduce emissions in line with limiting the global temperature increase to 1.5°C?[305]

5.3 CARBON MARKETS UNDER THE PARIS AGREEMENT

Under the Paris Agreement, states can meet the targets included in their NDCs through different forms of carbon markets (see Definitions).[306]

Article 6.2 of the Paris Agreement provides for countries to co-operate directly and bilaterally in the implementation of their NDCs. It allows for emission reduction measures to be implemented in one country and the resulting emission reductions to be transferred to another country and counted towards its NDC. For example, if country X assists country Y in implementing emission reduction projects, such as financing wind energy turbines, country Y can then transfer the actual reduction in emissions (or "mitigation outcomes") to country X, which then counts them as its own emission reduction under its NDC. As indicated by Article 6.2, for this bilateral co-operative approach to result in effective global emission reductions, it is essential to establish "robust accounting" of the emission reductions achieved to prevent double-counting (where both states count the reduction in emissions as their own). If double-counting is not avoided, the global calculation of emission reductions could be higher than the emissions reduction actually achieved. To avoid double counting, corresponding adjustments must be made to both states' NDCs, where one state involved in the project must make an addition, and the other a subtraction, to their emissions inventory.[307]

While Article 6.2 provides for solely bilateral approaches, Article 6.4 establishes a more formal, top-down approach, whereby mitigation outcomes are produced and certified through an international mechanism known as the "Sustainable Development Mechanism" (SDM). Here, countries can implement mitigation projects in other states, even through private companies, and in return they will receive "emission reduction units" that can count towards meeting their NDCs. A supervisory body must verify this support as delivering real, measurable and long-term emissions reduction, whilst promoting sustainable development.[308] The SDM is the successor to the Clean Development Mechanism (CDM), which allowed developed states under the Kyoto Protocol[309] to implement emission reduction projects in developing states, producing emission reduction units to count towards their Kyoto targets. The SDM is noticeably different, however, as it encompasses emission reduction policies and programmes, in addition to projects; it must reduce emissions overall not just offset them; it accounts for mitigation targets of all countries, not just developed ones as per Kyoto; and it must contribute to long-term sustainable development.[310] In addition, advocates have pointed

[305] These tests are elaborated in the forthcoming publication: A. Khalfan, "Litmus Tests as Tools for Tribunals to Assess State Human Rights Obligations to Reduce Greenhouse Gas Emissions" in César Rodríguez-Garavito (ed). *Litigating the Climate Emergency: How Human Rights, Courts, and Legal Mobilization Can Bolster Climate Action* (forthcoming, Cambridge University Press), ssrn.com/abstract=3860018
[306] Article 6, Paris Agreement.
[307] OECD, *Workshop on Corresponding Adjustment as Part of Article 6 Accounting*, 20 February 2017, oecd.org/environment/cc/Workshop_Summary_OECD_IEA.pdf, p. 10.
[308] R. Webb and J. Wentz, *Human Rights and Article 6 of the Paris Agreement: Ensuring Adequate Protection of Human Rights in the SDM and ITMO Frameworks*, May 2018, columbiaclimatelaw.com/files/2018/05/Webb-Wentz-2018-05-Human-Rights-and-Article-6-of-the-Paris-Agreement.pdf#page=16, p. 9.
[309] The Kyoto Protocol is an international agreement linked to the UNFCCC adopted in 1997. It entered into force in 2005 and expired in 2020. It set the first internationally binding emission reduction targets, now regarded as wildly inadequate. For more information, see unfccc.int/kyoto_protocol
[310] For the full list of differences, see Carbon Market Watch, "Building blocks for a robust Sustainable Development Mechanism", 2017, carbonmarketwatch.org/wp-content/uploads/2017/05/BUILDING-BLOCKS-FOR-A-ROBUST-SUSTAINABLE-DEVELOPMENT-MECHANISM_WEB-SINGLE_FINAL.pdf, p. 3.

out that it is essential that the SDM contributes to shifting away from fossil fuels, compared with the CDM which included fossil fuel projects, such as coal-fired power stations that were deemed more efficient than the norm.[311]

At COP24 and COP25, states repeatedly failed to agree implementation guidelines for Article 6. The biggest stumbling block is double-counting.[312] Brazil, supported by India, Russia and the Arab states group,[313] wants "corresponding adjustments" to the NDCs to be scrapped, so mitigation outcomes can be claimed by both states involved in a project. This is rightly rejected by most of the other states who point out that this will lead to a decade of "imaginary emission-reductions".[314] The same group of countries also want carbon credits generated through the CDM to be circulated and counted within the Paris system. This position is supported by Australia, which was particularly adamant on this point at COP25.[315] Allowing countries to use credits gained through the Kyoto Protocol to meet their Paris Agreement goals is extremely problematic. It would mean countries will have to cut fewer emissions, as the credits – which are for emission reductions that have already taken place – would therefore cover a large proportion of their emission reduction target. This would reduce the overall mitigation action those countries must take in order to meet their target under the Paris Agreement.[316] If implementation rules for Article 6 are not precise enough and include loopholes that could be used to allow double-counting and Kyoto credit carry-over, they could seriously undermine the goals of the Paris Agreement and result in more GHG emissions, rather than in their reduction.[317]

Article 6 does not mention substantive and procedural human rights safeguards with respect to market-based mechanisms, nor to co-operative approaches in general. This is a concern given that the absence of adequate safeguards in the CDM has often resulted in human rights abuses in the context of CDM projects.[318]

Article 5 of the Paris Agreement has also increased the likelihood of linking the UNFCCC's mechanism for Reducing emissions from deforestation and forest degradation (REDD+)[319] with Article 6, thereby raising the human rights risks for Indigenous Peoples. Under Article 5, states are encouraged to implement the Paris Agreement through "results-based payments" and "positive incentives for activities relating to reducing emissions from deforestation and forest degradation". This refers to payments from one country to another for having implemented REDD+ projects (that financially reward a state for reducing emissions associated with deforestation and land degradation), therefore opening the possibility of linking REDD+ financial rewards with emissions trading under Article 6. Yet there are several human rights concerns associated with REDD+ projects, including: centralizing land ownership away from local communities and towards government bodies; depriving Indigenous Peoples of their ancestral land, with ensuing loss of access to forests and forced evictions; and violating the right of Indigenous Peoples to free, prior and informed consent in REDD+ projects.[320]

Despite strong demands and mobilization by civil society observers, the last text developed by the Chilean presidency at COP25 regarding the rules for the implementation of Article 6 did not include human rights

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[311] See for example Carbon Market Watch, "Say no to coal in CDM! sustainable development – promises vs. reality", 2014, carbonmarketwatch.org/wp-content/uploads/2014/04/Adani-Mundra-report_Falguni-Joshi_Final.pdf

[312] Carbon Brief, "Bonn climate talks: Key outcomes from the June 2019 UN climate conference", 1 July 2019, carbonbrief.org/bonn-climate-talks-key-outcomes-from-june-2019-un-climate-conference

[313] In climate negotiations, state parties are organized in groupings to present the substantive interests of the parties. The Arab states group comprises Algeria, Bahrain, Comoros, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Mauritania, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, United Arab Emirates and Yemen. See unfccc.int/process-and-meetings/parties-non-party-stakeholders/parties/party-groupings

[314] S. Zwick (Ecosystem Marketplace), "Will double-counting dust-up crush Katowice climate conference?", 2018, ecosystemmarketplace.com/articles/old-hang-up-over-double-counting-just-one-wrench-in-katowice-climate-talks/

[315] Climate Change News, "Australia admits it is on its own using cringe carbon loophole", 22 October 2019, climatechangenews.com/2019/10/22/australia-admits-using-cringe-carbon-loophole/; Carbon Brief, "COP25: key outcomes agreed at the UN climate talks in Madrid", 15 December 2020, carbonbrief.org/cop25-key-outcomes-agreed-at-the-un-climate-talks-in-madrid

[316] See for example Carbon Market Watch, "Carbon Markets 101 – The ultimate guide to carbon offsets mechanisms", July 2020, carbonmarketwatch.org/wp-content/uploads/2020/07/CMW-ENGLISH-CARBON-MARKETS-101-THE-ULTIMATE-GUIDE-TO-MARKET-BASED-CLIMATE-MECHANISMS-FINAL-2020-WEB.pdf

[317] See for example, Carbon Brief, "In depth Q&A: How Article 6 carbon markets could "make or break" the Paris Agreement", 29 November 2019, carbonbrief.org/in-depth-q-and-a-how-article-6-carbon-markets-could-make-or-break-the-paris-agreement

[318] In Honduras for example, a CDM project aimed at recovering biogas from palm oil mill effluent and using it to generate power resulted in land seizures and in 23 people being killed between 2010 and 2011 by private security officers employed by a company involved in this project. Another well-known example is the Barro Blanco hydroelectric dam project in Panama, which was initiated without respecting the right to free, prior and informed consent of local Indigenous Peoples. Despite being suspended as a CDM project due to human rights concerns, construction resumed in 2016 by the government and resulted in violations of Indigenous Peoples' rights to land, self-determination, food and water, among others. For more detail, see archive.carbonmarketwatch.org/campaigns-issues/aguan-biogas-project-honduras/; CIEL, "Barro Blanco hydroelectric dam threatens Indigenous communities, Panama", 2016, ciel.org/project-update/barro-blanco/

[319] For more information about REDD+, see redd.unfccc.int/fact-sheets.html

[320] UN Permanent Forum on Indigenous Issues, *Indigenous People's Rights and Safeguards in Projects Related to Reducing Emissions From Deforestation and Forest Degradation*, 5 February 2013, UN Doc. E/C.19/2013/7, para. 12.

safeguards. Also, in the final hours of the negotiations, Costa Rica launched the "San José Principles for High Ambition and Integrity in International Carbon Markets", which were immediately endorsed by 32 countries. This set of principles, conceived to indicate the minimum requirements to ensure that carbon markets contribute to enhancing the ambition under the Paris Agreement, did not include reference to human rights and the rights of Indigenous Peoples.[321]

States must reject any multilateral mechanisms for carbon trading that do not lead to genuine emission reductions and do not include human rights safeguards.

In particular, states should:

- Ensure that the guidelines for the implementation of Article 6 of the Paris Agreement recognize the importance of respecting, protecting and fulfilling human rights when engaging in carbon markets and other co-operative approaches.
- Ensure that the guidelines for the implementation of the SDM include sufficient human rights safeguards. Such safeguards must include provisions obliging parties to carry out human rights impacts assessments before adopting a project, policy or programme under Article 6. Safeguards should also ensure access to information for and adequate public participation of affected individuals and communities, in particular minority communities, and respect of the right of free, prior and informed consent of Indigenous Peoples, including when states can make use of Indigenous Peoples' experience and knowledge in climate change measures. An independent, accessible and effective grievance mechanism should also be put in place to ensure that communities can seek remedy for any harm caused by projects carried out under Article 6.
- Ensure that co-operation between states under Article 6 mechanisms leads to genuine emissions reduction, rather than the creation of an additional barrier to effective climate action, by:
    - guaranteeing that clear rules are put in place to secure a robust accounting mechanism to prevent double-counting, including rules dictating the implementation of corresponding adjustments and establishing a clear supervisory tool to ensure that emission reductions deriving from Article 6 are correctly calculated to mirror the actual mitigation outcome produced;
    - preventing the accounting of CDM carbon credits towards the emission reductions targets set by states under the Paris Agreement;
    - drafting safeguards for both the sale and purchase of carbon credits, including a limit on the amount of carbon credits that a country can buy and sell. This would help ensure that countries that wish to support emission-reduction projects also mitigate emissions within their own territory, and that countries producing credits do not produce excess credits that flood the market.

5.4 PHASE OUT FOSSIL FUELS

Burning fossil fuels such as coal, oil and gas is the source of most emissions for almost all economic sectors and accounts for more than 70% of global GHG emissions.[322] Despite the urgency of the climate crisis and the commitments made by states under the Paris Agreement, carbon emissions from fossil fuel use continued to grow roughly by 1% annually between 2010 and 2018.[323] Emissions were slightly higher in 2019 compared to 2018[324] and dropped by 5.8% in 2020 due to the fallout of the COVID-19 pandemic.[325] The International Energy Agency projects that they will grow by 4.8% in 2021, in what could be the second biggest annual rise in history.[326] Total annual fossil CO_2 emissions are now 62% higher than emissions at the time international climate negotiations began in 1990.[327]

According to the latest data from the International Energy Agency, in 2017 and 2018 fossil fuels accounted for 81% of the global energy production. Although the production of energy grew for all sources in 2018,

[321] CIEL, *Report from the Madrid Climate Conference: Promoting Human Rights in Climate Action at COP25* (previously cited).
[322] WMO and others, "United in science" 2019 (previously cited).
[323] WMO and others, "United in science" 2019 (previously cited).
[324] Global Carbon Project, "Global carbon budget 2020, summary highlights", www.globalcarbonproject.org/carbonbudget/20/highlights.htm
[325] International Energy Agency, *World Energy Outlook 2021*, April 2021, iea.org/reports/global-energy-review-2021
[326] International Energy Agency, *World Energy Outlook 2021*, April 2021, iea.org/reports/global-energy-review-2021
[327] WMO and others, "*United in science*", 2020 (previously cited).

fossil fuels remained the main drivers of the global growth.[328] In G20 countries, in 2018, 82% of energy supply was still sourced from fossil fuels, with several G20 countries increasing their total supply of fossil fuels.[329] The planned production of fossil fuel by 2030 will exceed by 120% what could be produced in a way consistent with limiting global warming to 1.5°C.[330] Overall fossil fuel production needs to be cut by roughly 6% per year until 2030 in order to limit the increase of the global average temperature to 1.5°C. Yet UNEP calculated in 2020 that countries were instead planning an annual increase of 2%.[331]

In response to the COVID-19 pandemic and its economic consequences, many wealthy industrialized countries and states with the highest levels of emissions have allowed fossil fuel companies, the aviation industry and other carbon-polluting companies to benefit from economic stimulus measures, such as tax rebates and loans. With a few exceptions,[332] these stimulus measures have largely been granted with no conditions attached, meaning that these industries can continue to function and even expand without having to commit to reducing emissions or to solely using the government measures to support their workers.[333]

The IPCC has confirmed that the only way to keep the increase of temperatures below 1.5°C is to quickly phase out fossil fuels.[334] This requires action addressing both the supply and the demand side.[335] The supply side refers to reducing the production of fossil fuels, including curbing exploration, extraction, production and supply of fossil fuels abroad, and related investments.[336] Demand side action involves cutting the demand for and the consumption of fossil fuels, for example by promoting energy efficiency, facilitating access to renewable energy that is responsibly produced in a manner that does not violate human rights, putting in place financial and other incentives and disincentives to switch production and use of energy from fossil fuels to renewable energy, and promoting behavioural change to reduce consumption.

According to the IPCC, to stay within the 1.5°C target, it is necessary to invert the current trends in energy supply and ensure that renewable energy accounts for most of the total share by 2050. This means that renewable energy should account for at least 75-80% of the global electricity supply by 2050 and fossil fuels should fall to 0-25%.[337] In particular, the use of coal should be cut by at least two thirds by 2030 and completely phased out by 2050. Gas should only provide 8% of the global electricity supply by 2050, and then only if carbon capture and storage (CCS) technologies are used.[338] However, because of the uncertain feasibility of CCS and its potential negative impacts on people's human rights (see section 5.8), to protect human rights, it is essential to phase out fossil fuels faster than proposed by the IPCC in order to limit the need for CCS to the greatest possible extent.[339]

Rapidly phasing out fossil fuel production and use is therefore an urgent task if we are to reduce emissions to a level where we can mitigate the worst impacts of the climate crisis on the enjoyment of human rights.[340]

Fossil fuel extraction, production and its related infrastructure are often associated with human rights abuses and violations, for example through contamination of local water and food supplies and air pollution caused

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[328] International Energy Agency, "World energy balances overview 2020", 2020, iea.org/reports/world-energy-balances-overview
[329] Climate Transparency, *Brown to Green: The G20 Transition Towards a Net-Zero Emissions Economy 2019,* November 2019, climate-transparency.org/g20-climate-performance/g20report2019
[330] UNEP and others, *The Production Gap 2019, Executive Summary,* productiongap.org/wp-content/uploads/2019/11/Production-Gap-Report-2019-Executive-Summary.pdf
[331] UNEP, *Production Gap Report 2020,* 2020, productiongap.org/
[332] In certain cases, policies benefit the fossil fuel, car manufacturing or aviation industry but conditions have been attached, mostly related to the companies adopting emission reduction targets or complying with additional pollution reduction requirements. For example, the French government made its bailout of Air France conditional on the company reducing its emissions. See Energy Policy Tracker, "Track public money in recovery packages", energypolicytracker.org/methodology/#fossil-conditional-anchor
[333] Amnesty International, "G20: Rich, powerful states must ensure COVID-19 recovery measures tackle global poverty, inequality and the climate crisis", 17 July 2020, amnesty.org/en/latest/news/2020/07/g20-rich-powerful-states-must-ensure-covid19-recovery-measures-tackle-global-poverty-inequality-and-the-climate-crisis/ See also Energy Policy Tracker, "Track public money in recovery packages", energypolicytracker.org/
[334] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited).
[335] See for F. Green and R. Denniss, "Cutting with both arms of the scissors: the economic and political case for restrictive supply-side climate policies", 2018, Climatic Change, Volume 150, Issues 1-2, link.springer.com/article/10.1007/s10584-018-2162-x, pp. 73-87.
[336] For a long time, climate policies have mostly focused on demand-side measures. However, acknowledging the failure of these measures alone to result in emission reductions consistent with the goals of the Paris Agreement, academics, investors, civil society and some policy-makers have started to pay increasing attention to the importance of adopting supply-side measures. The climate movement has also been instrumental in showing the contradictions of allowing further fossil fuel expansion, including related infrastructure, with the Paris Agreement. However, supply-side measures remain under-developed. See M. Lazarus and H. van Asselt, "Fossil fuel supply and climate policy: exploring the road less taken", 2018, Climatic Change, Volume 150, Issues 1-2, link.springer.com/article/10.1007/s10584-018-2266-3.
[337] IPCC, *Special Report on Global Warming of 1.5°C* (previously cited), Chapter 2, p. 134.
[338] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 15.
[339] See also Climate Action Network, Position on Carbon Capture, Storage and Utilisation, January 2021, climatenetwork.org/wp-content/uploads/2021/01/can_position_carbon_capture_storage_and_utilisation_january_2021.pdf
[340] OHCHR, "Our addiction to fossil fuels causes climate emergency, say human rights experts", 17 September 2019, ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=25003&LangID=E

by gas-flaring.[341] In addition, the burning of fossil fuels for electricity generation is among the main causes of air pollution, which negatively affects the right to health and to life due to the resulting high incidence of respiratory and cardiovascular diseases.[342] As stated by the UN Special Rapporteur on human rights and the environment, "a rapid shift away from fossil fuels to renewables such as solar and wind (except in the context of clean cooking, which often involves a shift to LPG [liquefied petroleum gas]) could save as many as 150 million lives over the course of the twenty-first century by reducing air pollution."[343]

Access to energy is integral to the realisation of various human rights. For example, the Committee on Economic, Social and Cultural Rights recognises that the right to adequate housing includes energy for cooking, heating and lighting.[344] The International Covenant on Economic Social and Cultural Rights provides for the right of everyone to an adequate standard of living, "including adequate food, clothing and housing, and to the continuous improvement of living conditions."[345] The Convention on the Elimination of All Forms of Discrimination Against Women mandates that states implement measures to eliminate discrimination against women in rural areas, including that states ensure them the right, among others, to "adequate living conditions, particularly in relation to housing, sanitation, electricity and water supply, transport and communications."[346]

At the same time as phasing out fossil fuels, states must expand access to affordable renewable energy to all those who currently do not have it. This may include, as an interim measure, the use of natural gas for cooking as an alternative to the use of wood and charcoal to protect health, while steps are taken to ensure access to affordable electricity produced from renewable energy.

States must therefore rapidly phase out and implement a just transition away from fossil fuel production and consumption as quickly as possible based on their capacities and responsibility for emissions. Wealthy industrialized states must phase out fossil fuels by 2030 or as soon as possible after that. Other countries must phase out fossil fuels as quickly as possible and no later than 2050, in line with the latest IPCC scientific evidence. All states must take steps to ensure that affordable renewable energy generated in full compliance with human rights standards, is available and accessible to all.

In particular, states must ensure an immediate phase-out of the most polluting fossil fuels and forms of production, such as coal, peat, fracking and tar sands. Wealthy industrialized countries must completely end their production and use of these fuels as soon as possible and no later than 2030; all others must phase them out by 2040 at the latest. States must also refrain from contributing to the expansion of fossil fuel use in other countries, including in their development co-operation.

The following sub-sections indicate recommendations to rapidly phase out both the supply and the demand of fossil fuels. Recommendations on states to regulate the fossil fuel industry are included in section 13.

5.4.1 END FOSSIL FUEL SUBSIDIES

Despite their commitments made under the Paris Agreement, most states continue to heavily subsidize the production and consumption of fossil fuels.

Globally, fossil fuel subsidies were estimated to be USD$5.2 trillion in 2017, representing 6.5% of global GDP.[347] Despite coal being the most carbon-polluting of fossil fuels, it remains the most subsidized fuel (44%), followed by oil (41%) and natural gas (10%).[348] Even though they pledged in 2009 to eliminate fossil fuels subsidies, G20 countries continued to subsidize both production and consumption of coal, oil and gas to a total of USD$127 billion in 2017, with only nine countries decreasing these subsidies between 2012 and

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[341] Amnesty International, *Nigeria: Petroleum, Pollution and Poverty* (Index: AFR 44/017/2009), 30 June 2009, amnesty.org/en/documents/AFR44/017/2009/en/; Amnesty International, *India: "When Land Is Lost, Do We Eat Coal?" Coal Mining and Violation of Adivasi Rights in India* (Index: ASA 20/4391/2016), 13 July 2016, amnesty.org/en/documents/asa20/4391/2016/en/

[342] Centre for Research on Energy and Clean Air, *Quantifying the Economic Costs of Air Pollution from Fossil Fuels*, February 2020, energyandcleanair.org/publications/costs-of-air-pollution-from-fossil-fuels/; F. Perera, "Pollution from fossil-fuel combustion is the leading environmental threat to global pediatric health and equity: Solutions exist", 2018, International Journal of Environmental Research and Public Health, Volume 15, Issue 1, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5800116/.

[343] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 8 January 2019, UN Doc. A/HCR/40/55, para. 109.

[344] UN Committee on Economic, Social and Cultural Rights (CESCR), General Comment 4: The right to adequate housing, 13 December 1991, UN Doc. E/1992/23, para. 8 (b).

[345] Article 11(1).

[346] Article 14 (2) (h).

[347] International Monetary Fund (IMF), *Working Paper – Global Fossil Fuel Subsidies Remain Large: An Update Based on Country-Level Estimates*, 2 May 2019, imf.org/en/Publications/WP/Issues/2019/05/02/Global-Fossil-Fuel-Subsidies-Remain-Large-An-Update-Based-on-Country-Level-Estimates-46509, p. 5.

[348] IMF, *Global Fossil Fuel Subsidies Remain Large* (previously cited).

2017.[349] France and Turkey actually increased subsidies for fossil fuels, while the rest of the G20 countries maintained them at the same level.[350] Subsidies for coal-fired power almost tripled between 2013 and 2017 across G20 countries.[351]

Fossil fuel subsidies can be defined as government action that lowers the cost of fossil fuel energy production, raises the price received by energy producers, or lowers the price paid by energy consumers.[352] They can take different forms, including direct funding, tax breaks, price controls on domestic energy, government loans and guarantees at favourable rates, government spending on infrastructure such as oil pipelines, provision of resources such as land and water to fossil fuel companies at below-market rates, and research and development funding investment by state-owned enterprises. Some analysts also count government expenses to address the environmental and health consequences of fossil fuel use as subsidies.[353]

Maintaining fossil fuel subsidies is not consistent with states' human rights obligations for two primary reasons.

First, the subsidies promote fossil fuel-based energy production and consumption. Continuing, and even increasing, fossil fuel subsidies therefore runs counter to the duty of states to reduce GHG emissions and protect the enjoyment of human rights from the climate crisis. It is estimated that the elimination of all subsidies to fossil fuel production and consumption globally would reduce emissions by roughly 10%,[354] in addition to reducing premature air pollution-related deaths by more than 50%.[355] Maintaining the subsidies hampers the transition towards a zero-carbon economy, as they distort market prices at the expense of renewable energy.

Moreover, fossil fuel subsidies render carbon taxes ineffective and redundant. This is because such subsidies can offset the financial costs incurred by a carbon tax, ensuring it does not impose a significant incentive for the relevant corporation to invest in renewable energy. Instead, if subsidies are significantly and incrementally reduced alongside the introduction of a progressive carbon tax (which imposes burdens primarily on fossil fuel corporations and wealthier consumers), companies will no longer be able to invest in fossil fuels without suffering serious economic damage, thereby pushing them to invest in renewables. Governments should at the same time ensure access to affordable energy for low-income groups through means that shift away from fossil fuels (see also section 7.1).

Second, fossil fuel subsidies have the potential to negatively affect the enjoyment of economic and social rights when they divert without justification the potential resources available for the fulfilment of economic and social rights such as education, housing, an adequate standard of living, water, sanitation, health and social security.[356] For example, the Asian Development Bank calculated that "government expenditure on fossil fuel subsidies exceeds public spending on education or health in some Asian countries".[357] Of course, some fossil fuel subsidies may help realize economic and social rights, where they aim to secure access to energy for essential purposes or to support livelihoods. However, in those cases, there needs to be a strategy to redirect such resources to securing the same objectives through funding renewable energy produced in a manner consistent with human rights and other livelihood alternatives as part of a just transition approach that does not cause human rights harms.

In light of the above, states must urgently end fossil fuel subsidies, with the exception of clean cookstove programmes.[358] **Wealthy industrialized countries must end fossil fuel subsidies immediately, and developing countries must immediately begin phasing them out with the aim of ending all such subsidies by 2025.** To maximize the benefits of ending fossil fuel subsidies and to avoid regressive effects on people with low incomes and other marginalized groups,[359] states should redeploy the resources freed to support renewable energy and just transition measures, including social protection (see section 7). This approach is

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[349] These were Argentina, Brazil, China, India, Indonesia, Italy, Japan, the UK and the USA.
[350] Climate Transparency, *Brown to Green* (previously cited).
[351] Climate Transparency, *Brown to Green* (previously cited).
[352] See Oil Change International, priceofoil.org/fossil-fuel-subsidies/
[353] IMF, *Global Fossil Fuel Subsidies Remain Large* (previously cited).
[354] P. Gass and D. Echevarria, *Fossil Fuel Subsidies and the Just Transition: Integrating Approaches for Complementary Outcomes*, December 2017, iisd.org/sites/default/files/publications/fossil-fuel-subsidy-reform-just-transition-summary.pdf
[355] IMF, *Working Paper – How Large are Global Energy Subsidies?*, 18 May 2015, imf.org/en/Publications/WP/Issues/2016/12/31/How-Large-Are-Global-Energy-Subsidies-42940, p. 29.
[356] IMF, *Working Paper – How Large are Global Energy Subsidies?* (previously cited), p. 4.
imf.org/en/Publications/WP/Issues/2016/12/31/How-Large-Are-Global-Energy-Subsidies-42940
[357] Asian Development Bank, *Fossil Fuels in Indonesia: Trends, Impacts and Reforms*, 2015, adb.org/sites/default/files/publication/175444/fossil-fuel-subsidies-indonesia.pdf
[358] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 77(a).
[359] See IISD and Global Subsidies Initiative, *Fossil Fuel to Clean Energy Subsidy Swaps: How to Pay for an Energy Revolution*, 2019, iisd.org/sites/default/files/publications/fossil-fuel-clean-energy-subsidy-swap.pdf

essential to protect human rights, particularly for those people in an already disadvantaged situation, as the elimination of fossil fuel subsidies must not undermine the ability of people with low incomes to secure their right to an adequate standard of living, but should in fact release resources to ensure the fulfilment of their economic, social and cultural rights.

5.4.2 HALT FOSSIL FUEL EXPANSION

The continued expansion of fossil fuel production and infrastructure runs counter to the obligation to reduce emissions.

States must refrain from starting or authorizing new fossil fuel projects, including exploration, production and development of new infrastructure, at home and abroad.[360] Such projects would lock in increased emissions and contradict the imperative of phasing out the use of fossil fuels globally by 2050.[361] As a matter of priority, countries must not allow, facilitate or support investment in the most polluting forms of fossil fuel, thus prohibiting the opening of new coal mines, the construction of new coal-fired power plants[362] and the extraction of oil from tar sands, but instead focus on a just transition to renewable energy produced in a manner consistent with human rights.

Acknowledging their ecological debt[363] and to ensure that the rights of people in developing countries are not disproportionately affected, wealthier industrialized states should:

- prohibit, in law and practice, further investments to expand fossil fuel exploration, extraction and production including the development of new infrastructure, and take the lead in decommissioning existing fossil fuel production within their territory;
- stop financing fossil fuel expansion in other countries, as wealthier countries' emission reduction targets cannot be met by simply shifting sources of production to less developed countries;
- provide means and support, including financial resources and technology transfers, to developing countries to avoid the rapid development of fossil fuels and instead facilitate a speedy transition to human rights-consistent renewable energy that creates livelihood opportunities, supports communities and facilitates access to affordable energy to all.

All states should, as members of multilateral development banks and other international organizations, oppose financing of such projects by international organizations.

5.5 SHIFT TOWARDS RENEWABLE ENERGY PRODUCED CONSISTENTLY WITH HUMAN RIGHTS

Shifting towards renewable energy across the electricity, heat and transport sectors by 2050 at the latest is of paramount importance in order to avoid reaching levels of global warming of more than 1.5°C, which would be catastrophic for human rights protection. Because renewable energy itself will be unlikely to meet energy demand by 2050, it should be taken in conjunction with other essential mitigation measures such as those aimed at reducing the consumption of energy though energy efficiency schemes, circular economy strategies and the encouragement of behavioural change.[364]

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[360] See also Principle 21, Oslo Principles on Global Climate Change Obligations, globaljustice.yale.edu/sites/default/files/files/OsloPrinciples.pdf

[361] In May 2021, the International Energy Agency (IEA) confirmed that to fully decarbonize the economy by 2050, no new fossil fuel project should be authorized beyond what already committed as of 2021. See IEA, *Net Zero by 2050 – A Roadmap for the Global Energy Sector*, May 2021, iea.blob.core.windows.net/assets/4482cac7-edd6-4c03-b6a2-8e79792d16d9/NetZeroby2050-ARoadmapfortheGlobalEnergySector.pdf

[362] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 77.

[363] This refers to the concept that developed countries, by using up most of the atmospheric space into which states could have safely emitted GHGs, owe developing countries compensation.

[364] See for example International Energy Agency (IEA), *Net Zero by 2050 – A Roadmap for the Global Energy Sector*, May 2021 (previously cited), pp. 64-70; International Renewable Energy Agency (IRENA), *Global Energy Transformation: A Roadmap to 2050*, 2018, irena.org/-/media/Files/IRENA/Agency/Publication/2018/Apr/IRENA_Report_GET_2018.pdf; Ellen Macarthur Foundation, *Completing the Picture: How the Circular Economy Tackles Climate Change*, September 2019, ellenmacarthurfoundation.org/assets/downloads/Completing_The_Picture_How_The_Circular_Economy-_Tackles_Climate_Change_V3_26_September.pdf

The momentum towards a transition to renewable energy is growing, with many governments,[365] regions, cities and businesses[366] committing to transition to 100% renewable energy by 2050 or earlier.

In addition to the need to mitigate climate change, the shift towards renewable energy offers numerous advantages. As stated by the IPCC, "renewable energy offers the opportunity to contribute to social and economic development, energy access, secure energy supply, climate change mitigation, and the reduction of negative environmental and health impacts".[367]

In particular, renewable energy can help to accelerate access to energy, particularly for billions of people deprived of it or who depend on unreliable electricity networks, and for those relying on unhealthy and high-emission sources such as charcoal for cooking and heating. For example, the IPCC estimated that solar technology could address the energy gap for 1.4 billion people who do not currently have access to electricity, and for the 2.7 billion people who rely on traditional biomass for home cooking and heating needs.[368] Through the SDGs, states have adopted a stand-alone goal on energy – Goal 7 – that aims to ensure access to affordable, reliable, sustainable and modern energy for all by 2030. Important benefits can be achieved by ensuring renewable energy is provided though 'distributed renewable energy'; energy produced through off-grid and mini-grid wind and solar installations near the point of use instead of centralized generation sources from power plants.

States must shift towards renewable energy produced consistently with human rights for all as quickly as possible. Wealthy states must complete this transition by 2030 or as soon as possible after that. Developing countries must do so as quickly as possible and no later than 2050, based on states' capacities and responsibility for emissions. All states should immediately develop concrete long-term plans for a just and sustainable transition to human rights-consistent renewable energy, in line with the Paris Agreement targets and the SDGs.

States must facilitate the shift through measures including ending fossil fuel subsidies and redeploying resources to support the renewable energy sector. In addition, to allow developing countries to carry out a rapid and just transition, developed countries must deliver sufficient public climate finance and technical support (see section 10.1). In parallel, developing countries should put in place policies and mobilise domestic resources for a just and human rights-consistent transition to renewable energy, including from polluting industries through appropriate fiscal measures, and determine in their NDCs the exact needs in terms of technology transfer and financial resources needed from wealthier countries to carry out a just transition to renewable energy by 2050 at the latest. They should also ensure that all resources received effectively advance and do not undermine or violate human rights.

Although a rapid transition to renewable energy is essential, it must not be carried out to the detriment of communities and individuals who are already marginalized or disadvantaged (see section 7). A study by the Business and Human Rights Resource Centre found that most of the largest renewable energy companies "lack the essential human rights policies to avoid abuse of the communities and workers on which a just transition depends". The lack of a human rights policy strongly correlates with allegations of abuse. The results of the study also revealed that "none of the companies analysed are currently fully meeting their responsibility to respect human rights, as defined by the UN Guiding Principles".[369] (See section 13.3 on the independent responsibility of businesses to respect human rights, as set out in the UN Guiding Principles on Business and Human Rights).

In particular, there is a wealth of documentation on the human rights = abuses linked to the construction of hydroelectric dams, especially large projects. According to research by the Business and Human Rights Resource Centre, the hydropower sector is the renewable energy sub-sector with the largest number of allegations of human rights abuses.[370] Probably the most well known recent example is the construction of the Agua Zarca dam in Honduras, planned in violation of Indigenous Peoples' rights. Opposition from members of the community led to unlawful arrests, criminalization of human rights defenders (HRDs) and

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[365] For example, at the 2019 UN Climate Action Summit, small island developing states committed to reach 100% renewable energy by 2030 provided that adequate resources are made available through climate finance.
[366] See there100.org/companies
[367] IPCC, *Special Report on Renewable Energy Sources and Climate Change Mitigation, Summary For Policy Makers*, 2011, ipcc.ch/report/renewable-energy-sources-and-climate-change-mitigation/, p. 18.
[368] IPCC, *Special Report on Renewable Energy Sources and Climate Change Mitigation* (previously cited), Chapter 3, p. 372.
[369] Business and Human Rights Resource Centre, "Renewable energy & human rights benchmark", 7 September 2020, business-humanrights.org/en/from-us/briefings/renewable-energy-human-rights-benchmark/
[370] Business and Human Rights Resource Centre, *Fast and Fair: Renewable Energy Investments: A Practical Guide For Investors*, July 2019, business-humanrights.org/sites/default/files/Renewable%20Energy%20Investor%20Briefing_0.pdf The study found that only four companies (Acciona, Enel, Iberdrola and Orsted) specifically commit to implementing the UN Guiding Principles on Business and Human Rights or the OECD Guidelines for Multinational Enterprises.

the killing of community leader Berta Cáceres.[371] Amnesty International has documented attacks on HRDs and other human rights violations and risks associated with hydropower projects in numerous countries, including Canada, Colombia, Guatemala and Honduras.[372] In addition, large hydropower projects have serious negative ecological and climate consequences, such as major GHG emissions from large dam reservoirs and serious impacts on biodiversity. For this reason, governments and investors should exercise maximum caution before authorizing or investing in large hydropower projects, and only promote them if thorough and independent environment and human rights impact assessments reveal that the projects and related mitigation measures will not lead to human rights violations.[373]

The production of energy from renewable sources such as wind and solar can also lead to human rights abuses, especially when companies lack, or fail to adequately implement, human rights due diligence policies and processes. The most frequent human rights concerns associated with the wind and solar energy sectors are failures to respect Indigenous Peoples' rights, including lack of free, prior and informed consent, forced evictions and illegal land seizures, loss of livelihoods related to the loss of land, and insufficient respect of labour rights.[374] In addition, the mining of minerals used to produce wind turbines and solar panels is often associated with "decreased access to water for local communities, increased instances of mining-related illnesses, and environmental pollution".[375]

Similarly, the production of rechargeable, lithium-ion batteries needed for renewable energy storage and electric vehicles carries its own risks of increased environmental harm and the abuse of human rights. These risks are especially imposed on people and communities, mostly in the Global South, who are already marginalized by poverty and discrimination, and many whose rights also disproportionately at risk due to the effects of climate change.[376] For example, years of unregulated industry practices have led to detrimental human rights and environmental impacts at many of the mines where battery metals are extracted, such as the contamination of water bodies and other forms of pollution, tailings dam disasters, the forced eviction of communities, child labour and other labour rights abuses, and violence by security personnel.[377] Product design for rapid replacement, rather than resource efficiency and recycling, has resulted in ever-growing amounts of waste and an unnecessarily and rapid increase in demand for raw materials. To prevent this, mandatory requirements to increase recovery and secondary usage of battery and base metals are necessary in order to contribute to a more circular economy. This will significantly reduce the demand for minerals, and reduce the impact on people and planet.[378] The rush to find new sources of battery minerals is also driving the recent charge to exploit mineral deposits on the ocean floor, known as deep sea mining. This poses new risks to both the sea-floor ecosystem and coastal communities.[379]

Bio-energy, which is often considered a source of renewable energy, has also serious environmental and human rights implications, as described in sub-section 5.7.

As economies shift towards renewable energy, it is imperative that states adopt and implement laws obliging all companies, including those producing renewable energy, to conduct human rights due diligence on their global operations, supply and value chains, in accordance with the UN Guiding

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[371] Amnesty International, "Honduras: Brutal murder of Indigenous leader, a tragedy waiting to happen", 3 March 2016, amnesty.org/en/latest/news/2016/03/honduras-brutal-murder-of-indigenous-leader-a-tragedy-waiting-to-happen/; BankTrack, "Agua Zarca Hydro Project", 1 December 2018, banktrack.org/project/agua_zarca_dam

[372] See Amnesty International, "Guatemala: Amnesty International declares Bernardo Caal Xol prisoner of conscience", 16 July 2020, amnesty.org/en/latest/news/2020/07/guatemala-bernardo-caal-xol-preso-conciencia/; Amnesty International Canada, "The defenders of this river are under attack and here's why action from Canada is vital", 9 March 2020, amnesty.ca/blog/defenders-river-are-under-attack-and-heres-why-action-canada-vital; Amnesty International, *"We Are Defending the Land with Our Blood" – Defenders of the Land, Territory and Environment in Honduras and Guatemala* (Index: AMR 01/4562/2016), 1 September 2016, amnesty.org/en/documents/amr01/4562/2016/en /; Amnesty International, *The Point of No Return: The Human Rights of Indigenous Peoples in Canada Threatened by the Site C Dam* (Index: AMR 20/4281/2016), 9 August 2016, amnesty.org/en/documents/amr20/4281/2016/en/

[373] The Guardian, "The hydropower paradox: Is this energy as clean as it seems?", 6 November 2016, theguardian.com/sustainable-business/2016/nov/06/hydropower-hydroelectricity-methane-clean-climate-change-study; Environmental Defense Fund, "Long-considered a "clean" energy source, hydropower can actually be bad for the climate", 15 November 2019, blogs.edf.org/energyexchange/2019/11/15/long-considered-a-clean-energy-source-hydropower-can-actually-be-bad-for-climate/

[374] Business and Human Rights Resource Centre, *Fast and Fair* (previously cited).

[375] Business and Human Rights Resource Centre, *Fast and Fair* (previously cited).

[376] Business and Human Rights Resource Centre, Transition Minerals Tracker, February 2021, trackers.business-humanrights.org/transition-minerals/; SOMO, *The Battery Paradox: How the Electric Vehicle Boom is Draining Communities and the Planet*, 22 December 2020, somo.nl/the-battery-paradox/

[377] Afrewatch, *Report of the Stakeholder Brainstorming Workshop on Artisanal Mining*, 19 May 2020, afrewatch.org/2731-2/; Amnesty International, *Time to Recharge* (Index: AFR 62/7395/2017), 2017, amnesty.org/en/documents/afr62/7395/2017/en/

[378] Earthworks, *Reducing New Mining for Electric Vehicle Battery Metals: Responsible Sourcing through Demand Reduction Strategies and Recycling*, 27 April 2021, earthworks.org/publications/recycle-dont-mine/

[379] Greenpeace, *In Deep Water,* 3 July 2019, greenpeace.org/international/publication/22578/deep-sea-mining-in-deep-water/

Principles on Business and Human Rights.[380] States must also adopt and enforce environmental protection laws and regulations, investigate allegations of environmental and human rights abuses in the renewable energy sector and provide access to remedy.

The shift to renewable energy can and must be carried out in a manner that is just and complies with human rights standards (see section 7).[381]

5.6 ENSURE SUSTAINABLE AGRICULTURE AND END DEFORESTATION

5.6.1 ENVIRONMENTAL IMPACTS

Although emissions from agriculture, forestry and other land use are difficult to systematically quantify, the IPCC estimates that almost a quarter of total GHG emissions originate from this sector (23%), making it the second highest source of emissions after the energy sector.[382]

Emissions from agriculture, forestry and other land use have been steadily increasing over the past few decades. In 2016, the Food and Agriculture Organization (FAO) estimated that emissions from agriculture rose 8% annually between 2005 and 2015.[383]

More than half of emissions in the agriculture sector come from raising livestock.[384] In particular, between 1990-2017, enteric fermentation – the natural digestive process that occurs in ruminant animals such as cattle, sheep and goats – accounted for about 40% of the emissions in the agriculture sector.[385]

Another important source of emissions is land use and land-use change activities (such as deforestation, forest degradation and forest fires).[386] Most of these emissions are intimately connected to industrial agriculture[387] and agro-industrial food systems,[388] as the bulk of emissions result from land-use change, as monoculture farms expand and encroach on tropical forests.[389] This includes turning forest areas into grazing land for commercial cattle farming, the production of feed crops such as soy, and palm oil plantations.[390] The use of synthetic fertilizers and pesticides whose production is fossil fuel-intensive, and unsustainable agriculture practices associated with industrial agriculture such as overgrazing and shifting

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[380] For example, the French corporate duty of vigilance law adopted in 2017, which only applies to the largest French companies, requires companies to assess and address the adverse impacts of their activities on people and the planet. In September 2020 the European Commission launched a public consultation in preparation for legislating on deforestation. In October 2020 the European Parliament adopted recommendations to the Commission that this legislative proposal should entail due diligence requirements for corporate actors and liability norms in case of harm. Equally, the European Commission committed in April 2020 to put forward a legislative proposal to establish mandatory human rights and environmental due diligence for business enterprises and ensuring liability for harm occurred. At international level, since 2014 states have been negotiating a legally binding instrument at the United Nations with the aim of ensuring that businesses carry out due diligence and engage in remedy for damage.

[381] See also Amnesty International, *Powering Change: Principles for Businesses and Governments in the Battery Value Chain*, 4 February 2021, amnesty.org/en/documents/act30/3544/2021/en/. The Principles, issued in February 2021, have been endorsed by over 50 organizations.

[382] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited), p. 7. The IPCC also indicated that the share of the total emissions attributable to agriculture, forestry and other land use is estimated to be as high as 37% if emissions associated with pre- and post-production activities in the global food system, such from energy, transport and industry sectors for food production, are included

[383] FAO, *Greenhouse Gas Emissions from Agriculture, Forestry and Other Land Use*, 2016, fao.org/3/i6340e/i6340e.pdf.

[384] See FAO, fao.org/faostat/en/#data/GT/visualize

[385] See FAO, www.fao.org/faostat/en/#data/GT/visualize

[386] CLARA (Climate Land Ambition and Rights Alliance), *Missing Pathways to 1.5°C*, 2018, climatelandambitionrightsalliance.org/report, p. 10.

[387] The International Panel of Experts on Sustainable Food Systems (IPES-Food) consider "industrial agriculture" to refer to modes of farming that are analogous to industrial processes in their scale and task segregation, and seek to derive productivity gains from specialization in the production of a single item (or few items) or of a single stage of that item's production, and intensification of production. See IPES-Food, *From Uniformity to Diversity: A Paradigm Shift From Industrial Agriculture to Diversified Agroecological Systems*, ipes-food.org/_img/upload/files/UniformityToDiversity_FULL.pdf, p. 11.

[388] According to the FAO, a food system encompasses all the stages of food production, consumption and disposal: growing, harvesting, packing, processing, transforming, marketing, distributing, consuming and disposing of food products that originate from agriculture, forestry or fishery. The most common food system is the agro-industrial food system that is global. See FAO, Sustainable Food Systems, 2018, fao.org/3/ca2079en/CA2079EN.pdf

[389] FAO estimates that 80% of forest loss is being driven by conversion of forest to agricultural land. See fao.org/news/story/en/item/1103556/icode/

[390] It is estimated that deforestation rates in Brazil from converting land for feed crops and pastures has increased by more than a quarter since 2014, which has coincided with Brazil becoming the world's largest exporter of soy, beef and poultry, and the second largest exporter of maize (CLARA, *Missing Pathways to 1.5°C* (previously cited), p. 30).

cultivation without adequate fallow periods,[391] which contribute to land degradation, are also important sources of emissions.

In some cases, such as in the Brazilian Amazon, forest fires have been linked to efforts to illegally seize land for commercial cattle farming.[392] Large-scale wildfires aggravate climate change because of the quantity of CO_2 and other GHGs emitted and because, by destroying forests, they alter the forests' capacity to remove CO_2 from the air.[393] The result is a feedback loop, whereby massive forest fires drive global warming, which in turn increases the likelihood of wildfires.[394]

Deforestation and unsustainable agricultural practices related to industrial food systems alter the capacity of land to act as an important sink for CO_2.[395] In its natural state, land absorbs CO_2 equivalent to almost a third of CO_2 emissions from fossil fuels and industry.[396] When land is degraded, or forests are cleared, CO_2 is released into the atmosphere, along with nitrous oxide, making land degradation one of the biggest contributors to climate change. An estimated two-thirds of all terrestrial carbon stores from soils and vegetation have been lost since the 19th century through land degradation.[397] The IPCC estimated that about a quarter of the Earth's ice-free land area is subject to human-induced land degradation.[398] Land degradation also severely threatens food security, as land becomes less productive, restricting what can be grown.[399] It is estimated that land degradation and loss of soil fertility are affecting 3.2 billion people, especially rural communities, small-scale farmers and people living in poverty.[400]

Most of the emissions from agriculture, forestry and other land-use sectors come from countries where industrial agriculture is prevalent and that have high levels of over-consumption and waste.[401] For example, as far as emissions from meat and dairy are concerned, Argentina, Australia, Brazil, Canada, the EU, New Zealand and the USA together account for 43% of total global emissions from meat and dairy production, even though they are home to just 15% of the world's population. Each of these countries has both surplus production and high per capita consumption of meat and dairy.[402] Adding China, these countries are responsible for two-thirds of all emissions from meat and dairy production.[403] Despite the concentration of meat and dairy production in these countries, the production of animal feed supply has been shifted towards other parts of the world, with the consequence that vast areas of land have been converted to sustain the meat and dairy intensive diets and over-consumption in wealthier countries.[404]

Deforestation, agricultural intensification and unsustainable practices related to the agro-industrial food system have resulted in biodiversity loss and the loss of habitats for terrestrial and aquatic animal species.[405] For example, agricultural intensification and the use of agrichemicals have led to a "worldwide loss of pollinators" such as bees and other insects.[406] Degradation and loss of biodiversity have serious human rights impacts, as they alter the ability of ecosystems to provide essential services such as food, water, timber and fibre, which are necessary for basic material needs, including nutrition, shelter and clothing.[407] As highlighted by the COVID-19 pandemic, deforestation and loss of biodiversity contribute to the risk that

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[391] For an explanation of these practices, see FAO, fao.org/3/v4360e/V4360E08.htm
[392] Amnesty International, *Fence Off and Bring Cattle: Illegal Cattle Farming in Brazil's Amazon* (Index: AMR 19/1401/2019), 26 November 2019, amnesty.org/en/documents/amr19/1401/2019/en/
[393] NOAA, *The Impact of Wildfires on Climate and Air Quality*, esrl.noaa.gov/csl/factsheets/csdWildfiresFIREX.pdf; Inside Climate News, "how wildfires can affect climate change (and vice versa)", 23 August 2018, insideclimatenews.org/news/23082018/extreme-wildfires-climate-change-global-warming-air-pollution-fire-management-black-carbon-co2
[394] See for example M.W. Jones and others, "Climate change increases the risk of wildfires", 2020, ScienceBrief, sciencebrief.org/briefs/wildfires; Union of Concerned Scientists, "The connection between climate change and wildfires", updated March 2020, ucsusa.org/resources/climate-change-and-wildfires#.V6xaQ-uLS71
[395] Through photosynthesis, plants grab carbon dioxide from the atmosphere and partly keep it for their growth and partly transfer it through their roots to the soil to form carbon compounds, which feed soil organisms. Carbon is the main component of soil organic matter and helps give soil its water-retention capacity, its structure, and its fertility. See Yale Environment 360, "Soil as carbon storehouse: New weapon in climate fight?", 4 March 2015, e360.yale.edu/features/soil_as_carbon_storehouse_new_weapon_in_climate_fight
[396] IPCC, "Land is a critical resource: IPCC report says", 8 August 2019, ipcc.ch/2019/08/08/land-is-a-critical-resource_srccl/
[397] IUCN, "Land degradation and climate change, Issues Brief", November 2015, iucn.org/resources/issues-briefs/land-degradation-and-climate-change
[398] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited), p. 3.
[399] IPCC, "Land is a critical resource: IPCC report says" (previously cited).
[400] Global Environment Facility, Land Degradation, thegef.org/topics/land-degradation
[401] ActionAid, *Principles for a Just Transition in Agriculture*, 7 January 2020, actionaid.org/publications/2019/principles-just-transition-agriculture, p. 5.
[402] GRAIN and IATP, *Emissions Impossible: How Big Meat and Dairy Are Heating Up the Planet*, 2018, grain.org/article/entries/5976-emissions-impossible-how-big-meat-and-dairy-are-heating-up-the-planet, p. 6.
[403] GRAIN and IATP, *Emissions Impossible. How Big Meat and Dairy Are Heating Up the Planet* (previously cited), p. 8.
[404] IPES-Food, *From Uniformity to Diversity* (previously cited), p. 17.
[405] IPBES, *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, Summary for Policy-Makers*, paras B1 and 11, ipbes.net/sites/default/files/downloads/spm_unedited_advance_for_posting_htn.pdf.
[406] IPES-Food, *From Uniformity to Diversity* (previously cited), p. 22.
[407] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 19 January 2018, UN Doc. A/HRC/34/49.

new infectious diseases will emerge, and therefore to an increased risk of future pandemics.[408] As articulated by the UN Special Rapporteur on human rights and the environment, "the full enjoyment of human rights thus depends on biodiversity, and the degradation and loss of biodiversity undermine the ability of human beings to enjoy their human rights".[409]

5.6.2 HUMAN RIGHTS IMPACTS

Deforestation and unsustainable agricultural practices associated with industrial food systems not only lead to major negative environmental impacts, such as high emissions, land degradation and biodiversity loss, but are also often linked to human rights abuses.[410]

For example, Amnesty International has documented how illegal land seizures in Reserves and Indigenous territories in the Brazilian Amazon for commercial cattle farming lead to violence, threats and intimidation of Indigenous Peoples and traditional residents of these protected areas.[411] Forced evictions of Indigenous Peoples, peasants, pastoralists, forest dwellers and other communities have severe ramifications for the enjoyment of their human rights, including loss of livelihoods and food insecurity, with disproportionate impacts on women.[412] In many cases, illegal land seizures or attempts to seize land from Indigenous Peoples and local communities for agricultural purposes lead to attacks, threats and even murder of community members and HRDs. For Indigenous Peoples, forced evictions constitute a violation of their right to ancestral land, to self-determination and to their cultural rights. Their community is dispersed, they are separated from their spiritual and cultural practices linked to the forest and in certain cases this translates into the disappearance of their unique culture and identity, as documented by Amnesty International in its research into the Sengwer people of Kenya, who experienced forced evictions as part of a misguided approach to forest conservation.[413]

Unsustainable agricultural practices also have severe impacts on the right to water of local communities, affecting both the quality and quantity of water. Agriculture accounts for 70% of water extraction worldwide.[414] Industrial agricultural systems require more water for irrigation because of poor soil conservation and consequent low water retention and high water runoff.[415] In some countries, large-scale irrigation results in over-exploitation and depletion of water sources.[416] The high density of livestock, over-application of nutrients, intensive use of chemical fertilizers and pesticides and aggressive soil practices are important drivers of water contamination.[417] Both water scarcity and water pollution have direct impacts on the right to health,[418] with local communities and the most marginalized people suffering the most.[419]

The current agro-industrial food system also affects the health of people across the world in many interdependent ways.[420] In Global South countries, the intensification of monocultures has eroded the diversity of traditional diets and left lower income people unable to access more diverse foods that are imported.[421] Also, the specialization in energy-rich staple cereals has resulted in a decline in consumption of

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[408] B.A. Wilcox and B. Ellis, "Forests and emerging infectious diseases of humans", 2006, fao.org/3/a0789e/a0789e03.htm; F. Keesing and others, "Impacts of biodiversity on the emergence and transmission of infectious diseases", 2010, Nature, Volume 468; National Geographic, "Deforestation is leading to more infectious diseases in humans", 22 November 2019, nationalgeographic.com/science/2019/11/deforestation-leading-to-more-infectious-diseases-in-humans/

[409] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 19 January 2018, UN Doc. A/HRC/34/49, para. 5.

[410] For a comprehensive list of the human rights impacts of deforestation, see Forest Peoples Programme, *Closing the Gap: Rights-Based Solutions for Tackling Deforestation,* 2018, forestpeoples.org/en/node/50213, pp. 13-15.

[411] Amnesty International, "Brazil: Halt illegal cattle farms fuelling Amazon rainforest destruction", 26 November 2019, amnesty.org/en/latest/news/2019/11/brazil-halt-illegal-cattle-farms-fuelling-amazon-rainforest-destruction/

[412] See for example FIAN and Habitat International Coalition, *Monocultures and Human Rights*, 2009, fian.org/fileadmin/media/publications_2015/2009_06_Monocultures_and_HumanRights.pdf; FIAN, *Rede Social de Justiça e Direitos Humanos and Comissão Pastoral da Terra, The Human and Environmental Cost of Land Business in Brazil – The Case of Matopipa, Brazil,* 2018, fian.org/en/publication/article/land-speculation-is-leading-to-human-rights-violations-and-eco-destruction-in-brazil-matopiba-2234

[413] Amnesty International, *Families Torn Apart: Forced Eviction of Indigenous People in Embobut Forest, Kenya* (Index: AFR 32/8340/2018), 15 May 2018, amnesty.org/en/documents/afr32/8340/2018/en/

[414] FAO and International Water Management Institute, *Water Pollution From Agriculture: A Global Review, Executive Summary*, p. 2, fao.org/3/a-i7754e.pdf#page=14

[415] IPES-Food, *From Uniformity to Diversity* (previously cited), p. 20.

[416] IPES-Food, *From Uniformity to Diversity* (previously cited), pp. 20-21.

[417] IPES-Food, *From Uniformity to Diversity* (previously cited), pp. 19-20.

[418] FAO and International Water Management Institute, *Water Pollution From Agriculture: A Global Review, Executive Summary*, fao.org/3/i7754e/i7754e.pdf, p. 3.

[419] See for example FIAN, *Rede Social de Justiça e Direitos Humanos and Comissão Pastoral da Terra, The Human and Environmental Cost of Land Business in Brazil – The Case of Matopipa* (previously cited).

[420] For a comprehensive picture of the food system-health nexus see IPES-Food, *Unravelling the Food-Health Nexus: Addressing Practices, Political Economy, and Power Relations to Build Healthier Food Systems*, 2017, ipes-food.org/_img/upload/files/Health_FullReport(1).pdf

[421] IPES-Food, *From Uniformity to Diversity* (previously cited), pp. 27-29

pulses and other minor crops with high nutritional value.[422] All over the world, the per capita consumption of calorie-dense foods has increased, as inexpensive calories from commodity crops have become more easily available.[423] As a result, overall, both undernutrition and obesity rates are increasing.[424] On the one hand, a growing number of people are getting sick because of hunger or lack of reliable access to adequate and acceptable foods, while on the other hand an increasing percentage of the population see their health deteriorating as a consequence of unhealthy diets and over-consumption.[425] The exposure of crops to agro-chemicals, such as pesticides and herbicides, further aggravates the impacts on the right to health.[426]

The agro-industrial food system is also plagued by pervasive violations of workers' rights. For example, violations on sugar cane and palm oil plantations have been widely documented and include forced and child labour, discrimination based on gender, nationality or descent, as well as exploitative and dangerous working practices that put the health of workers at risk.[427] Important occupational health hazards are also reported, for example with pesticides accounting for an estimated 200,000 acute poisoning deaths each year, 99% of which occur in developing countries.[428]

Industrial agriculture and the industrial food systems that have developed around it are also associated with negative impacts on the right to an adequate standard of living, especially of peasants and small-scale farmers. For example, forced evictions of peasants for land acquisition for large monocultures have led to the impoverishment of workers and small-scale farmers, especially in developing countries when they are unable to find decent alternative employment in other sectors.[429]

5.6.3 PROMOTE SUSTAINABLE AGRICULTURAL PRACTICES

In order to reduce emissions from the agriculture sector while addressing its numerous other environmental and human rights impacts, it is essential to transform the current model of industrial agriculture.

States should therefore adopt public policies that promote and facilitate a just transition from unsustainable and exploitative agriculture and food systems to sustainable and human rights-consistent agricultural and land management practices.

Agro-ecology is a specific form of sustainable agriculture practised by many small-scale farmers and Indigenous Peoples.[430] In 2010, the UN Special Rapporteur on the right to food highlighted the numerous benefits of a consistent shift towards agro-ecology, including emission reductions, enhanced resilience of food production to climate shocks and all of the components of the right to food.[431] In recent years, agro-

[422] IPES-Food, *From Uniformity to Diversity* (previously cited), pp. 27-29.
[423] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, pp. 445-446.
[424] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, pp. 445-446.
[425] IPES-Food, *Unravelling the Food-Health Nexus: Addressing Practices, Political Economy, and Power Relations to Build Healthier Food Systems* (previously cited).
[426] IPES-Food, *From Uniformity to Diversity* (previously cited), p. 29.
[427] See for example FIAN and Habitat International Coalition, *Monocultures and Human Rights* (previously cited); Amnesty International, *Dominican Republic: A Life in Transit – The Plight of Haitian Migrants and Dominicans of Haitian Descent* (Index: AMR 27/001/2007), 21 March 2007, amnesty.org/download/Documents/AMR270012007ENGLISH.PDF; Amnesty International, *The Great Palm Oil Scandal – Labour Abuses Behind Big Brand Names* (Index: ASA 21/5184/2016), 2016, amnesty.org/download/Documents/ASA2152432016ENGLISH.PDF
[428] IPES-Food, *Unravelling the Food-Health Nexus* (previously cited), pp. 16 and 19.
[429] IPES-Food, *From Uniformity to Diversity* (previously cited), p. 23.
[430] The UN Special Rapporteur on the right to food adopted the following definition of agro-ecology in 2011: "the application of ecological science to the study, design and management of sustainable agroecosystems". He explained that: "The core principles of agroecology include recycling nutrients and energy on the farm, rather than introducing external inputs; integrating crops and livestock; diversifying species and genetic resources in agroecosystems over time and space; and focusing on interactions and productivity across the agricultural system, rather than focusing on individual species. Agroecology is highly knowledge-intensive, based on techniques that are not delivered top-down but developed on the basis of farmers' knowledge and experimentation". See Report, 20 December 2010, UN Doc. A/HRC/16/49, para. 12. Agro-ecology is not a new approach, but rather a science, a set of practices and a social justice vision that small-scale farmers and Indigenous Peoples have been using to promote agricultural practices that are environmentally sustainable and socially just. It has also been defined as a holistic set of principles for redesigning food systems. See IPES-Food, *Breaking Away From Industrial Food and Farming Systems – Seven Case Studies of Agroecological Transition*, 2018, ipes-food.org/_img/upload/files/CS2_web.pdf For a common understanding of agro-ecology by organizations and international movements of small-scale food producers and consumers, see Declaration for the International Forum on Agroecology, Nyéléni, Mali: 27 February 2015, fao.org/family-farming/detail/en/c/341387/.
[431] UN Special Rapporteur on the right to food, Report, 20 December 2010, UN Doc. A/HRC/16/49. The subsequent Special Rapporteur on the right to food also recommended agro-ecology as an alternative to the extensive use of pesticides, and stressed that agro-ecology has the potential to "secure livelihoods for smallholder farmers and those living in poverty, including women". See UN Special Rapporteur on the right to food, Report, 24 January 2017, UN Doc. A/HRC/34/48, para. 95.

ecology has been gaining increased interest and support from the UN as a way to realize many of the SDGs.[432]

The IPCC also clearly illustrated the numerous co-benefits of sustainable land management practices such as agro-ecology. These include preventing and reducing land degradation, maintaining land productivity, contributing to mitigation and adaptation, and even reversing the adverse impacts of climate change on land degradation.[433]

As set out by the UN Declaration on the Rights of Peasants and Other People Working in Rural Areas: "States shall stimulate sustainable production, including agro-ecological and organic production, whenever possible" (Article 16, para. 4) and "take measures aimed at the conservation and sustainable use of land and other natural resources used in their production, including through agro-ecology, and ensure the conditions for the regeneration of biological and other natural capacities and cycles" (Article 17, para. 7).

As documented by the International Panel of Experts on Sustainable Food Systems (IPES-Food), measures to facilitate the agro-ecological transition include: securing access to land, water, forests, common property resources and seeds; providing access to credit; supporting urban and peri-urban agro-ecological production, particularly of small- and medium-sized enterprises; and reorienting national and international trade policies to reverse the incentives for export-oriented monoculture.[434]

5.6.4 ADOPT SUSTAINABLE AND HUMAN RIGHTS-CONSISTENT POLICIES ACROSS THE FOOD SYSTEM

Changes in food production, for example by facilitating the transition to sustainable agricultural practices, are essential but not sufficient to reduce emissions from agriculture and land use in line with the imperative of keeping global heating below 1.5°C. Transformations need to happen across the whole food system, combining measures affecting the supply side in farms and throughout the supply chain, and the demand side.[435] Without such a food system approach, the IPCC estimates that there would be an over-reliance on climate mitigation approaches that increase competition over land, with adverse effects such as "increased numbers of malnourished people and impacts on smallholder farmers".[436]

According to the IPCC, demand-side measures, such as changes in diet and reduction of food loss and waste, can contribute to substantially lower emissions.[437] About 25-30% of total food produced is either lost during production, storage, processing or distribution, or is wasted by retailers or consumers. Between 2010-2016, global food loss and waste amounted to 8-10% of total GHG emissions.[438] Reducing food loss and waste would reduce production, and hence emissions, and improve food security.[439]

In wealthy industrialized countries, where food waste and overconsumption of resource intensive food, especially meat and dairy, is widespread, policies to promote behavioural changes to reduce waste and resource intensive food consumption should be promoted as part of a state's overall emissions reduction obligations.[440] Research indicates that considerably reducing consumption of meat and dairy products in wealthier countries would have positive impacts both in terms of emission reductions and health improvements.[441] However, given the current disparities in consumption and the relatively low emission rate of traditional livestock cultivation,[442] such changes may not be necessary in many developing countries and could be counterproductive in countries with high levels of food insecurity. Moreover, even in wealthy industrialized countries, policies to promote changes in consumption levels should consider the specific

[432] See for example, FAO, "Scaling up Agroecology Initiative", 2018, fao.org/3/I9049EN/i9049en.pdf; FAO, *The 10 Elements of Agroecology – Guiding the transition to sustainable food and agricultural systems*, 2018, fao.org/3/i9037en/I9037EN.pdf; UNEP, "Last call for a food systems revolution", 19 July 2019, unenvironment.org/news-and-stories/story/last-call-food-systems-revolution
[433] IPCC, *Special Report on Land, Summary for Policymakers* (previously cited), para. B5, p. 24.
[434] IPES-Food, *Breaking Away From Industrial Food and Farming Systems* (previously cited), p. 16.
[435] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, p. 440.
[436] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, p. 440.
[437] IPCC, *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf, p. 29.
[438] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, p. 440.
[439] CLARA, *Missing pathways to 1.5°C* (previously cited), p. 34; IPCC, *Special Report on Land* (previously cited), Chapter 5, p. 440.
[440] UN Special Rapporteur on the right to food, Report, 24 January 2017, UN Doc. A/HRC/34/48, para. 89(n); CLARA, *Missing pathways to 1.5°C* (previously cited), pp. 32-33.
[441] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 5, p. 497; CLARA, *Missing pathways to 1.5°C* (previously cited), p. 32.
[442] ActionAid, *Principles for a Just Transition in Agriculture* (previously cited), p. 19.

needs of different groups of the population, and respect people's cultural identities, for example that of Indigenous Peoples.

States must ensure that any transition to more sustainable forms of agriculture and food systems are just, inclusive and participatory. As with the transition away from fossil fuels, the transition to more sustainable agricultural practices and food systems must address, rather than deepen, inequalities, and protect, respect and fulfil the human rights of those most affected. This means that the transition should benefit, not harm, the most marginalized sections of society including those living in poverty, small-scale farmers, fisherfolk, women and other workers in agriculture and food systems (see also section 7).

In order to do that, governments must begin by carefully assessing the human rights challenges faced by different groups in the current food system and what is needed to remove these challenges.[443] A specific human rights assessment of each proposed measure related to the transition should be carried out, and human rights-compliant indicators, targets and benchmarks should be set.

It is also imperative that governments do not impose measures on a one-size-fits-all model but rather fully include and involve all affected people and stakeholders in designing and planning policies and measures that can transform the food system.[444] In particular, peasants, farmers, fisherfolk, forest dwellers, workers throughout the food system supply chain, trades unions, and communities whose livelihood and cultural identity rely on agriculture and the forest, should have a central role in designing measures that may impact on their lives and rights. The specific barriers to participation faced by certain groups, especially women and those most marginalized, should be analysed and removed. This would result in more effective decision-making processes.[445]

5.6.5 ENSURE ACCESS TO LAND AND SECURITY OF TENURE

Limited access to land and insecurity of tenure have major negative implications for climate change mitigation and adaptation, food security, gender equality and social justice.[446]

States should ensure access to land and legal security of tenure for all, including communities who are dependent on land for their livelihood and access to food, water and housing. States should explore the full range of tenure arrangements, including community ownership of land, in a process of meaningful consultation with all those likely to be affected, with a view to providing the greatest protection to communities and individuals from forced eviction and land alienation, including the rights of Indigenous Peoples to their ancestral lands and to free, prior and informed consent. State interventions in guaranteeing security of tenure must be in line with international human rights standards, including International Labour Organization (ILO) Convention 169 and the UN Declaration on the Rights of Indigenous Peoples and the UN Declaration on the Rights of Peasants.

In cases where Indigenous Peoples and other communities with customary tenure systems exercise self-governance of land, fisheries and forests, they should, as noted by the FAO Voluntary Guidelines on the Tenure of Land, Fisheries and Forests "…promote and provide equitable, secure and sustainable rights to those resources, with special attention to the provision of equitable access for women".[447] Effective participation of all members, men, women and youth, in decisions regarding their tenure systems should be promoted through their local or traditional institutions, including in the case of collective tenure systems. Where necessary, communities should be offered culturally appropriate assistance to increase the capacity of their members to participate fully in decision-making and governance of their tenure systems.[448]

Despite the fact that more than 50% of the world's land, including many of the remaining forests and biodiversity hotspots, is directly managed by Indigenous Peoples and rural communities,[449] these custodians legally own only 10% of this land overall, and have formal rights to use or manage an additional 8%.[450]

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[443] ActionAid, *Principles for a Just Transition in Agriculture* (previously cited), p. 19.
[444] IPES-Food, *Unravelling the Food-Health Nexus (previously cited)*, p. 7; ActionAid, *Principles for a Just Transition in Agriculture* (previously cited), pp. 23-25.
[445] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited), p. 34.
[446] ActionAid, *Principles for a Just Transition in Agriculture* (previously cited), p. 10.
[447] Para. 9.2, www.fao.org/3/a-i2801e.pdf.
[448] Para. 9.2, www.fao.org/3/a-i2801e.pdf.
[449] Rights and Resources Initiative, *A Global Baseline of Carbon Storage in Collective Lands*, 2018, rightsandresources.org/wp-content/uploads/2018/09/A-Global-Baseline_RRI_Sept-2018.pdf.
[450] Rights and Resources Initiative, *A Global Baseline of Carbon Storage in Collective Lands* (previously cited); CLARA, *Missing pathways to 1.5°C* (previously cited), p. 5.

While women compose on average 43% of the agricultural labour force in developing countries,[451] patriarchal structures, stereotyped gender roles and traditional practices severely limit women's access to land and security of tenure. For example, the Organisation for Economic Co-operation and Development (OECD) calculated in 2014 that in only 37% of 161 developing and developed countries did men and women have equal rights to use and control land.[452] The percentage of landowners in developing countries who are women varies from a maximum of 18% in Latin America and the Caribbean to a minimum of 5% in North Africa and West Asia.[453]

Lack of security of tenure increases the exposure of Indigenous Peoples and local communities, and particularly the women among them, to the threat of violence, forced evictions and other human rights abuses as a consequence of illegal land seizure and land acquisition for a variety of purposes, including industrial agriculture, extractive industries, biofuels and trade in timber.[454] In some cases, they are also forcibly evicted in the name of "forest conservation" to establish government-managed protected areas,[455] in what has been labelled a "fortress conservation" approach, which creates "chronic patterns of abuse and human-rights violations".[456] Fortress conservation has been defined as a "model based on the belief that biodiversity protection is best achieved by creating protected areas where ecosystems can function in isolation from human disturbance. Fortress, or protectionist, conservation assumes that local people use natural resources in irrational and destructive ways, and as a result cause biodiversity loss and environmental degradation. Protected areas following the fortress model can be characterized by three principles: local people dependent on the natural resource base are excluded; enforcement is implemented by park rangers patrolling the boundaries, using a 'fines and fences' approach to ensure compliance; and only tourism, safari hunting and scientific research are considered as appropriate uses within protected areas. Because local people are labelled as criminals, poachers, and squatters on lands they have occupied for decades or centuries, they tend to be antagonistic toward fortress-style conservation initiatives and less likely to support the conservation goals."[457]

Fortress conservation conflicts with evidence showing that Indigenous Peoples and local communities are "effective forest and biodiversity managers".[458] For example, a worldwide comparison of 40 government-protected areas and 33 community-managed forests found that "as a whole, community managed forests presented lower and less variable annual deforestation rates than [government] protected forests".[459] In many cases, Indigenous Peoples and local communities are achieving conservation outcomes that are at least equivalent to those of government-managed protected areas with a fraction of the money spent.[460]

There is also evidence that conservation and climate mitigation efforts are more successful when women, Indigenous Peoples and local communities are guaranteed tenure rights and have greater access to and control over the land and forests they have customarily used or managed.[461] This is because security of tenure, including recognition of customary land ownership, gives reassurances to individuals and communities against dispossession, therefore facilitating their stronger involvement in forest management.[462] Security of tenure also facilitates the ability of communities to make changes to and investment in the land towards more sustainable ways of farming that can advance climate change adaptation and mitigation.[463] Access to land and security of tenure for women increases women's conservation efforts, raising their productive and environmentally beneficial agricultural investments, such as their willingness to engage in tree planting and sustainable soil management.[464]

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[451] FAO, "Closing the gender gap in agriculture", 7 March 2011, fao.org/news/story/en/item/52011/icode/
[452] OECD, *Social Institutions and Gender Index*, 2014, cited in IPCC, *Special Report on Land* (previously cited), Chapter 7, p. 718.
[453] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 7, p. 718.
[454] See for example Amnesty International, *The Forest is Our Heartbeat – The Struggle to Defend Indigenous Land in Malaysia*, 2018, (Index: ASA 28/9424/2018), amnesty.org/download/Documents/ASA2894242018ENGLISH.pdf
[455] See for example Amnesty International, *Families Torn Apart: Forced Evictions of Indigenous Peoples in Embobut Forest, Kenya* (Index: AFR 32/8340/2018) (previously cited).
[456] Rights and Resources Initiative, *Cornered by Protected Areas*, 2018, rightsandresources.org/wp-content/uploads/2018/06/Cornered-by-PAs-Brief_RRI_June-2018.pdf
[457] P. Robbins, *Sage encyclopedia of Environment and Society,* 2007, quoted in Dartmouth, SESMAD, "Critique of fortress conservation", sesmad.dartmouth.edu/theories/85
[458] Rights and Resources Initiative, *Cornered by Protected Areas* (previously cited), p. 7.
[459] L. Porter-Bolland and others, "Community managed forests and forest protected areas: An assessment of their conservation effectiveness across the tropics", 2012, Forest Ecology and Management, p. 6.
[460] Rights and Resources Initiative, *Cornered by Protected Areas* (previously cited), p. 10.
[461] F. Seymour and others, *Evidence Linking Community-Level Tenure and Forest Condition: An Annotated Bibliography,* Climate and Land Use Alliance, 2014, p. iii; CLARA, *Missing pathways to 1.5°C* (previously cited), p. 5; IPCC, *Special Report on Land* (previously cited), Chapter 7, p. 667.
[462] Clientearth, *Communities at the Heart of Forest Management: How Can the Law Make a Difference?*, 2019, documents.clientearth.org/wp-content/uploads/library/2019-02-01-communities-at-the-heart-of-forest-management-ce-en.pdf
[463] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited), p. 29; ActionAid, *Principles for a Just Transition in Agriculture* (previously cited), p. 11.
[464] IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 7, p. 719.

Security of tenure including community ownership does not always prevent interference from government authorities or companies.[465] Similarly, lack of security of tenure does not automatically translate into less investment in forest and land conservation.[466] However, protecting the rights of Indigenous Peoples and local communities on the land and forests they have customarily used or managed is considered a highly cost-effective way to protect forests, reduce soil degradation, better protect the biodiversity and ensure carbon sequestration.[467] Regardless of the positive environmental and climate mitigation outcomes, demarcation and titling of the lands of Indigenous Peoples is an obligation under human rights law.[468]

The UN Declaration on the Rights of Indigenous Peoples states that "Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired" (Article 26(2)).[469] The UN Committee on the Elimination of Racial Discrimination has called on states parties to "recognize and protect the rights of indigenous peoples to own, develop, control and use their communal lands, territories and resources and, where they have been deprived of their lands and territories traditionally owned or otherwise inhabited or used without their free and informed consent, to take steps to return those lands and territories."[470]

5.6.6 END DEFORESTATION AND RESTORE FORESTS

States have committed to halting deforestation under various international agreements, including the Convention on Biological Diversity, the SDGs (Goal 15), the UNFCCC and the Paris Agreement. In 2014, a number of governments, companies, civil society organizations and representatives of Indigenous Peoples pledged to end deforestation and restore millions of hectares of land by 2030 by signing the non-binding New York Declaration on Forests.[471] However, milestones towards these objectives are not being met and a review in 2019 found that global deforestation had instead increased rapidly.[472] Another review of primary forest loss in 2020 had similarly worrying findings.[473]

As stressed by the IPCC, conservation and restoration of high-carbon ecosystems such as peatlands, wetlands, rangelands, mangroves and forests is an essential climate mitigation strategy to limit global heating to below 1.5°C. In order to avoid going over this threshold, **states must adopt and implement effective policies to end deforestation by 2030 and restore forests.** This means tackling the direct and indirect drivers of deforestation, both on the demand and the supply side, both in countries with large areas of natural forest and countries that import commodities produced through deforestation. While governments bear the primary responsibility to tackle deforestation, business enterprises have important responsibilities too.

In particular, all states must:

- Adopt and implement forest and other natural ecosystems conservation laws and policies. Such laws and policies must avoid a forest-centric or a fortress-conservation approach or any other approach that can result in human rights violations (see section 5.6.5). On the contrary, conservation laws and policies must respect the free, prior and informed consent rights and land rights of Indigenous Peoples and favour community based forest management in which communities, including Indigenous Peoples, are given security of tenure on the land they have traditionally occupied and are fully recognized as co-managers of the forests and other

[465] B. Fisher and G. Oviedo, "Rights-based approaches to forest conservation", 2008, ArborVidae, IUCN Forest Conservation Newsletter, Issue 36, iucn.org/es/node/2073
[466] B. Fisher and G. Oviedo, "Rights-based approaches to forest conservation" (previously cited).
[467] World Resources Institute, *Climate Benefits, Tenure Costs*, 2016, wri.org/publication/climate-benefits-tenure-costs; IPCC, *Special Report on Climate Change and Land* (previously cited), Chapter 7.
[468] Inter-American Court of Human Rights: *Case of the Mayagna (Sumo) Awas Tingni Community v. Nicaragua*, Judgement of August 31, 2001 (Merits, Reparations and Costs): "[P]ursuant to article 2 of the American Convention on Human Rights, this Court considers that the State must adopt the legislative, administrative, and any other measures required to create an effective mechanism for delimitation, demarcation, and titling of the property of indigenous communities, in accordance with their customary law, values, customs and mores", para. 164.
[469] UN Declaration on the Rights of Indigenous Peoples, adopted by the UN General Assembly (UNGA) in 2007. See UNGA, Resolution 61/295 adopted on13 September 2007, UN Doc UNGAR 61/295.
[470] UN Committee on the Elimination of Racial Discrimination, General Recommendation 23: The rights of indigenous peoples, 1997, UN Doc NT/CERD/GEC/7495, para. 5.
[471] See nydfglobalplatform.org/wp-content/uploads/2017/10/NYDF_Declaration.pdf. Endorsers of the Declaration can be tracked here: nydfglobalplatform.org/endorsers/
[472] See New York Declaration on Forests Global Platform, *Protecting and Restoring Forests: A Story of Large Commitments yet Limited Progress – Five Year Assessment Report*, September 2019, forestdeclaration.org/images/uploads/resource/2019NYDF_ES.pdf
[473] Global Forest Watch, "We lost a football pitch of primary rainforest every 6 seconds in 2019", 2 June 2020, blog.globalforestwatch.org/data-and-research/global-tree-cover-loss-data-2019?utm_campaign=LAUNCH:+2019+Tree+Cover+Loss&utm_medium=bitly&utm_source=GFWTwitter

natural ecosystems. Such laws and policies should be developed with the full and meaningful participation of all affected people.

- To ensure implementation and compliance with such laws and policies, state agencies responsible for environment protection should be given sufficient resources and powers to carry out their enforcement functions; states should establish monitoring and grievance mechanisms to ensure such agencies respect human rights in all of their activities.
- As recommended by the CEDAW Committee: "Ensure that indigenous women in rural areas have equal access as indigenous men to ownership/possession of and control over land, water, forestry, fisheries, aquaculture and other resources which they have traditionally owned, occupied or otherwise used or acquired, including by protecting them against discrimination and dispossession."[474]
- Ensure that forest conservation methods do not result in forced evictions of any individuals or communities, or relocation of Indigenous Peoples without their free, prior and informed consent.
- Ensure that other national development plans, as well as projects and strategies supported by international finance institutions, are not in contradiction with forest and ecosystem conservation objectives and instead integrate these objectives into their broader plans and strategies.[475]
- Provide alternatives to deforestation driven by basic needs. Although not the main driver of deforestation worldwide, poverty and the lack of livelihood alternatives can in certain contexts lead to deforestation, as people sometimes have no option but to clear forest land to carry out subsistence farming and collect wood for fuel.[476] One important solution is to implement programmes to provide access to renewable and safe energy and cooking solutions. Another approach to solve the competition for land use between agriculture and forests is to promote, whenever suitable, diversified agricultural production systems that integrate trees, crops and livestock, such as agro-forestry.[477] These approaches have been found to promote sustainable forest management and forest restoration while increasing agricultural productivity and resilience and food security of small farmers.[478]
- Establish effective redress mechanisms to ensure that those responsible for forest destruction, illegal land seizures and human rights abuses and violations are brought to justice, and Indigenous Peoples, local communities and individuals who have been forcibly evicted or have suffered other human rights violations have access to reparations, including land restitution when possible.
- Adopt and implement human rights and environmental due diligence laws to prevent harm deriving, among others, from deforestation and natural ecosystem conversion, as well as from business activities linked to these.

Business enterprises must not through their own operations, products or services or throughout their value chain cause, contribute to or be linked to deforestation and human rights violations.

For this purpose:

- Businesses must carry out human rights and environmental due diligence on their operations, value chains and business relationships and demonstrate how they address risks to people and the environment and ensure that that they do not cause, contribute to or are linked to deforestation through their operations, products and business relationships. Where harm occurs, companies must engage in remediation.
- Where companies end their economic activities in a certain area with the aim of stopping deforestation or ending human rights violations, they should take steps to ensure that this disengagement is done responsibly, in accordance with the UN Guiding Principles on

[474] CEDAW Committee, General Recommendation 34 on the rights of rural women, 2016, UN Doc. CEDAW/C/GC/34, para. 59.
[475] See for example, Forest Peoples Programme, *Closing the Gap: Rights-Based Solutions for Tackling Deforestation* (previously cited), pp. 27-28.
[476] New York Declaration on Forests, *Five Year Assessment Report* (previously cited), pp. 58-64.
[477] FAO, "Productive and healthy forests are crucial for meeting sustainable development, climate, land and biodiversity goals", 2018, fao.org/news/story/en/item/1103556/icode/
[478] FAO, fao.org/news/story/en/item/1103556/icode/; New York Declaration on Forests, *Five Year Assessment Report* (previously cited); CLARA, *Missing pathways to 1.5°C* (previously cited), p. 24.

Business and Human Rights. They should publicly and transparently provide information about the steps taken.

- Equally, when engaging in environmental conservation activities, companies must ensure that they respect human rights, including the right to free, prior and informed consent of Indigenous Peoples.
- Companies must refrain from any action that may discourage states from urgently adopting and implementing forest and other natural ecosystems conservation laws and policies or from creating economic alternatives to deforestation.
- Financial institutions must stop funding or divest from any company that causes or contributes to deforestation.

5.7 AVOID OVER-RELIANCE ON BIO-ENERGY

Bio-energy refers to the production of energy from biological matter (or biomass). Solid biomass, such as wood, food and garden waste, can be burned directly to produce energy for heating and electricity. Biomass, mostly from agricultural crops, can be converted into liquid biofuels such as ethanol and biodiesel, mostly for use as transportation fuels. Biomass from waste can also be converted into a gas called biogas.

Over the last two decades, bio-energy has become increasingly popular among policymakers as a climate mitigation strategy, as it is considered more sustainable than fossil fuel energy. This is because of the assumption that the CO_2 released by the combustion of plant and tree matter is balanced out by the CO_2 absorbed by biomass that grows back, or that agricultural residues would emit CO_2 anyway when decomposing if not burned for energy.[479] Bio-energy policies in wealthier countries have led to a rapid increase in the production of biofuels.[480]

However, the environmental and climate mitigation benefits of most forms of bio-energy are highly contested. In particular, many scientists have highlighted that bio-energy produced from forest biomass, especially when resulting from felling trees, is not carbon neutral. As stated by 800 scientists in a letter to the European Parliament in 2018, "burning wood is inefficient and therefore emits far more carbon than burning fossil fuels for each kilowatt hour of electricity produced".[481] Cutting trees for fuel has also been defined "antithetical to the important role that forests play as a sink for CO_2 that might otherwise accumulate in the atmosphere".[482] Even if the felled forests are allowed to regrow, it takes decades for new trees to grow and absorb all the CO_2 emitted, meaning that the CO_2 released by the cutting and burning of trees would stay in the atmosphere for many decades, fuelling global warming.[483] Moreover, using wood for energy means that more forests will have to be cut to produce other wood products, driving deforestation and additional carbon emissions.[484] Burning wood for energy also results in pollution that has negative health impacts.[485]

Concerning biofuels produced from agricultural crops,[486] multiple studies have showed that, when all the emissions from growing the crops and producing and transporting the biofuels are taken into account, biofuels are far from being carbon neutral.[487] In some cases, biofuel emissions are higher than those

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[479] CLARA, *Missing pathways to 1.5°C* (previously cited), p. 18.
[480] For example, in 2015 the UN Special Rapporteur on the right to food stated that the production of biofuels had increased fivefold in less than a decade. See UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc. A/70/287, para. 61. See also Global Agriculture, Agrofuels and Bioenergy, globalagriculture.org/report-topics/agrofuels-and-bioenergy.html
[481] Letter from scientists to the European Parliament on forest biomass, updated on 14 January 2018, dropbox.com/s/l8sx5bl0h02x395/Scientist%20Letter%20on%20EU%20Forest%20Biomass_ENGLISH.pdf?dl=0
[482] W.H. Schlesinger, "Are wood pellets a green fuel?", 2018, Science, Volume 359, Issue 6382, pp. 1328-1329, cited in CLARA, *Missing pathways to 1.5°C* (previously cited), p. 18.
[483] Biofuelwatch, Biomass basics, biofuelwatch.org.uk/2018/biomass-basics-2/
[484] Letter from scientists to the European Parliament on forest biomass (previously cited).
[485] D. G. Fullerton and others, "Indoor air pollution from biomass fuel smoke is a major health concern in the developing world", 2008, Trans R Soc Trop Med Hyg., ncbi.nlm.nih.gov/pmc/articles/PMC2568866/; FERN, *Covered in Smoke: Why Burning Wood Threatens the Health of Europeans*, 2018, fern.org/publications-insight/covered-in-smoke-why-burning-biomass-threatens-european-health-160/
[486] Most biofuels currently produced are agro-fuels, made from agricultural crops like corn, soy and other oils and sugar. For example, bioethanol is obtained from sugar or starch-based crops, such as sugar cane, corn and wheat. Biodiesel is produced by from vegetable oils such as palm, soybean and rapeseed. Agro-fuels are commonly known as conventional biofuels, as opposed to advanced biofuels derived from non-food and non-feed biomass, including waste materials (such as vegetable oils or animal fats) and energy-specific crops capable of being grown on less-productive and degraded land. However, most advanced biofuels are still in the early stages of technological development. See International Renewable Energy Agency, *Advanced Biofuels: What Holds Them Back?*, November 2019, irena.org/-/media/Files/IRENA/Agency/Publication/2019/Nov/IRENA_Advanced-biofuels_2019.pdf
[487] See for example D. Rungani, "Life cycle assessments of greenhouse gas emissions for common agrofuel feedstocks", 2008, biofuelwatch.org.uk/wp-content/uploads/lca_assessments.pdf

produced by fossil fuels.[488] This is particularly evident when their production entails land-use change, either directly because forests are destroyed or land is used for plantations dedicated to biofuel production, or indirectly when new land is allocated to the production of crops for food or animal feed to replace those crops being used for biofuels. In both cases, land conversion releases carbon previously stored in land and trees, causing significant GHG emissions.[489] Deforestation and severe impacts on biodiversity are other major negative environmental consequences of land-use change for biofuel production.

Besides the doubtful value of bio-energy as a climate mitigation strategy and the impacts on the right to a clean, safe, healthy and sustainable environment, most forms of bio-energy raise other serious human rights concerns, notably surrounding Indigenous Peoples' rights, access to food and water, and labour rights.[490]

Dedicating areas of land to bio-energy increases competition for land. This leads to governments and corporations acquiring large plots of land often at the expenses of Indigenous Peoples and smallholder farmers who are forcibly evicted and dispossessed of their land and livelihoods. For example, in Indonesia and Malaysia, palm oil companies have bulldozed entire Indigenous villages, leaving their residents homeless and unable to provide for themselves.[491] In Brazil, the Guarani People have lost much of their land to sugar cane cultivation, while in Central America the rush for sugar, driven also by the global biofuel demand, has led to threats, forced evictions and killings of Indigenous Peoples.[492] In 2008, the chairperson of the UN Permanent Forum on Indigenous Issues said that if biofuels expansion continued as planned, 60 million Indigenous Peoples worldwide would be threatened with losing their land and livelihoods.[493]

Preventing such violations is unlikely to be feasible without addressing their root cause – the use of land for biofuels. Two consecutive UN Special Rapporteurs on the right to food have highlighted how the demand for land and water for biofuel production severely restricts realization of the right to food, affecting both the availability and accessibility of food.[494] Large-scale plantations for biofuel take the place of food production and require large quantities of water,[495] reducing access to food for local communities.[496] Biofuels policies have also contributed to the increase in food prices, as shown by several studies on the causes of the global spikes in food prices and consequent riots around the world in 2008.[497] In 2011, a report by nine international organizations, including UN agencies, stated that "prices [of food commodities] are substantially higher than they would be if no biofuels were produced".[498] The increase in food prices affect what and how much people in developing countries can afford to eat, driving more people into hunger.[499]

As made clear by the IPCC, if in the rush to limit the increase of global average temperatures, bio-energy is significantly expanded as an alternative to fossil fuel energy, this would result in "substantial land use change".[500] The environmental and human rights impacts could be devastating for millions of people, especially in developing countries. For example, it is estimated that with only a 10% replacement of fossil fuels with bioethanol in the global transport sector, global water demand would increase by 6-7%.[501]

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[488] For example, the NGO Transport and Environment found that biodiesel produced from vegetable oil lead to around 80% higher emissions than the fossil diesel they replace. In particular, they found that palm and soy-based biodiesels are three and two times worse respectively. See Transport and Environment, "Globiom: The basis for biofuel policy post-2020", April 2016, transportenvironment.org/sites/te/files/publications/2016_04_TE_Globiom_paper_FINAL_0.pdf

[489] On this topic see IUCN, *Biofuels and Indirect Land Use Change*, October 2011, iucn.org/sites/dev/files/content/documents/biofuels_and_indirect_land_use_change.pdf

[490] On violations of labour rights in palm oil and sugar plantations, see section 5.6.2, page 73.

[491] Human Rights Watch, *"When We Lost the Forest, We Lost Everything" – Oil Palm Plantations and Human Rights Violations in Indonesia*, 22 September 2019, hrw.org/report/2019/09/23/when-we-lost-forest-we-lost-everything/oil-palm-plantations-and-rights-violations; Amnesty International, *The Forest is Our Heart-Beat: The Struggle to Defend Indigenous Land in Malaysia* (Index: ASA 28/9424/2018), 29 November 2018, amnesty.org/en/documents/asa28/9424/2018/en/

[492] ActionAid, *Feeling the Biofuels Pressure – Human Rights Abuses in Guatemala*, 2013, ms.dk/sites/default/files/filarkiv/dokumenter/jordtyveri/guatemala_report.pdf ; EarthRights International, "Honduran Farmers Sue World Bank Group for Human Rights Violations", 2017, earthrights.org/media/honduran-farmers-sue-world-bank-group-for-human-rights-violations/

[493] Survival International, "Biofuels threaten lands of 60 million tribal people", 20 April 2008, survivalinternational.org/news/3279

[494] UN Special Rapporteur on the right to food, "Agrofuels and the right to food – Q&A from the Special Rapporteur", 17 October 2012, srfood.org/images/stories/pdf/otherdocuments/20121016_agrofuels_qa2.pdf; UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc. A/70/287.

[495] A.R. van Lienden and others, *Biofuel Scenarios in a Water Perspective: The Global Blue and Green Water Footprint of Road Transport in 2030,* 2010, waterfootprint.org/media/downloads/Report43-WaterFootprint-BiofuelScenarios.pdf

[496] UN Special Rapporteur on the Right to Food, *Agrofuels and the right to food – Q&A from the Special Rapporteur* (previously cited); UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc. A/70/287, para. 61; IPCC, *Special Report on Land* (previously cited), chapter 7, p. 1325.

[497] See for example High Level Panel on Food Security and Nutrition, *Biofuels and food security*, June 2013, fao.org/3/a-i2952e.pdf

[498] IEEP, *EU Biofuel Use and Agricultural Commodity Prices: A Review of the Evidence Base*, 2012.

[499] ActionAid, *Meals Per Gallon – The Impact of Industrial Biofuels on People and Hunger*, January 2010, actionaid.org.uk/sites/default/files/doc_lib/meals_per_gallon_final.pdf

[500] IPCC, *Special Report on Land* (previously cited), Chapter 7, p. 1325.

[501] The Guardian, "Switching to biofuels could place unsustainable demands on water use", 2015, theguardian.com/sustainable-business/2015/may/28/switching-to-biofuels-would-place-unsustainable-demands-on-water-use

The use of residues and organic waste to produce bio-energy could reduce land competition and associated human rights risks[502] and offer better opportunities for GHG emissions reduction.[503] However, it also presents other environmental and human rights risks. For example, the removal of residues that would otherwise be left on the soil could lead to soil degradation.[504] Equally, the production of energy from waste can result in air and water pollution, with consequences for human health if adequate safeguards are not implemented.[505] There are also concerns that promoting the production of energy from urban biowaste would reduce the incentive to reduce food waste[506] and would interfere with more sustainable forms of organic waste disposal, such as composting.[507]

Due to the human rights implications of biofuels, in 2012, the UN Special Rapporteur on the right to food recommended to governments to "fully integrate agro-fuel policy into national strategies for food security and the right to food, in order to ensure that all new agricultural developments – for food or for fuel – aid the progressive realization of the right to food by increasing, and not hindering, the ability of vulnerable populations to produce or to procure food".[508] In 2015 the UN Special Rapporteur on the right to food recommended governments to scale back biofuel and biomass policies to eliminate perverse incentives and to apply strict sustainability criteria to all biofuels.[509] Moreover, in 2019, the UN Special Rapporteur on human rights and the environment recommended states to "reconsider policies and programmes that subsidize and support biofuels, in light of their negative impact on food security and uncertain impact on emission reduction".[510]

Considering the high human rights and environmental costs of most current forms of bio-energy and the relatively low benefits for climate change mitigation, states and companies should carefully review the use of bio-energy as a climate mitigation measure by taking human rights and environmental risks fully into account. They should phase out production and use of forest biomass and crop-based biofuels, including by ending subsidies, tax exemptions and other incentives for them.

In particular, states should:

- Phase out the production and use of bio-energy from forest biomass and crop-based biofuels, including by ending subsidies, tax exemptions and other incentives for them.
- Support the use of non-land based biofuels and adopt specific bio-energy projects only if independent environmental and human rights impact assessments show that they do not involve significant land use, do not threaten people's right to food and other human rights at the global or local level, and do not result in increased GHG emissions.
- Prior to the approval of a bio-energy project, carry out consultations with Indigenous Peoples and local communities, allowing for the meaningful participation of all and especially of the most marginalized groups and individuals, and respecting the right of Indigenous Peoples to free, prior and informed consent.

5.8 CARBON DIOXIDE REMOVAL MECHANISMS

Carbon dioxide removal (CDR) refers to both nature-based mechanisms[511] and geo-engineering industrial technologies[512] that can deliver large scale removal of CO_2 from the atmosphere. CDR mechanisms are

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[502] IPCC, *Special Report on Land* (previously cited), Chapter 7, p. 1325.
[503] Royal Academy of Engineering, *The Sustainability of Liquid Biofuels*, 2017, raeng.org.uk/publications/reports/biofuels, p. 5.
[504] IPCC, *Special Report on Land, Summary for Policymakers* (previously cited), p. 21.
[505] IEA, "Will energy from waste become the main form of bioenergy in Asia?", January 2019, iea.org/articles/will-energy-from-waste-become-the-key-form-of-bioenergy-in-asia
[506] Reducing food waste has numerous human rights and environmental co-benefits as shown in section 5.6.4 of this document.
[507] ActionAid, *Alternatives to Biofuels – Renewable Energy in Transport Without Crop-Based Biofuels*, October 2012, indiaenvironmentportal.org.in/content/367392/alternatives-to-biofuels-renewable-energy-in-transport-without-crop-based-biofuels/ ; Zero Waste Europe, *Urban biowaste: a sustainable source of energy?*, June 2016, zerowasteeurope.eu/2016/06/urban-biowaste-a-sustainable-source-of-bioenergy/
[508] UN Special Rapporteur on the right to food, *Agrofuels and the right to food – Q&A from the Special Rapporteur* (previously cited).
[509] UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc. A/70/287 para. 89(g).
[510] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 80 (f).
[511] Nature-based CDR mechanisms include reforestation, afforestation and forest management, soil carbon sequestration and ecosystems restoration.
[512] Industrial CDR technologies include bio-energy with carbon capture and storage (BECCS), direct air carbon capture and storage (DACCS), enhanced weathering, ocean iron fertilization and ocean alkalinization. Another widely discussed geo-engineering approach,

considered to deliver "negative emissions" because of the assumption that the removal of CO_2 will help offset the emissions that we are currently unable to prevent. The balance over a specific period between carbon emissions and negative emissions is referred as "net-zero emissions".

In recent years, governments and companies have redoubled their interest in CDR mechanisms, both geo-engineering technologies and nature-based mechanisms involving tree-planting such as reforestation and afforestation.[513] Increasingly, these methods are becoming a central part of states' and companies' strategies for emission reductions and for achieving "net-zero" by 2050.[514]

However, CDR mechanisms should not be seen as a panacea to the climate crisis and only some nature-based mechanisms should be actively encouraged, provided that they are carried out in a human rights-consistent manner. This is because most mechanisms pose severe risks of human rights harm, especially for people in developing countries, and possibly irreversible damage to the environment, especially if used on a large scale.[515] In addition, most technologies are not currently able to produce substantive negative emissions and an excessive reliance on their future development could represent a dangerous gamble and an unreasonable delay to the urgent phasing out of fossil fuels.

The most relied-upon CDR approach, bio-energy with carbon capture and storage (BECCS), is based on the production of bio-energy associated with mechanisms to capture and store the CO_2 emitted in the process of energy production.[516] As explained in the section above, the production of bio-energy can be very land-intensive, therefore carrying a wide range of human rights implications especially for the communities affected by the bio-energy project. In order to produce substantial negative emissions, BECCS would require massive amounts of land dedicated to it. For example, it has been estimated that delivering three gigatons of CO_2-equivalent negative emissions annually from BECCS, which is a relatively modest amount, would require conversion of a land area of approximately 380-700 million hectares in 2100, translating into 7-25% of global agricultural land and 25-46% of arable and permanent crop area.[517] The impacts on the rights of Indigenous Peoples and rural communities and on food security, biodiversity and land degradation would be devastating.

Some nature-based CDR approaches present similar constraints on land as BECCS. For example, afforestation also requires dedicated land, as it involves growing a forest on land that has not historically contained forest. The IPCC confirmed that "there are limits to the deployment of land-based mitigation measures such as bio-energy crops or afforestation".[518] Large-scale use of "afforestation and bio-energy may compete with other land uses and could increase risks for food security, sustainable development, desertification, land degradation, biodiversity and other ecosystem functions and services".[519]

Reforestation poses less demand on new land than afforestation as it involves human efforts to re grow a forest that once existed but was destroyed or degraded. However, the land impact is not inexistent as degraded forest land is often used for habitation or agriculture purposes. Also, the climate mitigation and environmental benefits of reforestation could be reduced if it involves planting large-scale monoculture tree plantations that replace natural ecosystems, or lands that were in the process of ecosystem restoration.

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although not yet available, is solar radiation management (SRM), which does not entail carbon removal. SRM does not attempt to reduce GHG in the atmosphere but proposes to reflect a small amount of inbound sunlight back out into space before it becomes trapped in the atmosphere by GHG, thus reducing the effects of global heating. On the dangers associated with SRM, see CIEL, *Fuel to Fire: How Geo-Engineering Threatens to Entrench Fossil Fuels and Accelerate the Climate Crisis*, 2019, p. 9, ciel.org/reports/fuel-to-the-fire-how-geoengineering-threatens-to-entrench-fossil-fuels-and-accelerate-the-climate-crisis-feb-2019/ and W. Burns, *The Paris Agreement and Climate Geo-engineering Governance: The Need For a Human Rights-Based Component*, 2016, CIGI Papers, cigionline.org/sites/default/files/documents/CIGI%20Paper%20no.111%20WEB.pdf

[513] The IPCC defines reforestation as the "conversion to forest of land that has previously contained forests but that has been converted to some other use" and afforestation as the "conversion to forest of land that historically has not contained forests". See ipcc.ch/srccl/chapter/glossary/

[514] ActionAid and others, *Not Zero: How "Net Zero" Targets Disguise Climate Inaction* (previously cited).

[515] For example, ocean iron fertilization and ocean alkalinization could alter the integrity of ocean ecosystems, resulting in loss of biodiversity and loss of livelihoods for communities who rely on fisheries. See W. Burns, *The Paris Agreement and Climate Geo-engineering Governance* (previously cited); W. Burns, *"Can we tweak marine chemistry to help stave off climate change?"*, 12 March 2019, The Conversation, theconversation.com/can-we-tweak-marine-chemistry-to-help-stave-off-climate-change-93174 Similarly, enhanced terrestrial weathering could result in negative impacts for marine biodiversity and in soil, water and food contamination. Royal Society and Royal Academy of Engineering, *Greenhous Gas Removal*, 2017, royalsociety.org/~/media/policy/projects/greenhouse-gas-removal/royal-society-greenhouse-gas-removal-report-2018.pdf#page=39. See also IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited); Climate Action Network, *Position on Carbon Capture, Storage and Utilization*, January 2021, climatenetwork.org/wp-content/uploads/2021/01/can_position_carbon_capture_storage_and_utilisation_january_2021.pdf

[516] Carbon dioxide can be stored terrestrially or under the world's oceans, or potentially utilized for other purposes. For a technical explanation of BECCS see Royal Society and Royal Academy of Engineering, *Greenhouse Gas Removal* (previously cited), p. 37.

[517] W. Burns, *The Paris Agreement and Climate Geo-engineering Governance: The need for a human rights-based component* (previously cited).

[518] IPCC, *Special Report on Climate Change and Land, Summary for Policymakers* (previously cited), p. 21.

[519] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 23; IPCC, *Special Report on Land, Summary for Policymakers* (previously cited), p. 21.

Monoculture tree plantations store less carbon than natural forests and their regular harvesting releases CO_2 into the atmosphere every 10 to 20 years.[520] They can also have negative environmental impacts, such as displacing existing biodiversity, run-off pollution from water and nutrient inputs, and altering local hydrological flows.[521] Large monoculture tree plantations can also have negative human rights implications, as they are often established on land taken from Indigenous Peoples and rural communities.[522] Despite these drawbacks, it is estimated that the majority of forest restoration commitments will be met by planting monoculture tree plantations.[523]

On the other hand, forest restoration that happens either by removing elements such as weeds and grazing that suppress forest recovery (natural regeneration) or by re-planting or re-seeding the known native mix of species present prior to clearing (reforestation) can result in greater carbon sequestration, biodiversity and forest resilience.[524] Ultimately, avoiding forest degradation and deforestation in the first place presents the highest opportunity for carbon removal, as trees take on average 30 years to achieve their maximum capacity for carbon storage.[525]

As demonstrated by the Climate Land Ambition and Rights Alliance (CLARA), the protection and restoration of natural ecosystems such as of forests, peatlands and grassland is one of the most effective nature-based mechanisms for carbon removal that protects biodiversity and does not interfere with human rights. The report also showed that when Indigenous Peoples and local communities manage land and forests, ensuring their security of tenure represents "a far more equitable and cost-effective way to achieve climate mitigation targets than other carbon capture and storage measures" (see also section 5.6.5).[526] Similarly, the IPCC stated that some nature-based CDR measures "such as restoration of natural ecosystems and soil carbon sequestration could provide co-benefits such as improved biodiversity, soil quality, and local food security".[527]

While conserving and enhancing natural carbon sinks, enhancing land management and shifting to more sustainable agricultural practices could remove significant amounts of CO_2 from the atmosphere and contribute to avoiding emissions, it is important that even nature-based mechanisms are seen as complementary and not a substitution for other approaches to avoid and reduce emissions, including measures to reduce energy demand and consumption and a rapid phase-out of fossil fuels.[528]

Without such rapid and far-reaching measures in all sectors, global average temperatures will exceed 1.5°C and governments will need to resort to CDR mechanisms on a large-scale,[529] with "significant impacts on land, energy, water or nutrients,[530] and severe human rights consequences, particularly for people in developing countries who are already more disadvantaged. Allowing emissions to increase and then resorting to dangerous CDR measures would expose people who are already marginalized to even further suffering, leading to human rights violations on a massive scale. In practice, it would mean that most disadvantaged people and future generations pay the price for the inaction of wealthy governments.[531]

States must prioritize measures to prevent and reduce emissions, including those that reduce energy demand and consumption and lead to a rapid phase out of fossil fuels, to avoid over-reliance on the use of CDR mechanisms. In particular:

- Among CDR measures, prioritize nature-based mechanisms, and particularly those that provide the best outcomes for ecosystems and human rights and do not compete with them for land use.

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[520] I. Kaminski, "We might not be planting the right kind of forests", 25 December 2019, Wired, wired.com/story/we-might-not-be-planting-the-right-kinds-of-forests/
[521] CLARA, *Missing pathways to 1.5°C* (previously cited), p. 17.
[522] Global Forest Coalition, *Monoculture Tree-Plantations – Fuelling the Fire* , 2017, www.globalforestcoalition.org/7432-2/
[523] New York Declaration on Forests, *Five Year Assessment Report* (previously cited).
[524] CLARA, *Missing pathways to 1.5°C* (previously cited), p. 17.
[525] I. Kaminski, "We might not be planting the right kind of forests" (previously cited).
[526] CLARA, *Missing pathways to 1.5°C* (previously cited), p. 1.
[527] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), pp. 23-24.
[528] See for example FERN, "What are carbon sinks?", 2016, fern.org/news-resources/what-are-carbon-sinks-332/; CIEL, *Fuel to Fire: How Geo-Engineering Threatens to Entrench Fossil Fuels and Accelerate the Climate Crisis* (previously cited), pp. 56-57.
[529] The IPCC stated with high confidence that "avoiding overshoot and reliance on future large-scale deployment of carbon dioxide removal (CDR) can only be achieved if global CO_2 emissions start to decline well before 2030". See IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 24.
[530] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), pp. 23-24.
[531] Amnesty International, "Failure to act swiftly on climate change risks human rights violations on a massive scale", 8 October 2018, amnesty.org/en/latest/news/2018/10/failure-to-act-swiftly-on-climate-change-risks-human-rights-violation-on-massive-scale/

- Before adopting CDR projects, including afforestation and reforestation, carry out environmental and human rights impact assessments to accurately assess the potential harm and identify possible mitigation and redress measures.
- Prior to the approval of CDR projects, carry out consultations with local communities, allowing for the meaningful participation of all and especially of the most marginalized groups and individuals, and respect the right of Indigenous Peoples to free, prior and informed consent.

5.9 REDUCE EMISSIONS FROM TRANSPORT

Emissions from road, rail, air and marine transportation account for 14% of annual global GHG emissions and about 24% of annual CO_2 emissions.[532] Road vehicles are responsible for 72% of global transport emissions.[533] Emissions from the transport sector have been increasing steadily, more than doubling since 1970.[534] In 2014, the IPCC calculated that emissions from transport had continued to increase since its Fourth Assessment Report published in 2007, "in spite of more efficient vehicles and policies being adopted" and that "without aggressive and sustained mitigation policies being implemented, transport emissions could increase at a faster rate than emissions from the other energy end-use sectors".[535] In particular, before the temporary reduction in air travel in 2020 because of the COVID-19 pandemic, it was estimated that emissions from the aviation sector were growing faster than any other mode of transport and that, in the absence of additional measures by 2050, they could grow by more than 300%.[536]

Besides GHG emissions, the combustion of fossil fuels for transportation is also responsible for other noxious emissions that cause air pollution. Air pollution is a major contributor to lung and heart diseases, and therefore an extreme threat to the rights to life and health. The World Health Organization (WHO) estimates that 4.2 million premature deaths globally are linked to outdoor air pollution each year.[537] Children are uniquely vulnerable to the adverse impacts of poor air quality due to physiological, behavioural and environmental factors.[538] Lower-income people are disproportionately affected by air pollution from transportation since they tend to live and spend time in more polluted locations, for example on and near major urban arterial roads and highways.[539] These impacts come in spite of the fact that, in most contexts, lower-income people contribute the least to transport-linked air pollution, as they take fewer flights and are less likely to own a car than wealthier people.[540]

In order to reduce emissions from road transportation, replacing fossil fuel-powered vehicles with electric vehicles is an important step. For the maximum reduction in emissions, the production of electric vehicles and lithium-ion batteries that power them should be achieved through the use of renewable energy.[541] Similarly, the energy grid, which is used to charge the batteries of electric vehicles, should be powered by renewable energy. However, the production of lithium-ion batteries currently presents a number of human rights and environmental concerns (see section 5.5). To ensure a just transition, governments and companies, while providing incentives for the production and use of electric vehicles, must address human rights and environmental risks and damage across the lithium-ion battery supply chain and life cycle.[542]

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[532] World Resources Institute, "Everything you need to know about the fastest-growing source of global emissions: Transport", 16 October 2019, wri.org/blog/2019/10/everything-you-need-know-about-fastest-growing-source-global-emissions-transport#:~:text=1.,emissions%20from%20burning%20fossil%20fuels.

[533] World Resources Institute, "Everything you need to know about the fastest-growing source of global emissions: Transport" (previously cited).

[534] UNFCCC and others, *Compendium on Greenhouse Gas Baselines and Monitoring – Passenger and Freight Transport*, 2018, gcca.eu/node/5281, p. 15.

[535] IPCC, *Climate Change 2014: Mitigation of Climate Change – Working Group III Contribution to the Fifth Assessment Report*, chapter 8, ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter8.pdf, p. 604.

[536] Transport and Environment, "How to reduce airline emissions", transportenvironment.org/what-we-do/aviation-and-eu-ets; ICAO, "Trends in emissions that affect climate change", icao.int/environmental-protection/Pages/ClimateChange_Trends.aspx

[537] WHO, *Ambient Air Pollution: Health Impacts*, who.int/airpollution/ambient/health-impacts/en/#:~:text=An%20estimated%204.2%20million%20premature,and%20disease%20from%20lung%20cancer

[538] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 8 January 2019, UN Doc. A/HRC/40/55, para. 3.

[539] E. Doherty, *Beyond Batteries: A Just Transition for Transportation. An internal discussion paper for Amnesty International Canada*, May 2020 (unpublished); UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 8 January 2019, UN Doc. A/HRC/40/55, para. 35.

[540] E. Doherty, *Beyond Batteries* (previously cited).

[541] Amnesty International, "Amnesty challenges industry leaders to clean up their batteries", 21 March 2019, amnesty.org/en/latest/news/2019/03/amnesty-challenges-industry-leaders-to-clean-up-their-batteries/

[542] Amnesty International, *Powering Change: Principles for Businesses and Governments in the Battery Value Chain* (Index: 30/3354/2021), 4 February 2021, amnesty.org/en/documents/act30/3544/2021/en/ See footnote no 381.

Although essential to climate change mitigation, transitioning to electric vehicles alone will not be sufficient to achieve substantial emission cuts at the pace that we need. Firstly, it will be impossible to electrify quickly enough the more than 1.3 billion cars currently in use.[543] In addition, given the finite nature of minerals needed for the production of lithium-ion batteries and the risk of human rights and environmental abuses associated with the production and disposal of cars and batteries, it is necessary that governments also introduce measures to reduce the demand for private cars.

These would include measures to avoid or shorten journeys, for example by encouraging remote-working when possible and planning measures that aim to reduce distances between home, work and education thus reducing the need for motorized transport.[544] Governments should also invest in electrified, mass public transport and ensure it is physically accessible and affordable to all. They should develop facilities for walking, rolling (wheelchairs and other mobility devices), cycling and car sharing.[545] Such measures will also benefit the majority of people who will not, in any case, be able to afford to buy their own electric vehicles.[546]

In 2014, the IPCC stated that mitigation measures such as urban (re)development and investments in new infrastructure, integrated urban planning, development based around low-carbon transit and a more compact urban layout that supports cycling and walking could reduce GHGs by 20-50% below 2010 emissions rates by 2050.[547]

Measures that governments should adopt to reduce emissions from maritime shipping include regulations that improve design efficiency of ships, reduce ship speed [548] and require large ships to report emission when they dock.[549] Establishing adequate taxation for pollution at ports could also result in lower emissions.[550] While alternative fuels for shipping should be considered, crop-based biofuels should be limited given their serious environmental and human rights impacts (see section 5.7). Environmental groups consider emission reduction measures adopted by member states of the International Maritime Organization (IMO) in November 2020 utterly incompatible with the imperative to limit global warming to 1.5°C by 2050.[551] It is estimated that the IMO measures will keep emissions from shipping rising until 2030.[552]

A combination of approaches is also required to reduce emissions from the aviation sector. So far, the industry's preference has been to buy carbon offsets. Offsets involve paying other sectors to reduce their emissions, rather than reducing their own. In 2016, the International Civil Aviation Organization adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) that aims to stabilize CO_2 emissions at 2020 levels. However, environmental NGOs consider this approach faulty,[553] especially as the Paris Agreement requires all sectors to cut their emissions and because, according to the IPCC, limiting global warming to 1.5°C implies "deep emissions reductions in all sectors".[554] Carbon market mechanisms to offset emissions also frequently result in human rights violations against Indigenous Peoples and rural communities, for example under the REDD+ programme and the CDM (see section 5.3).[555]

Instead, governments should require that aviation companies set time-bound commitments to reduce emissions in absolute terms without relying on offsets, including by reducing the number of flights over a

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[543] E. Doherty, *Beyond Batteries* (previously cited). For the figure of 1.3 billion cars, see Wars Intelligence, "World car population rose 4.6% in 2016", 17 October 2017, wardsintelligence.informa.com/WI058630/World-Vehicle-Population-Rose-46-in-2016

[544] The UN Special Rapporteur on extreme poverty and human rights, Report: *The "just transition" in the economic recovery: eradicating poverty within planetary boundaries*, 7 October 2020, A/75/181/Rev.1, para 41.

[545] IPCC, *Climate Change 2014: Mitigation of Climate Change – Working Group III Contribution to the Fifth Assessment Report* (previously cited), Chapter 8, pp. 603 & 648; UNFCCC and others, *Compendium on Greenhouse Gas Baselines and Monitoring – Passenger and Freight Transport* (previously cited).

[546] The UN Special Rapporteur on extreme poverty and human rights, Report: *The "just transition" in the economic recovery: eradicating poverty within planetary boundaries*, 7 October 2020, A/75/181/Rev.1, para 41.

[547] IPCC, *Climate Change 2014: Mitigation of Climate Change – Working Group III Contribution to the Fifth Assessment Report* (previously cited), Chapter 8, p. 604.

[548] Transport and Environment, "Shipping and Climate Change", www.transportenvironment.org/what-we-do/shipping-and-environment/shipping-and-climate-change

[549] Transport and Environment, "UN shipping agency greenlights a decade of rising greenhouse gas emissions", 17 November 2020, *transportenvironment.org/press/un-shipping-agency-greenlights-decade-rising-greenhouse-gas-emissions*

[550] New Climate Institute, *Carbon Pricing Options for International Maritime Emissions*, 2019, newclimate.org/wp-content/uploads/2019/04/Carbon-pricing-options-for-international-maritime-emissions.pdf

[551] Climate News Home, "Anger as UN body approves deal that allow ship emissions to rise to 2030", 17 November 2020, climatechangenews.com/2020/11/17/anger-un-body-approves-deal-allows-ship-emissions-rise-2030/

[552] Transport and Environment, "UN shipping agency greenlights a decade of rising greenhouse gas emissions" (previously cited).

[553] See for example, Transport and Environment, "How to reduce airline emissions" *(previously cited)*; Greenpeace UK and others, "Briefing: Building back better for aviation", June 2020, greenpeace.org.uk/wp-content/uploads/2020/06/Briefing-Building-back-better-for-aviation.pdf

[554] IPCC, *Special Report on Global Warming of 1.5C, Summary for Policymakers* (previously cited), p. 21.

[555] See for example FERN, *Unearned Credits: Why Aviation Industry Forest Offsets Are Doomed to Fail*, 2017, fern.org/fileadmin/uploads/fern/Documents/Fern_Unearned_Credit_FINAL.pdf; W. Obergassel and others, *Human Rights and the Clean Development Mechanism*, 2017, Wuppertal Institute for Climate, Environment and Energy, 2017, epub.wupperinst.org/frontdoor/deliver/index/docId/6662/file/6662_Obergassel.pdf

period of time.[556] While there is a lot governments and companies can do to continue increasing fuel efficiency,[557] air traffic management and other operational procedures,[558] these will not produce the emission reductions needed to keep the increase of global average temperatures within 1.5°C. An important constraint comes from the fact that viable alternative fuels are not widely available yet,[559] and using liquid crop-based biofuels is not a suitable response given their high human rights and environmental impacts, as discussed in section 5.7.

Given the above-mentioned constraints, it is essential that governments take adequate measures to reduce the demand for aviation transport. These should include the elimination of direct and indirect governmental subsidies to the aviation sector.[560] However, any new measures to tax aviation should be progressive, ensuring that the highest burden is borne by frequent flyers and more wealthy customers. In addition, until zero-emissions aviation can be achieved, States should also consider prohibiting private jet travel and requiring carriers to phase out premium class travel (such as first-class and business-class) because the emissions per seat are substantially greater than for economy class travel.[561] . Measures to reduce demand for air travel should also include halting the development of airport infrastructure such as new terminals and runways,[562] and instead investing in low-carbon transport infrastructure to facilitate a shift towards other forms of transportation, such as electric passenger rail and long-distance bus services, while ensuring that these alternative modes of transportation are accessible, affordable and powered through human rights-consistent renewable energy.[563] In addition, every new transport infrastructure project should be initiated only after carrying out independent environmental and human rights assessments, establishing adequate mitigation measures, and in full respect of the procedural rights of affected communities.

As demonstrated by the response to the COVID-19 pandemic, governments are able to impose measures that facilitate behavioural change, such as limiting the use of private cars and avoiding non-essential air travel. Comprehensive, multi-sectoral and human rights-consistent policies that promote behavioural change in relation to transport should therefore be promoted as an important contribution to reduce emissions from the transportation sector.

Generally, while considering measures to reduce emissions from the transportation sector, governments should also ensure that these reduce inequalities rather than exacerbate them. Similarly, measures to reduce emissions from the transportation sector must take into account the needs and rights of different groups, such as Indigenous Peoples, people living in rural areas, older people, children, women, and people with disabilities. For example, in Canada, respecting the rights of Indigenous Peoples and others living in rural areas requires avoiding a narrow focus on high-speed rail projects that are expensive and only connect major cities, when these communities actually require a better highway bus service that is more affordable and accessible to people living in rural areas.[564] The IPCC has stated that "transport can be an agent of sustained urban development that prioritizes goals for equity and emphasizes accessibility, traffic safety, and

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[556] Greenpeace UK, Open Letter to the Chancellor on a UK Government Support Package to the Aviation Industry (signed by Amnesty International), 31 March 2020, greenpeace.org.uk/news/the-airlines-industry-wants-a-government-bailout-heres-what-needs-to-happen/

[557] Aircraft produced today are about 70% more fuel efficient per passenger kilometer than 40 years ago. See IPCC, "Aviation and the global atmosphere", archive.ipcc.ch/ipccreports/sres/aviation/index.php?idp=10 However, much more could be done and although the costs should be borne by the aviation industry, governments have a duty to enable this through their policies. See Greenpeace UK and others, "Briefing: Building back better for aviation" (previously cited).

[558] The IPCC has estimated that up to 18% of emissions could be saved if air traffic management and other operational procedures improve. See IPCC, "Aviation and the global atmosphere" (previously cited).

[559] Electro-fuels (those produced from CO_2 and water using electricity) could provide an alternative in the future if produced using renewable energy, but they are inefficient and very expensive. In addition, biofuels and electro-fuels still produce water vapour, which can amplify the warming effect of other GHGs in the atmosphere. See Transport and Environment, "How to reduce airline emissions" and IPCC, "Aviation and the global atmosphere" (previously cited).

[560] See for example, Transport and Environment, "How to reduce airline emissions" (previously cited); Greenpeace UK and others, "Briefing: Building back better for aviation" (previously cited).

[561] H. Bofinger and J. Strand, *Calculating the Carbon Footprint from Different Classes of Air Travel*, 2013, World Bank Policy Research Working Paper 6471, documents1.worldbank.org/curated/en/141851468168853188/pdf/WPS6471.pdf, p.21. This is because aircrafts' fuel consumption depends on the number (or weight) of passengers only to a small degree. An average premium-class passenger takes up a larger than average space in an aircraft, reducing the number of passengers that can be transported on each flight.

[562] In the UK, a recent Court of Appeal judgement ruled that the government's decision to allow for the expansion of Heathrow Airport was unlawful because the government had failed to consider its commitments under the Paris Agreement. See Court of Appeal decision of 27 February 2020, judiciary.uk/wp-content/uploads/2020/02/Heathrow-judgment-on-planning-issues-27-February-2020.pdf and White and Case, "Court of Appeal declares Heathrow expansion unlawful on climate change grounds", 12 March 2020, whitecase.com/publications/alert/court-appeal-declares-heathrow-expansion-unlawful-climate-change-grounds#:~:text=Gwen%20Wackwitz-,Court%20of%20Appeal%20declares%20Heathrow%20expansion%20unlawful%20on%20climate%20change,its%20recent%20decision%20in%20R.&text=The%20Court's%20decision%20is%20part,obligations%20under%20the%20Paris%20Agreement.

[563] E. Doherty, *Beyond Batteries* (previously cited); Greenpeace UK and others, Open letter to Chancellor on a UK Government Support Package for the Aviation Industry (signed by Amnesty International), 31 March 2020, greenpeace.org.uk/news/the-airlines-industry-wants-a-government-bailout-heres-what-needs-to-happen/

[564] E. Doherty, *Beyond Batteries* (previously cited).

time-savings for the poor while reducing emissions, with minimal detriment to the environment and human health".[565]

States must:

- Include measures to reduce emissions from the transportation sector in their NDCs and long-term emission reduction strategies, ensuring that emission cuts across all forms of transportation are aligned with the imperative to keep the increase of global average temperatures below 1.5°C.
- Set deadlines to end sales of internal combustion engine cars. These deadlines must be aligned with the 1.5°C target. Internal combustion engine cars should be replaced with battery-powered electric vehicles that are smaller, lighter, less powerful and more energy efficient (as this reduces the size of batteries), designed with an increase in car sharing in mind. Provide financial incentives to make the transition to electric vehicles fair and accessible to those in rural areas with lower incomes.
- Ensure a rapid transition to a renewable energy grid to ensure transport and manufacturing are powered by renewable sources of energy.
- Address human rights and environmental risks and damage across the lithium-ion battery supply chain and life cycle, including by stepping up government regulation of all actors in the sector, including artisanal and industrial mining.
- Incentivize shared journeys and car sharing and promote a shift towards other forms of transportation rather than private cars. In particular, invest in electrified, mass public transport and ensure it is physically accessible and affordable to all; develop facilities for walking, rolling (wheelchairs and other mobility devices) and cycling.
- Refrain from adopting policies and measures that rely on the use of crop-based fuels as an alternative fuel for road vehicles, planes and ships, given the human rights risks associated with those fuels.
- Require that aviation companies set time-bound commitments to reduce emissions in absolute terms without relying on offsets, including by reducing the number of flights over a period of time.
- Avoid emission reductions strategies for the aviation sector that rely only on offsetting and ensure that, if adopted, mechanisms for carbon trading lead to genuine emission reductions and include human rights safeguards.
- Establish regulations to reduce emissions from shipping in a manner compatible with keeping global warming within the 1.5°C target, including related to ship design, speed limits, emission reporting obligations and adequate taxation for pollution at ports.
- Adopt comprehensive, multi-sectoral and human rights-consistent policies and measures to reduce the demand for transportation and promote behavioural change, especially in relation to private cars and air travel, such as providing remote services, encouraging remote-working and video conferencing, avoiding urban sprawl, ending direct and indirect governmental subsidies to the aviation sector and discouraging non-essential air-travel.
- While considering measures to reduce emissions from the transportation sector, ensure that these reduce inequalities rather than exacerbating them and address the needs and respect the rights of different groups of people, and particularly those most marginalized.
- Especially in wealthier countries, refrain from investing in and promoting the development of transport infrastructure that would entrench dependency on fossil fuel, such as airport expansions and runways or urban highway expansion, and instead promote the development of low carbon transport infrastructure.

Businesses in the transport and battery sectors should do the following:

- Aviation companies must adopt time-bound commitments to reduce emissions in absolute terms, without relying on offsets.

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[565] IPCC, *Climate Change 2014: Mitigation of Climate Change – Working Group III Contribution to the Fifth Assessment Report* (previously cited), Chapter 8, p. 604.

- All businesses, including electric vehicle and battery manufacturers, must ensure their operations, as well as those of their subsidiaries and suppliers, adhere to international environmental and human rights standards. They must continuously and proactively identify and address actual and potential risks for people and the environment linked to their operations, products and business relationships and provide for remediation in case of harm.
- Purchasers of battery minerals must "know and show" where their minerals are being sourced from and under what conditions, as part of their respect for human rights and environmental standards. This information, as well as information about how they identify and address potential and actual harm, should be available publicly on an ongoing basis to allow for greater accountability.

6. HELP AFFECTED PEOPLE TO ADAPT TO UNAVOIDABLE CLIMATE CHANGE

Even if systematic mitigation measures will be adopted in the future, the effects of climate change are already being experienced and will continue because of the inertia of the climate system and the long-term effects of previous greenhouse gas (GHG) emissions. The UN Framework Convention on Climate Change (UNFCCC) consequently refers to "adaptation" as the necessary changes in processes, practices and structures to limit potential damages or to benefit from opportunities associated with climate change.[566]

As described in sections 3 and 4 above, the climate crisis has devastating human rights impacts for individuals, peoples and communities. Such impacts are aggravated by factors including discrimination, inequality, poverty, conflicts, poor planning and regulation, poor disaster preparedness, weak institutions and corruption.

Based on the obligation for states to protect the enjoyment of human rights from the harmful effects of climate change, **states must adopt all necessary measures to assist those within their jurisdiction to adapt to the foreseeable and unavoidable effects of climate change, thus minimizing the impact of climate change on their human rights**.[567] Regions, provinces and municipalities should also act in line with the state's obligations to adapt. All states have obligations under human rights law in relation to climate change adaptation, regardless of whether the state is responsible for the effects of the climate crisis, because states have an obligation to protect human rights from harms caused by third parties.[568] In addition, states that are primarily responsible for climate change through their historical emissions have an obligation to provide remedies (see section 9), and wealthier states have the duty to provide support (see section 10).

As highlighted by several UN treaty bodies and Special Rapporteurs, measures to enhance people's resilience to disasters and to support adaptation to climate change include:

- conducting risk assessments in urban planning, rural development projects and the design of housing;[569]

[566] See unfccc.int/focus/adaptation/items/6999.php
[567] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy, and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 68.
[568] See UN Human Rights Committee, General Comment 31: The Nature of the General Legal Obligation Imposed on States Parties to the Covenant, 26 May 2004, UN Doc CCPR/C/21/Rev.1/Add. 13, para. 8; UN Committee on Economic, Social and Cultural Rights, General Comment 12 (previously cited), para. 15.
[569] UN Special Rapporteur on the right to adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 51.

- ensuring crucial infrastructure – such as water, sanitation, health and education – is resilient to climate impacts;[570]
- developing, adequately funding and implementing disaster risk reduction and management strategies, early warning systems and emergency response plans, while ensuring that early warning information is provided in a timely, culturally appropriate, accessible and inclusive manner and the needs of most impacted groups are taken into account;[571]
- supporting the construction of high-quality buildings and assisting those who live in sites at risk of climate change impacts to move to safer sites in a manner consistent with their human rights, as well as providing access to affordable and well-located land for the urban poor to avoid further unplanned settlement that increases vulnerability to climate impacts;[572]
- supporting sustainable agricultural practices and other approaches capable of making food systems and livelihoods more resilient to climate change impacts;[573]
- identifying and supporting livelihoods that are resilient to disasters and climate change,[574] as well as providing necessary technical and material support to livelihoods particularly at risk of climate change impacts;
- investing in social protection and social services to reduce vulnerability to and mitigate the risks of disasters and climate-induced stresses, ensuring that men and women have equal access to those and the needs of women and marginalized groups are taken into account;[575]
- addressing climate change and disasters as drivers of migration and displacement, preventing and reducing the risk of climate change-related displacement, including by facilitating safe and regular migration as an adaptation strategy.[576]

Given that climate change adaptation is closely related to disaster risk reduction and preparedness,[577] states should also refer to the Sendai Framework for Disaster Risk Reduction 2015-2030 in order to comply with their human rights obligations to protect people from the harmful effects of climate change.[578]

In designing climate change adaptation and disaster risk reduction strategies and measures, states must take into account the needs and requirements of different groups.[579] They must also identify and address the factors that increase the risks of harm from climate impacts, including marginalization and discrimination, and allocate adequate resources to tailor the realization of the economic, social and cultural rights of all persons, with priority to those facing the greatest risks.[580]

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[570] UN Special Rapporteur on the right to adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 51; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 86(b).
[571] UN Special Rapporteur on the right to adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 51; UN CEDAW, General Recommendation 37 (previously cited), para. 54(c); UN Committee on Economic, Social and Cultural Rights, Concluding observations: Mauritius, 5 April 2019, UN Doc. E/C.12/MUS/CO/5, para 10; UN Committee on the Rights of the Child, Concluding observations: Mozambique, 27 November 2019, UN Doc. CRC/C/MOZ/CO/3-4, para. 37; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 86(b).
[572] UN Special Rapporteur on the right to adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 74.
[573] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 86(e).
[574] UN CEDAW, General Recommendation 37 (previously cited), para. 46(c).
[575] UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc. A/70/287, para. 89(k); CEDAW, General Recommendation 37, para. 64(a); UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 86(c).
[576] OHCHR, Treaty bodies' joint statement on human rights and climate change, 2019.
[577] Disaster risk reduction (DRR) relates to preventing new disasters and reducing existing disaster links, while climate change adaptation (CCA) is understood as the process of adjustment to actual or expected climate impacts. While there is an overlap between the two disciplines, the main difference is that DRR tends to focus on rapid-onset disasters, while climate change adaptation also looks at slow-onset events. In addition, DRR covers all disasters, while CCA is concerned by the impacts of climate change-related events only. For more information, see OECD, *Common Ground Between the Paris Agreement and the Sendai Framework: Climate Change Adaptation and Disaster Risk Reduction,* 2020, read.oecd-ilibrary.org/development/climate-change-adaptation-and-disaster-risk-reduction_3edc8d09-en#page3, pp. 22-23.
[578] The Sendai Framework for Disaster Risk Reduction (2015-2030), endorsed by the UN General Assembly, outlines a set of actions and commitments for countries to build people's resilience to disasters. See preventionweb.net/files/43291_sendaiframeworkfordrren.pdf. Another useful tool is the 2019 Parliamentary Protocol for Disaster Risk Reduction and Climate Change Adaptation, drafted by the UN Office for Disaster Risk Reduction and ParlAmericas and aimed at guiding parliaments to implement the Sendai Framework. See unisdr.org/we/inform/publications/65289
[579] For example, in its 2018 Concluding Observations to the Seychelles, the Committee on the Rights of Persons with Disabilities emphasized that states must ensure that the requirements of all persons with disabilities are taken into consideration when designing and implementing adaptation and disaster risk reduction measures. See undocs.org/en/CRPD/C/SYC/CO/1, para. 23.
[580] OHCHR, "Key messages" (cited previously).

Adaptation measures should give priority to the most marginalized groups, communities and individuals,[581] be gender-responsive,[582] and seek to be informed by the traditional knowledge of Indigenous Peoples and other local communities.[583] In order to accomplish the above, and in compliance with their human rights obligations (see section 8), states must ensure the meaningful participation of all interested people, and particularly of women and the most affected communities and individuals, in the design, planning, implementation and monitoring of adaptation strategies and measures, and seek the free, prior and informed consent of Indigenous Peoples. Where relevant, special mechanisms must be put in place to facilitate genuine participation of women, Indigenous Peoples, communities affected by discrimination based on work and descent, minorities, children, persons with disabilities, migrants and refugees, and other groups facing marginalization or discrimination.

States' obligations to protect human rights in the face of disasters have been highlighted in a number of judgements by the European Court of Human Rights.[584] For example, in 2008 the Court established the responsibility of Russia for the deaths of several people in mudslides in the Caucasus region and, in doing so, reiterated the obligation of states to adopt legal frameworks and preventive measures designed to effectively reduce risks to the right to life from natural disasters as well as dangerous human activities.[585] Moreover, the Lahore High Court in Pakistan issued a decision in 2015 in which it held that the national government had violated the fundamental rights of its citizens, including the right to life, by failing to implement adaptation measures recommended in the 2012 National Climate Policy and Framework.[586]

States also have obligations in relation to climate change adaptation under the Paris Agreement. "Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production" is one of the three overall objectives of the treaty (Article 2(b)). Under the Paris Agreement, parties are required, "as appropriate" to submit and update periodically adaptation communications, which may include their priorities, implementation and support needs, plans and actions for adaptation (Article 7.10).[587] The Paris Agreement also includes a review of adaptation progress, and the adequacy and effectiveness of adaptation support, in the global stocktake to be undertaken every five years (Article 14).[588]

Under the Paris Agreement, states also commit to undertake adaptation action with a "gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems", and to be guided by the best available science and traditional and Indigenous knowledge (Article 7.5). The "Paris Agreement Rulebook", which was adopted at COP24 in Katowice and sets out the implementation guidelines for the Paris Agreement, also urges parties to include gender considerations throughout all stages of their adaptation planning processes, including national adaptation plans, in addition to encouraging a participatory approach to adaptation planning and implementation,[589] making use of input from "civil society, indigenous peoples, local communities, migrants, children and youth, persons with disabilities and people in vulnerable situations in general".[590]

While all states have obligations to protect people's human rights from climate change, states that are unable to take sufficient adaptation measures in a manner that would ensure continued enjoyment and progressive realization of economic, social and cultural rights for their population must seek (and cannot arbitrarily refuse) international assistance and co-operation to do so. Similarly, wealthier states have a duty to provide

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[581] UN Special Rapporteur on the right to adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 74; Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 15 July 2019, UN Doc. A/74/161, para. 85.
[582] See for example UN CEDAW, General Recommendation 37 (previously cited).
[583] See for example UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 86(a)
[584] For a review of the jurisprudence of the European Court of Human Rights, see E. Sommario and S. Venier, "Human rights law and disaster risk reduction", 30 April 2018, Questions of International Law, qil-qdi.org/human-rights-law-disaster-risk-reduction/
[585] European Court of Human Rights, *Budayeva and others v. Russia*, application. No. 15339/02 (2008). Available from echr.coe.int
[586] The Lahore High Court, *Case Leghari v. Federation of Pakistan*, W.P. No. 25501/2015, 4 September 2015, climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2015/20150404_2015-W.P.-No.-25501201_decision.pdf
[587] This communication must be submitted and updated periodically as a component of, or in conjunction with other communications or documents, including a national adaptation plan (NAP), a nationally determined contribution (NDC) and/or a national communication (Article 7.11). As part of a state's adaptation planning process, a NAP should aim to reduce vulnerabilities to climate change by building adaptive capacities and resilience, in addition to helping facilitate the integration of climate adaptation into new and existing policies, programmes and activities within different sectors.
[588] The global stock-take is the process, set out in Article 14 of the Paris Agreement, to take stock of the implementation of the Paris Agreement and to assess collective progress towards achieving the purpose of the Agreement and its long-term goals. See unfccc.int/topics/science/workstreams/global-stocktake-referred-to-in-article-14-of-the-paris-agreement
[589] UN Doc. FCCC/CP/2018/10/Add.1, Decision 9/CP.24, para. 7.
[590] UN Doc. FCCC/CP/2018/10/Add.1, Decision 9/CP.24, para. 8.

such support (financial and/or technical, bilateral and/or multilateral) for the realization of economic, social and cultural rights (see section 10).[591]

These obligations are echoed under the UNFCCC and the Paris Agreement, based on the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC). Taking into account that developing countries are usually among those most affected by the impacts of climate change and the least equipped to adapt to them, under the UNFCCC, developed country parties commit to assisting developing country parties in meeting the costs of adapting to the adverse effects of climate change and to take full account of the specific needs of least developed countries in funding and transfer of technology.[592] The Paris Agreement reiterates this principle (Article 2.2) and also includes recognition of the need to balance financial support between adaptation and mitigation (Article 9.4).[593]

Despite these commitments, adaptation remains largely underfunded, especially compared with mitigation. An Organisation for Economic Co-operation and Development (OECD) report concluded that, as of 2018, only 21% of funding was provided for adaptation, with 70% for mitigation and the rest for cross-cutting activities.[594] UN Environment programme (UNEP) also found that finance available for adaptation was significantly lower than the needs expressed in the nationally determined contributions (NDCs), and much lower than the costs of adaptation.[595]

[591] See O. De Schutter and others, "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights" (previously cited).
[592] Article 4, paras 4 & 9, UNFCCC.
[593] This was echoed by the Green Climate Fund's commitment to deliver a 50/50 split between mitigation and adaptation. See Green Climate Fund, *GCF in Brief: Adaptation Planning*, June 2018, greenclimate.fund/documents/20182/194568/GCF_in_Brief__Adaptation_Planning.pdf/c0fc85d5-a0d8-4fbc-b962-e077d5a2e067
[594] OECD, *Climate Finance Provided and Mobilised by Developed Countries in 2013-2018*, 6 November 2020, oecd.org/environment/climate-finance-provided-and-mobilised-by-developed-countries-in-2013-18-f0773d55-en.htm
[595] UNEP, *The Adaptation Gap Report 2018*, 2018, unenvironment.org/resources/adaptation-gap-report and UNEP, *The Adaptation Gap Report 2020*, 2020, unenvironment.org/resources/adaptation-gap-report-2020

7. ENSURE CLIMATE ACTION IS CONSISTENT WITH PEOPLES' RIGHTS INCLUDING JUST TRANSITION

States must respect, protect and fulfil human rights in all climate policies and initiatives. In particular, they must ensure that the transition to decarbonized economies and resilient societies is just and fair for all, in line with states' human rights obligations, creating opportunities to combat existing inequalities both within and between countries, including promoting gender, racial, ethnic, disability and inter-generational equality.

Ensuring that climate measures and policies are consistent with human rights is a legal obligation based on the human rights treaties that states have ratified. It is also an effective approach to ensure the shift to a zero-carbon economy happens at the speed and scale required to limit global heating to 1.5°C or below without negatively impacting disproportionately on the rights of the most marginalized and those living in poverty. When human rights are not a central consideration in climate policies and measures, the effects can be dire resulting in grievances and sometimes resistance by those worst affected. For example, the "*gilets jaunes*" protests in France[596] and the protests in Ecuador[597] in 2019 were initially driven by the governments' decisions to suddenly scrap fuel subsidies and the failure to provide support to people on lower incomes. Equally, the failure to consult with and respect the human rights of Indigenous Peoples or local communities in the context of climate change mitigation or adaptation projects has led to resistance and organized opposition to such projects.[598]

In turn, as the UN Human Rights Council has affirmed in each of its resolutions on climate change since 2009,[599] applying a human rights framework to climate policies and action also promotes "policy coherence, legitimacy and sustainable outcomes".[600] Climate policies that respect, protect and fulfil human rights are more likely to be supported because people's legitimate concerns are taken into account and as far as

[596] Kumi Naidoo, "France's yellow vest protests have been framed as a false choice of climate vs. the people", 2018, Time, time.com/5473618/france-yellow-vests-climate-macron/ See also Amnesty International, *Arrested For Protest: Weaponizing the Law to Crackdown on Peaceful Protesters in France* (Index: EUR 21/1791/2020), amnesty.org/en/documents/eur21/1791/2020/en/.
[597] Climate Home News, "After 11 days of civil unrest, Ecuador reinstates fossil fuel subsidies", 14 October 2019, climatechangenews.com/2019/10/14/11-days-civil-unrest-ecuador-reinstates-fuel-subsidies/
[598] See for example UN Special Rapporteur on the human rights of indigenous peoples, Report, 15 September 2017, UN Doc. A/HRC/36/46, pp. 20-22.
[599] See ohchr.org/EN/Issues/HRAndClimateChange/Pages/Resolutions.aspx
[600] See also UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy, and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, paras 10 & 86.

possible mitigated.[601] This is more likely to lead to a faster and fairer transition to decarbonized economies and societies. As stated by former UN High Commissioner for Human Rights Mary Robinson, in a climate justice framework, human rights are central to designing "appropriate responses to climate change, rooted in equality and justice".[602]

7.1 RESPECT, PROTECT AND FULFIL HUMAN RIGHTS IN CLIMATE ACTION

States must ensure that measures intended to protect people from the effects of climate change do not result in the violation of other human rights.

It has been well-documented that some climate mitigation and adaptation projects can negatively impact on the enjoyment of human rights, often disproportionately affecting groups already subject to discrimination and marginalization. For example, as shown in previous sections, renewable energy projects, biofuel crop farms and conservation projects, including under the REDD+ programme, are often initiated in violation of the rights of Indigenous Peoples and local communities who live there.[603] Such initiatives often result in threats and violence, including killings, against human rights defenders and community members opposing the projects.[604] In many cases, such projects have led to forced evictions and displacement of communities, accompanied by other ensuing human rights violations such as of the rights to an adequate standard of living, food, water and self-determination of Indigenous Peoples.[605] The cultural rights of women are also impacted in specific ways by such projects. For example, the forced eviction of the Indigenous Sengwer from their forest lands in Kenya due to misguided forest conservation policies has resulted in the women being unable to access traditional medicines and cultural practices around childbirth linked to their ancestral forests. It has also resulted in them being marginalized from access to traditional livelihoods exercised in the forest, and they have become more dependent on their spouses.[606]

As discussed in section 5.7, excessive reliance on crop-based biofuels as a climate change mitigation measure or on carbon dioxide removal (CDR) mechanisms such as bio-energy with carbon capture and storage (BECCS) can have very serious impacts on the right to food.[607]

Such human rights violations have often occurred in the context of climate projects funded through national, regional and international climate finance mechanisms. These mechanisms may lack adequate social, environmental and human rights safeguards to ensure that the projects they fund do not result in harmful effects for individuals and communities.[608] To make sure that climate mitigation and adaptation projects and measures do not violate human rights, human rights impact assessments should be carried out before such projects are authorized.

As highlighted in sections 5.5 and 5.9, the mass production of rechargeable batteries for electric vehicles and renewable energy storage and generation, essential for the shift to renewable energy, requires a massive increase in extraction of critical minerals, that all too often results in widespread human rights abuses of local communities, and egregious environmental harm from irresponsible water, waste, and tailings management. As set out in sections 5.5 and 5.9, governments must put in place and enforce requirements relating to recovery and secondary usage of battery and base metals and laws obliging all companies to conduct human rights due diligence in their global operations.

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[601] See Quaker United Nations Office, *Climate Justice and the Use of Human Rights Law in Reducing Greenhouse Gas Emissions* (previously cited), pp. 8-10; Trade Union Development Cooperation Network (TUDCN) and others, *The Contribution of Social Dialogue to the 2030 Agenda*, 2019, ituc-csi.org/social-dialogue-for-sdgs-promoting-just-transition

[602] Mary Robinson Foundation – Climate Justice, *Principles of Climate Justice*, mrfcj.org/principles-of-climate-justice/

[603] See for example Amnesty International, *Families Torn Apart: Forced Evictions of Indigenous Peoples in Embobut Forest, Kenya* (Index: AFR 32/8340/2018) (previously cited); UN Special Rapporteur on the human rights of indigenous peoples, Report, 15 September 2017, UN Doc. A/HRC/36/46, pp. 20-22.

[604] See for example Amnesty International, "Colombia: Authorities must investigate killing of community leaders and take urgent action to protect human rights defenders", 11 May 2018, amnesty.org/en/latest/news/2018/05/colombia-authorities-must-investigate-killings-of-community-leaders-and-take-urgent-action-to-protect-human-rights-defenders/

[605] UN Special Rapporteur on adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 47.

[606] Amnesty International, *Families Torn Apart: Forced Eviction of Indigenous People in Embobut Forest, Kenya* (Index: AFR 32/8340/2018), (previously cited), p. 53.

[607] UN Special Rapporteur on the right to food, Report, 5 August 2015, UN Doc A/70/287, paras 60-69.

[608] The UN Special Rapporteur on human rights and the environment wrote: "some financing mechanisms, such as the Adaptation Fund and the Green Climate Fund, include safeguards that are generally considered to be satisfactory, while others, such as the Clean Development Mechanism, have been criticized for failing to provide for adequate stakeholder consultation and thereby resulting in human rights violations through displacement and the destruction of livelihoods". Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 61.See also UNEP, *Climate Change and Human Rights*, (previously cited), pp. 36-39, and

In the light of the principle of non-discrimination, governments and local authorities, as well as multilateral organizations, should pay special attention to the needs and rights of the communities, groups and individuals most impacted by the effects of climate change and by the proposed climate measures. Consequently, states should ensure that measures to address climate change are implemented in a non-discriminatory manner and do not disproportionally impact individuals, groups and communities who are marginalized or discriminated against.

States must avoid using the response to climate change to justify violations of human rights, for example by limiting freedoms of expression, assembly and association (see also section 3.2), or adopting even more exclusionary policies against refugees, migrants and asylum-seekers.

For climate measures and decisions to be consistent with human rights, **states must also guarantee the procedural rights** described in section 8 (right to be informed of the effects of climate actions, to take part in decision-making processes, to have their concerns taken into account and to have access to appropriate and effective remedies for violations of their rights).[609] Special attention should be paid to ensure that marginalized groups and those who suffer discrimination, particularly multiple and intersecting forms of discrimination, have access to these rights.

States must ensure that the transition towards more resilient and zero-carbon societies is an opportunity to reducing poverty and correct existing imbalances in the enjoyment of human rights. For example, forest conservation projects must strengthen the rights of Indigenous Peoples, including by ensuring security of tenure on their ancestral land, so they have some form of legal protection against forced eviction (see also section 5.6.5). Carbon taxes must reduce inequalities rather than deepen them, thus putting the burden primarily on fossil fuel corporations and wealthier consumers while protecting low-income groups from regressive impacts through subsidies, grants and tax reforms and ensuring their access to affordable energy.[610] In order to ensure a truly just transition to a zero-carbon economy that provides effective new employment and livelihood opportunities for all affected people, measures should be taken to ensure women and other groups facing discrimination can have equal access to these opportunities.[611]

States must ensure a just transition for all workers and communities affected by climate change and the decarbonization process.[612] In particular, they should:

- Adopt human rights-consistent "just transition" plans, ensuring these are underpinned by national and regional employment strategies that address the concerns of all workers and communities affected by climate change and climate policies. These plans must be based on social dialogue[613] and on the genuine participation of affected communities. They should promote substantial public investment in low-carbon sectors and technologies, strengthen social protection systems and public investment in health, education and other essential services. This approach is consistent with governments' international and regional obligations to guarantee economic and social rights for all without discrimination. It must also be emphasized that a human rights consistent approach should be an inherent part of all macro economic policy and planning, not just with respect to the climate crisis.
- Assist workers – and their families – in the fossil fuel industry and those in other affected sectors who might lose their jobs due to the transition to secure alternative livelihoods that provide for sustainable and decent work. In particular, prioritize employment creation in affected areas and communities through appropriate investment, reskilling, training and other assistance for job seekers. This should include promoting and supporting the creation of green and other new jobs that deliver both sustainable and decent employment for workers that respects, protects and fulfils their economic and social rights, is non discriminatory and takes into account the needs of groups who are already suffering from discrimination.

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[609] See for example, UN Special Rapporteur on adequate housing, Report, 6 August 2009, UN Doc. A/64/255, paras 52 & 74; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 82.

[610] Amnesty International Canada, "Political and constitutional divisions do not excuse failure to comply with human rights obligations related to climate change", 12 February 2019, amnesty.ca/news/political-and-constitutional-divisions-do-not-excuse-failure-comply-human-rights-obligations; Kumi Naidoo, "France's yellow vest protests have been framed as a false choice of climate vs. the people" (previously cited); UN Special Rapporteur on extreme poverty and human rights, Report, 7 October 2020, UN Doc. A/75/181/Rev.1, para. 19.

[611] UN Special Rapporteur on extreme poverty and human rights, Report, 7 October 2020, UN Doc. A/75/181/Rev.1, para. 12.

[612] The concept of just transition is recognized as a guiding principle in the Paris Agreement. Useful guidance on policies, approaches and methodologies for a just transition can be found in International Labour Organization, *Guidelines For a Just Transition Towards Environmentally Sustainable Economies and Societies For All*, 2015, ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf

[613] Social dialogue is defined by the ILO to "include all types of negotiation, consultation or simply exchange of information between, or among, representatives of governments, employers and workers, on issues of common interest relating to economic and social policy". See org/ifpdial/areas-of-work/social-dialogue/lang--en/index.htm

- Support communities reliant on fossil fuel production or on other livelihoods affected by the transition to maintain an adequate standard of living and social cohesion. In particular, states, as an integral part of ensuring an adequate standard of living, must ensure that social protection measures are sufficient both in terms of coverage and level of support to mitigate the negative impacts on local communities.[614]
- Support workers and communities reliant on fossil fuel use to access and use alternative, affordable and human rights-consistent sources of energy.
- Raise and allocate sufficient resources to ensure a just transition, including by appropriate fiscal measures with respect to climate polluting industries, while protecting lower-income households from negative impacts.

Finally, states should ensure that the transition towards more resilient and zero-carbon societies occurs at a pace and in a manner consistent with the human rights of future generations.[615] The choices made today that delay climate action could have irreversible consequences on the environment affecting a range of rights of future generations and denying them equal access to the rights enjoyed by many members of the present generation. Delaying climate action also has the effect of increasing the costs of adapting to climate change and providing remedy for harm to future generations thereby reducing the resources available to them.

7.2 INTEGRATE HUMAN RIGHTS IN CLIMATE POLICIES AND PRACTICES

Thanks to pressure from human rights and climate justice organizations[616] and some UN agencies, the Paris Agreement recognizes the importance of human rights in climate action. The preamble states that

"Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of Indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity."

Although unfortunately the implementation guidelines for the Paris Agreement ("Paris Agreement Rulebook"), adopted at COP24, do not explicitly mention human rights,[617] they refer to related concepts such as public participation and engagement with local communities and Indigenous Peoples,[618] gender responsiveness and mainstreaming,[619] and the importance of taking into account Indigenous, traditional and local knowledge.[620]

In light of these commitments and their existing human rights obligations, states should integrate human rights into their nationally determined contributions (NDCs) and National Adaptation Communications, both in their preparation processes and in their content.[621] In the preparation of these documents, states must guarantee procedural rights, particularly the right to information and participation, especially of those most affected and those marginalized and discriminated against. With respect to their substance, national climate

[614] On the right to social protection, see UN Special Rapporteur on extreme poverty and human rights, Report, 11 August 2014, UN Doc. A/69/297. See also ITUC, "The role of social protection in a just transition", 2018, ituc-csi.org/IMG/pdf/role_of_social_protection_in_a_just_transition_en.pdf

[615] The rights of future generations are implicitly included within international human rights standards, see for example: UN Human Rights Committee (HRC), General Comment 36: Article 6: Right to life, 3 September 2019, UN Doc. CCPR/C/GC/36, para. 62; UN Committee on Economic, Social, Cultural Rights, General Comment 15: The Right to Water, 20 January 2013, UN Doc. E/C.12/2002/11, para. 11.

[616] See for example Human Rights & Climate Change Working Group, "Human Rights in Paris Agreement", climaterights.org/our-work/unfccc/road-to-paris-cop21-protect-human-rights-in-climate-action/

[617] For a more detailed overview of human rights integration in the Paris Rulebook, see CIEL, "Report from the Katowice Climate Conference, Promoting human rights in climate action at COP24", December 2018, ciel.org/wp-content/uploads/2018/12/HRCC_Roundletter_COP24_December2018.pdf

[618] See UN Doc. FCCC/PA/CMA/2018/3/Add.1, Decision 4/CMA.1, para. 7 and Annex 1, para. 4; UN Doc. FCCC/CP/2018/10/Add.1, Decision 9/CP.24, para. 8.

[619] See UN Doc. FCCC/PA/CMA/2018/3/Add.1, Decision 4/CMA.1, para. 7 and Annex 1, para. 4; UN Doc. FCCC/CP/2018/10/Add.1, Decision 9/CP.24, para. 7; UN Doc. FCCC/PA/CMA/2018/3/Add.1, Annex.

[620] See UN Doc. FCCC/PA/CMA/2018/3/Add.1, Annex.

[621] On the integration of human rights considerations in NDCs see: Women's Empowerment and Development Organization (WEDO), *Gender Equality and Women's Empowerment in Updated and New Nationally Determined Contributions (NDCs),* December 2020, wedo.org/brief-gender-equality-and-womens-empowerment-in-updated-and-new-nationally-determined-contributions-ndcs/; Climate Land Ambition and Rights Alliance (CLARA), *The CLARA Guide to Nationally Determined Contributions – Rights and Climate Action,* http://peoplesndc.org/ambition/rights/

plans should contain clear references to human rights principles and standards, be consistent with international human rights obligations and include relevant indicators, targets and benchmarks. In particular, they should indicate the specific steps and measures states will take to ensure that climate measures respect, protect and fulfil human rights, including in relation to the cross-cutting principles contained in the preamble of the Paris Agreement to all climate mitigation measures (that is, the rights of Indigenous Peoples, gender equality, food security, just transition, inter-generational equity and the preservation of the integrity of ecosystems).

States should also effectively implement the commitments taken within the "transparency framework" established by Article 13 of the Paris Agreement and include information on how their climate policies integrate human rights and other cross-cutting issues.

Moreover, states and multilateral institutions must ensure that projects supported by national and international climate finance mechanisms respect, protect and fulfil human rights. It is therefore essential that all climate funds adopt or strengthen and effectively implement adequate human rights safeguards. Such safeguards should include mandatory human rights impact assessments before adopting a project, mechanisms to ensure access to information and adequate public participation of affected individuals and communities and respect of the right of free, prior and informed consent of Indigenous Peoples, as well as procedures and mechanisms to ensure effective remedy for human rights violations.[622] The adoption of human rights safeguards is particularly crucial in the context of the ongoing negotiations of the implementation rules for Article 6 of the Paris Agreement on carbon trading, particularly in view of the establishment of the proposed Sustainable Development Mechanism (see section 5.3).

7.3 ENSURE A JUST RECOVERY FROM COVID-19 THAT PUTS HUMAN RIGHTS AND CLIMATE AT ITS CENTRE

Given the urgency of the climate crisis, it is imperative that responses to the COVID-19 pandemic and its economic fallout contribute to reducing global warming. Responses to the pandemic risk exacerbating the climate crisis if they roll back environmental protections, unduly delay climate action, or entrench fossil fuel dependency. Stimulus packages and recovery measures must facilitate the transition to a zero-carbon economy and resilient society. At the same time, they must contribute to addressing the inequalities that the pandemic and the climate crisis have brought to light. States must therefore commit to a just and environmentally sustainable recovery, that puts human rights and climate action at its centre.

UN Environment Programme (UNEP) estimates that a "green pandemic recovery could cut up to 25 per cent off the emissions we would expect to see in 2030 based on policies in place before COVID 19", substantially increasing the chances to meet the Paris Agreement goal.[623] Nevertheless, until now states seem to have been largely missing this opportunity, with most of public finance for the recovery invested either in the high carbon sectors or towards action with no discernible effects on emissions.[624]

It is therefore crucial that in future COVID 19 fiscal interventions foster a just and environmentally sustainable recovery. In particular, states must:

- Ensure that any economic stimulus packages, including those that cover private corporations, include a requirement to prioritize support for workers over corporate profit. Any immediate assistance to fossil fuel energy companies should be targeted at safeguarding workers' jobs and the protection of their rights, by prioritizing the maintenance of current services, rather than supporting new exploration and development. Any such assistance should be conditioned with time-bound commitments to phase out fossil fuels in line with the latest Intergovernmental Panel on Climate Change (IPCC) scientific advice accompanied by appropriate transition plans to safeguard jobs and livelihoods. Any assistance to aviation companies should be targeted at protection of workers' jobs and adequate standard of living and should be conditional on time-bound commitments to reduce emissions in absolute terms without relying on offsets, including by reducing the number of flights over a period of time.

[622] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, A/HRC/37/59, para. 39.
[623] UNEP, *Emissions Gap Report 2020* (previously cited).
[624] UNEP, *Emissions Gap Report 2020* (previously cited). See also energypolicytracker.org/region/g20

- Invest in sectors that support a just transition to a zero-carbon economy and resilient society, creating green and other new jobs that deliver sustainable and decent employment for all workers without discrimination of any kind and providing for greater social protection.

8. GUARANTEE EVERYONE'S RIGHTS TO INFORMATION, PARTICIPATION AND REMEDY

As detailed by the Office of the High Commissioner for Human Rights (OHCHR) and the UN Special Rapporteur on human rights and the environment,[625] under human rights law, states have several procedural obligations in relation to their duty to protect people from environmental harm, including climate change. Their main obligations are to provide access to information, facilitate public participation, and provide access to justice and effective remedies. All of these obligations recognize the crucial role that environmental human rights defenders (HRDs) play in demanding action and accountability in the protection of the environment, and the necessary pre conditions that states must provide so that HRDs can play that role safely and effectively.

These obligations are also recognized under environmental law, including the 1992 Rio Declaration on Environment and Development and the 1992 Convention on Biological Diversity. They are also the object of two regional treaties, the 1998 Convention on Access to Information, Public Participation in Decision making and Access to Justice in Environmental Matters, commonly known as the Aarhus Convention,[626] and the 2018 Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, also known as the Escazú Agreement.[627] The Escazú Agreement stems from Principle 10 of the Rio Declaration on access to information and public participation, and contains the world's first binding and specific provision on the protection of HDRs in environmental matters.

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[625] OHCHR, *Mapping Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, June 2014, srenvironment.org/sites/default/files/Reports/2018/ClimateChangemapping15-August.pdf; Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 1 February 2016, A/HRC/31/52, paras 50-64; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 64.

[626] See unece.org/env/pp/treatytext.html The Aarhus Convention was adopted in 1998 and entered into force in 2001. By the time of writing, it had 47 parties: 46 European and Central Asian countries and the European Union. For the status of signatures and ratifications, see treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-13&chapter=27

[627] See cepal.org/en/escazuagreement The Escazú Agreement entered into force on 22 April 2021, after being ratified by 12 countries. For the status of signatures and ratifications, see observatoriop10.cepal.org/en/treaties/regional-agreement-access-information-public-participation-and-justice-environmental

Parties to the UN Framework Convention on Climate Change (UNFCCC) and the Paris Agreement committed to co-operate in enhancing climate change education, training, public awareness, public participation and public access to information.[628] Similar commitments have been repeated in the decisions related to the "Paris Agreement Rulebook" adopted at COP24 (see footnote no. 618). Until now, the 2012-2020 Doha Work Programme on Action for Climate Empowerment (ACE)[629] has provided the main platform for the promotion of these principles in climate governance but has failed to translate them into effective promotion of human rights. When states complete the review of the work programme at COP26, they should adopt a new work programme is better anchored in human rights principles and standards and is capable of promoting the effective implementation of human rights-consistent climate policies.[630]

8.1 ACCESS TO INFORMATION AND CLIMATE CHANGE EDUCATION

The human right to seek, receive and impart information is a component of the right to freedom of expression,[631] and includes information on environmental matters.[632] States must therefore provide public access to environmental information. This obligation has two components: the duty to collect, update and disseminate environmental information, and the duty to provide access to environmental information.

The duty to regularly collect, update and disseminate environmental information[633] includes the obligation to assess how environmental impacts may interfere with the enjoyment of human rights, both from government and business activity.[634] In relation to the climate crisis, this obligation translates into **states' duty to produce and disseminate information about climate change, including transparent measurements of greenhouse gas (GHG) emissions and early warning information regarding climate effects and natural disasters,[635] and to take climate change into account when fulfilling their obligation to assess environmental risks**.[636] They should also conduct assessments for all on-going and planned activities that result or are likely to result in high GHG emissions, "such as programmatic decisions about fossil fuel development, large fossil fuel-fired power plants, and fuel economy standards",[637] and make the results publicly available. Similarly, states should carry out human rights assessments of mitigation and adaptation projects and plans and make them publicly available.[638] The obligation to disseminate environmental information implies that states should make the information available in all the languages used in their countries and in a culturally appropriate manner, producing information in an accessible format easily understandable to groups most affected by the climate crisis or measures to tackle it, including children[639] and people with disabilities,[640] and using suitable channels of communication.

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[628] Articles 4.1(i) & 6, UNFCCC; Article 12, Paris Agreement.
[629] UN Doc. FCCC/CP/2012/8/Add.2, Decision 15/CP.18, pp. 17-27, unfccc.int/sites/default/files/resource/docs/2012/cop18/eng/08a02.pdf#page=17
[630] See OHCHR and others, "Response to the request of the SBI for views from Parties and observers in response to the open call for submissions for the review of the Doha Work Programme (SBI FCCC/SBI/2019/L.3/Add.1), call for recommendations and views on future work to enhance Action for Climate Empowerment", 21 February 2020, ohchr.org/Documents/Issues/ClimateChange/OHCHR_ILO_UNWomen_UNESCO_UNEP_ECLAC_UNICEF_UNECE_JSubmission_ACE.pdf, p. 6; Climate Action Network, *Submission: Review of the Doha Work Programme and the Future Work on Action for Climate Empowerment*, April 2020, climatenetwork.org/resource/can-submission-review-of-the-doha-work-programme-and-the-future-work-on-action-for-climate-empowerment-may-2020/; Amnesty International, *Raising Ambition in Human Rights-Consistent Climate Pledges: Recommendations to States ahead of Relevant International Meetings in 2021*, (Index: IOR 40/4055/2021), 20 May 2021, amnesty.org/en/documents/ior40/4055/2021/en/
[631] Article 19, Universal Declaration of Human Rights; Article 19, ICCPR.
[632] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, Un Doc. A/HRC/37/59, para. 17.
[633] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 18.
[634] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 51. In its General Comment 36 on the right to life, the UN Human Rights Committee also specified that carrying out environmental assessments is among the measures that states should take to preserve the environment and protect it against harm, pollution and climate change, thus implementing their obligation to respect and ensure the right to life, and in particular life with dignity. See UN Doc. CCPR/C/GC/36, para. 62.
[635] OHCHR, "Key messages", (previously cited).
[636] See UNEP, *Climate Change and Human Rights* (previously cited), p. 17.
[637] UNEP, *Climate Change and Human Rights* (previously cited), p. 16; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, Un Doc. A/HRC/31/52, para. 54.
[638] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 55.
[639] See UNICEF, "Child-friendly Education: Transforming the lives of children affected by climate change", June 2012, unicef.org/environment/files/UNICEF-ClimateChange-E-panelformat1.pdf
[640] OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited), para. 61 (c).

In relation to the duty to provide access to environmental information, as stated by the UN Special Rapporteur on human rights and the environment, **states have the duty to "provide affordable, effective and timely access to environmental information held by public authorities, upon the request of any person or association, without the need to show a legal or other interest**".[641] Grounds for refusal of a request should be set out clearly in domestic law, narrowly defined and interpreted restrictively, in the name of the public interest of disclosure. States should also provide guidance to the public on how to obtain environmental information, and facilitate access to information for persons or groups in vulnerable situations.

Closely related to the obligation to provide access to environmental information is the duty to provide environmental education. Articles 29(1)(b) and (e) of the Convention on the Rights of the Child specifically state that children have the right to an education directed toward the development of respect for human rights and the natural environment. As a consequence**, states should ensure all children receive an adequate environmental education throughout their schooling by incorporating environmental and specifically climate change matters into the educational curricula at all levels**.[642] Such environmental educational programmes should be gender-responsive[643] and reflect the child's culture, language and environmental situation.[644] It should be aimed at fostering children's understanding of the relationship between humans and the environment and empowering children to respond to environmental challenges.[645]

Ensuring environmental education, and specifically climate change education, is therefore essential to facilitate children's participation in climate decision-making. As noted by a number of UN agencies, "education is a right in and of itself, but also a necessary enabling condition for effective enjoyment of the right to participation".[646] As stated by UNICEF, adequate climate education is "one of the most simple and effective strategies for strengthening mitigation and adaptation pathways, and sustainable development more broadly".[647]

States should also promote public awareness of and education about environmental matters throughout adulthood, specifically about the climate crisis, its causes, impacts and solutions.[648] Moreover, public awareness and access to environmental information and education, including about climate change, should be guaranteed with no discrimination. For example, the UN Committee on the Elimination of All Forms of Discrimination against Women Committee (CEDAW Committee) recommends that states "ensure that women and girls have equal access to information, including scientific research, and education regarding disasters and climate change".[649] Article 21 of the Convention on the Rights of Persons with Disabilities specifies the obligation to provide information in accessible formats, which is essential to ensure that people with disabilities have access to environmental information, including early warning about disasters, and have the knowledge to participate in climate decision-making.[650]

8.2 PUBLIC PARTICIPATION

Stemming from the right of everyone to take part in the government of their country and in the conduct of public affairs,[651] it is well established under international human rights law that states have an obligation to

[641] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 19.
[642] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 15; Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 15 July 2019, UN Doc. A/74/161, para. 64(a); UN Human Rights Council, Resolution 45/30, Rights of the child: Realizing the rights of the child through a healthy environment (previously cited), para. 8 (d).
[643] UN CEDAW, General Recommendation 37 (previously cited), para. 60(d).
[644] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/58, para. 40.
[645] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/58, para. 40; and A/HRC/37/59, para. 15.
[646] OHCHR and others, "Response to the request of the SBI for views from Parties and observers in response to the open call for submissions for the review of the Doha Work Programme (SBI FCCC/SBI/2019/L.3/Add.1), call for recommendations and views on future work to enhance Action for Climate Empowerment" (previously cited), p. 6.
[647] UNICEF, *Are Climate Change Policies Child-Friendly? A Guide For Action: Summary*, December 2019, unicef.org/globalinsight/media/646/file/are-climate-change-policies-child-sensitive-2019.pdf, p. 13.
[648] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 16.
[649] UN CEDAW, General Recommendation 37 (previously cited), para. 60(c).
[650] OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited), paras 27 & 41.
[651] Article 21, Universal Declaration of Human Rights; Article 25, ICCPR.

facilitate public participation in environmental decision-making, such as in the development of policies, laws, regulations, projects and activities.[652]

Provision of and access to information is a pre-requisite to the right to effective public participation. In order to be able to meaningfully participate, the public should receive and be able to access and understand relevant information, including early drafts of decisions to be adopted and prior assessment of the environmental and human rights impacts of government proposals.[653]

To be effective, public participation must occur early on in the process and must "provide real opportunities for the views of the affected members of the public to be heard and to influence the decision-making process".[654] States should ensure that relevant authorities take into account the views expressed and provide clear and justified explanations of the decisions taken.[655]

In particular, when planning and designing climate strategies, laws, nationally determined contributions (NDCs), national adaptation plans, but also specific climate mitigation and adaptation projects and initiatives, states should conduct adequate and meaningful public consultation, particularly ensuring the participation without discrimination of those most affected by climate change and by the proposed decisions. Specifically, in relation to Indigenous Peoples, states should consult and co-operate with them and obtain their free, prior and informed consent before adopting measures that may affect them, and provide for redress measures in the event that land or property is taken from them without their consent.[656] Consultations with Indigenous Peoples should be in accordance with their customs and traditions and ensure non-discrimination of Indigenous women.[657]

Particular attention should be paid to facilitating the public participation of individuals, communities, groups and peoples who are disproportionately affected by the climate crisis and by climate action measures, including women, children, older persons, workers and communities particularly affected by the decarbonization process, people living on low income or in poverty, Indigenous Peoples, rural communities, refugees and migrants, people discriminated on the basis of race, work and descent, persons with disabilities, LGBTI people, and other minorities, particularly those facing discrimination on multiple and intersecting grounds.

Doing so requires adopting a gender-based and intersectional approach, as well an analysis of existing formal and informal structures of participation and organization at the local and national level in order to understand processes that may facilitate or hinder the participation of those different groups, and to develop, where needed, a targeted strategy and specific measures to ensure their effective access to information, participation, consultation and free, prior and informed consent.[658] It also requires identifying and implementing effective measures to ensure disadvantaged groups are equally represented at international climate change negotiations and other multilateral forums. Several UN treaty bodies, Special Procedures and UN agencies have developed specific recommendations to promote the participation of women and marginalized groups in decision-making, including on climate change and disaster reduction, at the local, national and international levels.[659]

Participation of these groups should not be a mere box-ticking exercise but should be aimed at recognizing their leadership in the fight against climate change and ensuring they are able to share their knowledge,

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[652] See UNEP, *Climate Change and Human Rights* (previously cited); Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, 24 January 2018, UN Doc. A/HRC/37/59, paras 23-26.

[653] For more on what information governments should make available regarding the development of policies, laws and regulations, and the requirements regarding specific projects and activities, see UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 25.

[654] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 59.

[655] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 26.

[656] United Nations Declaration on the Rights of Indigenous Peoples; ILO Convention No. 169 (1989) concerning Indigenous and Tribal Peoples in Independent Countries.

[657] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 50.

[658] See Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women: General Recommendation on Gendered-Dimensions of Disaster Risk Reduction and Climate Change: Amnesty International's Preliminary Observations* (Index: IOR 40/3468/2016) (previously cited).

[659] See for example UN Committee on the Rights of the Child, General Comment 12: The right of the child to be heard, 20 July 2009, UN Doc CRC/C/GC/12, para. 134; UN Committee on the Rights of the Child, General Comment 14: The right of the child to have his or her best interests taken as a primary consideration (Art. 3, para. 1), 29 May 2013, UN Doc CRC/C/GC/14, para. 91; UN CEDAW, General Recommendation 37 (previously cited), para. 36; OHCHR, *Analytical Study on the Rights of Persons with Disabilities in the Context of Climate Change* (previously cited). For recommendations about participation in the Concluding Observations of certain treaty bodies to countries under review, see CIEL and GI-ESCR, *States' Human Rights Obligations in the Context of Climate Change*, 2020 (previously cited).

ideas and initiatives, thus contributing to more effective climate action.[660] For example, rural communities, and particularly women living in rural areas, often hold expert knowledge of their ecosystems and of sustainable land management practices, which allow them to adapt more easily to climate change.[661] Having a long history of living in fragile ecosystems and adapting to changes in their environments, Indigenous Peoples have valuable traditional knowledge that has proven effective for conserving land, water, biodiversity and ecosystems and can usefully contribute to mitigation and adaptation measures.[662] Free, prior and informed consent processes also allow for the sharing of this knowledge. Ethnic minorities, such as Afro-descendants in Latin America, in many cases also have significant experience and traditional knowledge in climate change mitigation and adaptation.

To enable informed public participation, the rights to freedom of expression, association and peaceful assembly must be safeguarded for all people in relation to all climate-related actions, including for individuals who oppose projects and policies designed to mitigate or adapt to climate change.[663] States should ensure that those who advocate for or against climate change policies are protected from abuse, threats or harassment by government or non-state actors (see section 8.4).

8.3 ACCESS TO REMEDY

Under human rights law, all persons who suffer human rights violations are entitled to access an effective remedy.[664] Relevant human rights bodies have clarified that this principle extends to human rights violations caused by environmental harm. Therefore, **states must ensure the right to remedy for those whose rights are affected by climate change or climate-related measures**.[665]

While the 1992 Rio Declaration on Environment and Development provides for "effective access to judicial and administrative proceedings, including redress and remedy" (Principle 10), the UNFCCC does not explicitly recognize a right of access to justice or remedy for individuals. The Paris Agreement also failed to establish a clear mandate for states, climate finance mechanisms or other entities to ensure access to remedy for those who are harmed by the impacts of or responses to climate change.

Negotiations over "loss and damage" within the UNFCCC are where issues related to remedies, in particular compensation, have emerged most explicitly at the international level (see section 9). Developing countries have argued that negotiations over loss and damage must address liability for climate change impacts and compensation for the loss and damage they suffer. Developed countries have opposed any wording that might risk implying acceptance of liability and possibly a consequent right to compensation. As a result, while an article on loss and damage was included in the Paris Agreement, all references to liability and compensation were removed following pressure from developed countries.[666]

However, human rights law requires that victims should have access to an effective remedy when states' and companies' actions and omissions fail to prevent foreseeable human rights harm.[667] This could be when a state fails to take all feasible steps to the full extent of their abilities to reduce GHG emissions within the shortest possible time frame, both nationally and through international co operation, or when states adopt climate change mitigation or adaptation projects that result in human rights violations. The failure to respect procedural rights in climate change initiatives and projects also gives rise to the obligation to provide effective remedies to the affected people.

The right to effective remedy has two components, one procedural – ensuring access to justice – and one substantive – ensuring that victims obtain effective redress.

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[660] See for example OHCHR, "Treaty bodies' joint statement on human rights and climate change, 2019".
[661] UN CEDAW, General Recommendation 37 (previously cited), para. 33.
[662] UN Special Rapporteur on the rights of indigenous peoples, Report, 1 November 2017, UN Doc. A/HRC/36/46, para. 24; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 48.
[663] For more details see UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, paras 12-14.
[664] See for example Article 8, Universal Declaration of Human Rights; Article 2(3), ICCPR.
[665] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 62.
[666] See for example, Global Governance Institute, *Climate Change and Loss and Damage, Policy Brief*, March 2017, ucl.ac.uk/global-governance/news/2017/mar/climate-change-loss-and-damage, p. 7
[667] Article 8, Universal Declaration of Human Rights; Article 2(3), ICCPR; UN Committee on Economic, Social and Cultural Rights, General Comment 9: The domestic application of the covenant, 1 December 1998, UN Doc. E/C.12/1998/24; UN General Assembly, Resolution 60/147, *Basic Principles and Guidelines on the Right to a Remedy and Reparation for Victims of Gross Violations of International Human Rights Law and Serious Violations of International Humanitarian Law*, adopted on 16 December 2005, UN Doc. A/RES/60/147.

States must provide affordable and timely access without discrimination[668] to administrative, judicial, legislative or any other appropriate means to adjudicate claims of imminent and foreseeable human rights violations resulting from climate change or climate measures, as well as past and current violations, including when conduct within their jurisdiction harms the rights of people outside their borders.[669]

States should take adequate measures to address obstacles, including gender-specific, age, poverty or disability-related barriers, for victims of human rights violations associated with climate change to access domestic remedies, including through the provision of accessible information and legal aid.[670] States should also ensure that courts are given the legal authority to adjudicate claims of human rights violations related to climate change, including those that challenge the lack of ambition of national policies, without claiming that judicial review of climate change policies infringe on the separation of powers.[671] More broadly, states should refrain from creating any obstacles to remedy, including by taking positions before tribunals in favour of limited interpretations of a tribunal's jurisdiction or by engaging in other steps that unnecessarily delay proceedings and raise the cost to victims of seeking a remedy.

According to the UN Committee on Economic, Social and Cultural Rights, remedies should be available at both the national and international level.[672] This should allow victims to seek remedy from regional or other international human rights bodies, where domestic remedies are not available or not effective.

The importance of domestic courts in providing access to justice for victims of human violations related to climate change is becoming increasingly evident with a rising number of rights-based climate litigation claims being brought to national courts in recent years.[673] To date, only a few cases have been positively adjudicated, but they did not include a transboundary claim nor a reparation claim.[674] Both the Inter-American Commission on Human Rights (IACHR) and the European Court of Human Rights (ECtHR) have received climate cases,[675] while three cases had been brought to UN human rights treaty bodies at the time of writing, of which one had been decided upon.[676]

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[668] See for example UN CEDAW, General Recommendation 37 (previously cited), para. 38.
[669] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59, para. 29; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 64(c).
[670] See M. Wewerinke-Singh, "Remedies for human rights violations caused by climate change", 2019, Climate Law, Volume 9; Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women* (Index: IOR 40/3468/2016) (previously cited); UN CEDAW, General Recommendation 37 (previously cited), para. 38; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/58, paras 52-53.
[671] Almost all courts that have addressed the justiciability of challenges to national climate change policies have found the issues appropriate for judicial review. See Amicus Curiae by Amnesty International USA, CIEL and ELAW on the case *Juliana v. United States,* amnestyusa.org/wp-content/uploads/2020/03/final-brief-on-Juliana-justiciability.pdf
[672] See for example General Comment 14: The Right to the Highest Attainable Standard of Health (Art. 12), 11 August 2000, UN Doc E/C.12/2000/4, para. 59; General Comment 18: The right to work (Art. 6), 6 February 2006, UN Doc E/C.12/GC/18, para. 48.
[673] J. Setzer & R. Byrnes, *Global Trends in Climate Change Litigation: 2020 Snapshot*, 2020, lse.ac.uk/granthaminstitute/wp-content/uploads/2020/07/Global-trends-in-climate-change-litigation_2020-snapshot.pdf, p. 14.
[674] M. Wewerinke-Singh, "Remedies for human rights violations caused by climate change" (previously cited), p. 229. Examples of judgements that have been positively adjudicated include: The Lahore High Court, *Case Leghari v. Federation of Pakistan* (previously cited); Supreme Court of the Republic of Colombia, *Case Future generations v. Ministry of Environment and others*, 5 April 2018, climatecasechart.com/climate-change-litigation/non-us-case/future-generation-v-ministry-environment-others/; Supreme Court of the Netherlands, *Case between the State of the Netherlands and the Urgenda Foundation* (previously cited).
[675] In 2005, the IACHR received a petition brought by a group of Inuit people against the USA seeking remedy for violations of the human rights of Inuit people resulting from global warming caused by GHG from the United States. The IACHR declined to process the petition because the information provided did not enable it to determine whether the alleged facts would constitute a violation of human rights. See climatecasechart.com/climate-change-litigation/non-us-case/petition-to-the-inter-american-commission-on-human-rights-seeking-relief-from-violations-resulting-from-global-warming-caused-by-acts-and-omissions-of-the-united-states/. In 2013, the IACHR received a petition against Canada for violations of the rights of Arctic Athabaskan Peoples resulting from rapid Arctic warming and melting caused by emissions of black carbon, but it had not yet issued a decision on the case at the time of writing. See earthjustice.org/sites/default/files/AAC_PETITION_13-04-23a.pdf. On 2 September 2020, the ECtHR received a complaint from six Portuguese youth against 33 countries (case *Duarte Agostinho and others v. Portugal and others).* The complaint alleges that the respondents have violated human rights by failing to take sufficient action on climate change, and seeks an order requiring them to take more ambitious action. See youth4climatejustice.org/. On 8 October 2020, the ECtHR received the case *Union of Swiss Senior Women for Climate Protection v. Swiss Federal Council and Others "Verein KlimaSeniorinnen Schweiz v. Bundesrat"* brought by several Swiss older women calling for more ambitious climate targets and more effective measures to protect their rights to life and health, after the Swiss Federal Supreme Court had dismissed their case. See greenpeace.org/international/press-release/45545/climate-seniors-to-sue-switzerland-before-the-european-court-of-human-rights/. In March 2021, the ECtHR received the case *Mex M. v Austria* brought by an Austrian man affected by a temperature-dependent form of multiple sclerosis who claims that the Austrian government's inaction on climate change is violating his right to family and private life, given that high temperatures worsen his condition. See climatecasechart.com/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2021/20210325_13412_complaint.pdf
[676] The case decided upon is *Teitiota v. New Zealand* which concerned the case of a man from Kiribati and his family who claimed New Zealand had violated their rights by deporting them to Kiribati despite the serious impacts of climate change (see footnote no. 81 for full reference and section 11.1 for discussion about the decision). In May 2019, a group of Torres Strait inhabitants petitioned the Human Rights Committee against Australia, claiming that Australia's failure to reduce emissions and to adequately support populations to adapt to

For victims of human rights violations to obtain effective redress, states must ensure that remedies are comprehensive and include measures of cessation, restitution and remediation, compensation, rehabilitation, satisfaction and guarantees of non-repetition, and that all affected individuals have equal access to remedies.[677] For example, when the violations originate from the failure of states to prevent human rights harm from the impacts of climate change, states should provide satisfaction and guarantees of non-repetition, for example by adopting and implementing legislation and regulations to increase their emission reduction targets in a way that protects human rights from future climate impacts.[678] Individuals and groups whose rights have been violated in relation to climate change should be able to effectively participate in establishing meaningful reparations and protection of human rights.[679]

In the context of climate change, restitution might be materially impossible, for example when climate impacts have resulted in loss of life or habitat. However, when a form of restitution is available, states should not use the financial cost as the sole reason to avoid it.[680] For example, in the case of Indigenous Peoples, it is necessary to demarcate and protect their territories, including by providing security of tenure and collective land titles when appropriate.[681] Where land is lost or the ability to sustain Indigenous cultures is harmed by climate change or climate change projects, states must provide compensation, where possible in the form of comparable lands and resources, as agreed to by the affected peoples.[682]

When restitution is impossible or inadequate, states should provide financial compensation to the victims for the loss or damage caused. Ensuring that victims of human rights violations related to climate change receive adequate compensation is not only an obligation under human rights law but also an imperative to achieve climate justice, ensuring that the costs of losses and damages are borne by the states and companies responsible rather than the victims. It might also work as an incentive for states to reduce their emissions and increase climate adaptation efforts to avoid further compensation claims.[683]

To enhance accountability for the climate crisis and ensure the right to effective remedies for victims of human rights violations associated with climate change, states should recognize the right to a healthy environment in their national constitutions and legislation.[684] States should also ratify international instruments establishing complaints and inquiry mechanisms under certain human rights treaties, such as the Optional Protocol to the International Covenant on Economic, Social and Cultural Rights (ICESCR) and the Optional Protocol to the Convention on the Rights of the Child, which provide for respective communications procedures.[685]

At the international level, states should recognize the principle of accountability for their actions and omissions in relation to climate change. They should establish procedures that provide effective remedies, including specific financial mechanisms to ensure support and compensation to people whose rights have been negatively affected by loss and damage caused by the climate crisis (see section 9).

8.4 PROTECT HUMAN RIGHTS DEFENDERS

HRDs are groups and individuals who claim and defend human rights, including rights related to the environment, through non violent actions. Environmental HRDs play a key role in tackling the climate crisis and ensuring a just transition, for example by standing against fossil fuel extractive projects or deforestation,

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climate impacts violates their rights, including to life and culture. See clientearth.org/human-rights-and-climate-change-world-first-case-to-protect-indigenous-australians/. In September 2019, 16 children submitted a petition to the Committee on the Rights of the Child against Argentina, Brazil, France, Germany and Turkey, alleging that in knowingly causing and perpetuating climate change, those states have failed to take the necessary measures to respect, protect, and fulfil the children's rights to life (Article 6), health (Article 24), and culture (Article 30) under the Convention. See earthjustice.org/news/press/2019/un-committee-on-the-rights-of-the-child-receives-first-ever-human-rights-complaint-on-climate-change

[677] Amnesty International, *The UN Committee on the Elimination of Discrimination Against Women* (Index: IOR 40/3468/2016) (previously cited).

[678] See M. Wewerinke-Singh, "Remedies for Human rights violations caused by climate change" (previously cited), p. 236. For example, in the Urgenda case, the court ruled the government must cut its greenhouse gas emissions by at least 25% by the end of 2020, compared with 1990 levels.

[679] A.J.K. Fleming, *Human Rights: An Alternative Approach For Addressing Climate-Induced Loss and Damage*, Masters dissertation, 2015, munin.uit.no/bitstream/handle/10037/8246/thesis.pdf?sequence=2&isAllowed=y

[680] See M. Wewerinke-Singh, "Remedies for human rights violations caused by climate change" (previously cited), p. 240.

[681] *Case of the Mayagna (Sumo) Awas Tingni Community v. Nicaragua*, Inter-American Court of Human Rights Judgment of 31 August 2001 (Merits, Reparations and Costs), para. 164.

[682] Article 16(4), ILO Convention 169 on Indigenous and Tribal Peoples; Article 28, UN Declaration on the Rights of Indigenous Peoples.

[683] M. Wewerinke-Singh, "Remedies for human rights violations caused by climate change" (previously cited), pp. 241.

[684] OHCHR, *Analytical Study on Climate Change and the Rights of the Child* (previously cited), para. 62(a).

[685] For the status of ratifications of both Protocols, see https://indicators.ohchr.org/

demanding more ambitious climate action, or opposing climate mitigation and adaptation projects adopted in violation of human rights.

Because their activities often bring them into conflict with powerful interests, environmental HRDs the world over are among the most at-risk HRDs. They face a high risk of physical attacks, killings, criminalization, threats and intimidation.[686] This particularly applies to those who fight for a safe and healthy environment and access to their land and territories, such as Indigenous rights defenders. Such attacks do not only affect individuals and their immediate social circle, they also create widespread fear and an enduring chilling effect in affected communities and wider civil society and put environmental protection in further jeopardy. Such attacks do not take place in a vacuum. They happen because of widespread impunity and corruption, and because environmental activists are often stigmatized, defamed, silenced and ignored, adding to the risks they face.

The rights to freedom of expression, information, association and peaceful assembly are essential to ensuring that HRDs and civil society at large are able to play their role in demanding decisive climate action, exposing corruption and those who put our environment at risk. However, in many contexts, governments impose or apply restrictions and limitations to these rights such as increased criminal and civil penalties for those who take part in non-violent protests and civil disobedience, censorship, surveillance, and curbs on freedom of association, which constrain activism and put a gag on civic space.

States should view environmental HRDs as crucial allies, not adversaries. They should recognize them as HRDs and protect them in line with the UN Declaration on Human Rights Defenders, adopted by consensus in 1998.[687] They must guarantee a safe and enabling environment for all those engaging in this struggle,[688] and guarantee the freedoms of expression, association and peaceful assembly.

States should ensure a culture of zero tolerance towards those who attack environmental HRDs. In particular, they should urgently and thoroughly investigate all human rights violations and abuses against environmental HRDs and bring perpetrators to justice. They should also refrain from using legal and administrative provisions or the misuse of the judicial system to harass, criminalize and stigmatize their activities. States should also ensure that businesses comply with their human rights obligations and refrain from attacking HRDs, including by introducing legislation to curb vindictive lawsuits (so-called SLAPPs: "strategic lawsuits against public participation") that punish climate and environmental activism and freedom of expression.

The challenges faced by environmental HRDs and states' obligations to protect them have been recognized and detailed by numerous international and regional human rights bodies[689] and the UN Human Rights Council.[690] The Escazú Agreement on access to rights on environmental matters in Latin America and the Caribbean is the first treaty to include specific provisions to protect environmental HRDs and therefore sets an example for the whole world to follow. Other similar protective tools should be adopted widely and quickly.

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[686] See footnote 85. For more specific examples see also: Amnesty International, *The Rights to Freedom of Peaceful Assembly and Association to Advance Climate Justice: Submission to the UN Special Rapporteur on the rights to freedom of peaceful assembly and association* (INDEX: IOR 40/4235/2021), May 2021, amnesty.org/download/Documents/IOR4042352021ENGLISH.pdf; Amnesty International, *"We Are Defending the Land with Our Blood" – Defenders of the Land, Territory and Environment in Honduras and Guatemala* (previously cited); Amnesty International, *"They Will Not Stop Us": Justice and Protection For Amazonian Women, Defenders of the Land, Territory and Environment* (Index: AMR 28/0039/2019), 30 April 2019, amnesty.org/en/documents/amr28/0039/2019/en/ ; Amnesty International, *A Recipe For Criminalization: Defenders of the Environment, Territory and Land in Peru and Paraguay* (Index: AMR 01/8758/2018), 26 April 2018, amnesty.org/en/documents/amr01/8158/2018/en/; Amnesty International, *Mexico: Caught Between Bullets and Neglect: Lack of Protection For Defenders of the Territory in the Tarahumara Sierra* (Index: AMR 41/9554/2109), 24 January 2019, amnesty.org/en/documents/amr41/9554/2019/en/; Amnesty International, *Madagascar: A Damocles Sword on Environmental Activist's Head* (Index: AFR 35/6841/2017), 30 July 2017, amnesty.org/en/documents/afr35/6841/2017/en/; Amnesty International, *Thailand: Six Years After Billy Disappeared, Authorities Must Provide Justice and Protect His Community's Rights* (Index: ASA 39/2155/2020), 17 April 2020, amnesty.org/en/documents/asa39/2155/2020/en/

[687] See ohchr.org/EN/Issues/CivicSpace/Pages/DeclarationHumanRightsDefenders.aspx

[688] The elements of a safe and enabling environment are detailed in the report of the UN Special Rapporteur on the situation of human rights defenders, 23 December 2013, UN Doc. A/HRC/25/55.

[689] See for example UN Special Rapporteur on the situation of human rights defenders, Report, 3 August 2016, UN Doc. A/71/281; UN Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 24 January 2018, UN Doc. A/HRC/37/59.

[690] UN Human Rights Council, Resolution 40/11: Recognizing the contribution of environmental human rights defenders to the enjoyment of human rights, environmental protection and sustainable development, adopted on 21 March 2019, UN Doc. A/HRC/RES/40/11.

9. PROVIDE AFFECTED PEOPLE WITH REMEDY FOR LOSS AND DAMAGE

Even if actions to mitigate and adapt to climate change are radically stepped up around the world, it is widely recognized that many of the consequences are inevitable because of historical emissions, the slow pace of mitigation and adaptation so far, and because some effects are beyond people's adaptive capacity. Such inevitable and irreversible residual effects that we see now, and will continue to see growing at an exponential level if climate mitigation and adaptation efforts do not match the urgency of the current crisis, are commonly referred to as "loss and damage". Although there is no universally accepted definition, most sources define loss and damage as climate impacts that cannot or will not be prevented by mitigation or adaptation measures.[691]

Loss and damage emanating from climate change impacts can either be categorized as economic in nature or "tangible" (for example damage to infrastructure or loss of income), or non-economic or "intangible" (for example loss of life, health, cultural knowledge, identity, and biodiversity, displacement, inability to continue living on ancestral land and to maintain cultural traditions associated with this). The latter are harder to define and quantify.[692]

The concept of loss and damage was not included in the UN Framework Convention on Climate Change (UNFCCC). Since 1990, the Alliance of Small Island States (AOSIS) and later the group of Least Developed Countries (LDCs) have been requesting to officially discuss loss and damage in climate change negotiations, but the issue has always been contentious due to their demands for financial support and the unwillingness of the wealthy industrialized countries to accept responsibility. It was not until COP19, held in Warsaw in 2013, that a three-year mechanism to address loss and damage was established (Warsaw International Mechanism for Loss and Damage – WIM).[693] The Paris Agreement included a dedicated article to loss and damage (Article 8) and embedded the WIM as a permanent institution.[694] However, developed countries managed to impose a clause specifying that Article 8 "does not involve or provide a basis for any liability or compensation".[695]

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[691] Stockholm Environment Institute, *Defining Loss and Damage: The Science and the Politics around one of the most contested issues within the UNFCCC*, 2016, https://www.sei.org/publications/defining-loss-and-damage/ For a literature review of definitions, see International Center for Climate Change and Development, *Defining Loss and Damage: Key Challenges and Considerations for Developing an Operational Definition*, 2015, icccad.net/wp-content/uploads/2015/08/Defininglossanddamage-Final.pdf

[692] UNEP, *Loss and Damage: When Adaptation Is Not Enough*, April 2014, na.unep.net/geas/archive/pdfs/GEAS_Apr2014_Climate_Change.pdf. See also SEEP, *Climate Displacement and Non-economic Loss in Fiji: A Briefing*, 2020, ohchr.org/Documents/Issues/CulturalRights/Call_ClimateChange/Makereta-waqavonovono.pdf.

[693] For more information see unfccc.int/topics/adaptation-and-resilience/workstreams/loss-and-damage-ld/warsaw-international-mechanism-for-loss-and-damage-associated-with-climate-change-impacts-wim

[694] Article 8 identifies areas of potential co-operation and facilitation, including early warning systems, emergency preparedness, risk insurance and resilience of communities, livelihoods and ecosystems.

[695] UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 51, unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf For a brief history of loss and damage under the UNFCCC till the adoption of the Paris Agreement, see M.J. Mace and R. Verheyen: "Loss, damage and responsibility after COP21: all options open for the Paris Agreement", 2016, Review of European Community and International Environmental Law.

The mandate of the WIM includes addressing rapid- and slow-onset events in developing countries that are particularly vulnerable, with three key functions:

- Enhancing knowledge and understanding of loss and damage and how to address it.
- Strengthening dialogue among relevant stakeholders.
- Enhancing action and support, including finance, technology and capacity building.

While the third function is crucial as it provides a mandate for the mobilization of funds for loss and damage, until recently the WIM had mostly focused on the first two functions.[696] The main reason for this has been a refusal from wealthier countries to meaningfully engage in negotiations on loss and damage finance and compensation mechanisms to support developing parties to deal with the consequences of the climate crisis. The primary mode for addressing the financing of loss and damage has been enhancing knowledge on catastrophe risk insurance (generally covering low probability, high-cost disasters), with the establishment at COP21 of the Fiji Clearing House for Risk Transfer, which collates information to facilitate states' development of risk management strategies.[697] However, such insurance will not cover the impact of slow-onset or regular/high probability events, nor does it deal with grave threats to human rights such as loss of land, life and livelihoods.[698] Personal insurance is also inaccessible to people unable to afford insurance premiums, who are therefore at greater risk of harm to the human rights due to the climate crisis. Insurance provided by states have a gender bias as men are more likely to own higher value assets and therefore to receive higher levels of compensation.[699]

Taking advantage of a scheduled review of the WIM, negotiations at COP25 in 2019 included discussions on how to strengthen the third function and ensure that enough resources are channelled to the most climate-vulnerable developing countries to address loss and damage. However, while developing countries, particularly the LDCs and the Small Island Developing States (SIDS), advocated for the mobilization of new and additional finance, most of the developed countries opposed specific references to this.[700] The final decision established a "Santiago network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change" to facilitate technical support for loss and damage but did not specify how the network will function.[701] The COP25 final decision also recognized "the importance of scaling up the mobilization of resources to support efforts to avert, minimize and address loss and damage".[702] However, the formulation is too general, with a risk that funds for loss and damage might be taken out of existing international development assistance or that funding for loss and damage will have to compete with funding for climate mitigation and adaptation within the Green Climate Fund (see section 10.1), without ensuring additional finance specifically for loss and damage.[703]

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[696] Grantham Research Institute on Climate Change and the Environment, *Addressing the Impacts of Climate Change Through an Effective Warsaw International Mechanism on Loss and Damage*, October 2019, lse.ac.uk/GranthamInstitute/wp-content/uploads/2019/10/GRI_Addressing-the-impacts-of-climate-change-through-an-effective-Warsaw-International-Mechanism-on-Loss-and-Damage-1.pdf

[697] See unfccc.int/process-and-meetings/bodies/constituted-bodies/executive-committee-of-the-warsaw-international-mechanism-for-loss-and-damage-wim-excom/fiji-clearing-house-for-risk-transfer

[698] Grantham Research Institute on Climate Change and the Environment, *Addressing the Impacts of Climate Change Through an Effective Warsaw International Mechanism on Loss and Damage* (previously cited).

[699] ActionAid, *Market Solutions to Help Climate Victims Fail Human Rights Test*, 2019, actionaid.org/sites/default/files/publications/Loss%20and%20Damage%20Finance%20and%20Human%20Rights%20-%20ActionAid.pdf, p. 30.

[700] See for example ActionAid: "COP25: Developed Countries continue to block loss and damage fund", 6 December 2019, actionaid.org/news/2019/cop25-developed-countries-continue-block-loss-and-damage-fund; Amnesty International, "COP25: Industrialized countries making world's poorest pay biggest price for climate change", 13 December 2019, amnesty.org/en/latest/news/2019/12/cop25-industrialized-countries-making-worlds-poorest-pay-biggest-price-for-climate-change/. For details on the negotiations on loss and damage at COP25, see Climate Analytics: "Loss and Damage at COP25 – a hard fought step in the right direction", 20 December 2019, climateanalytics.org/blog/2019/loss-and-damage-at-cop25-a-hard-fought-step-in-the-right-direction/

[701] Decisions on the implementation of the SNLD are expected to be taken at COP26, scheduled in Glashow, UK, from 1 to 12 November 2021. It is important that at COP26 the Santiago Network on Loss and Damage established at COP25 is fully operationalized, including through adequate financial arrangements, and able to provide technical assistance for countries with less resources in a timely manner to avert, minimize and address the loss and damage of climate-related impacts. See S. Huq, "Dealing with Loss and Damage at COP26", 11 February 2021, thecvf.org/ourvoice/blog/dealing-with-loss-and-damage-in-cop26/; Joint Constituency, in partnership with The Loss and Damage Coalition, *Call for Action on the Operationalization of an effective Santiago Network on Loss and Damage*, April 2021, climatenetwork.org/resource/joint-constituency-climate-action-network-demand-climate-justice-official-youth-constituency-of-the-unfccc-and-women-and-gender-constituency-in-partnership-with-the-loss-and-damage-collaboration/

[702] Decision 2/CMA.2 Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts and its 2019 review, UN Doc. FCCC/PA/CMA/2019/L.7, unfccc.int/documents/209506, para. 30.

[703] Carbon brief, "COP25: Key outcomes agreed at the UN climate talks in Madrid", 15 December 2020, carbonbrief.org/cop25-key-outcomes-agreed-at-the-un-climate-talks-in-madrid; CIEL, *Report from the Madrid Climate Conference Promoting Human Rights in Climate Action at COP25* (previously cited), p. 4.

Addressing loss and damage is a human rights and climate justice issue as it "aims to rectify global injustice and human suffering to the degree possible"[704] and states should recognize it as such. The UN Independent Expert on human rights and international solidarity has called the unwillingness of certain developed countries to dedicate sufficient attention and financial support to the loss and damage agenda "an acute gap in human rights-based international solidarity".[705]

States must not treat remedy for loss and damage just as a matter of humanitarian assistance but also as an action they must take on the basis of their human rights obligations.

In the first place, the obligation to protect the enjoyment of human rights from the impacts of climate change entails the duty of states to step up mitigation and adaptation efforts in order to avoid loss and damage to the greatest possible extent. However, states should not use this as an argument to conflate loss and damage with climate change mitigation and adaptation, as many developed countries have attempted to do during climate negotiations within the UNFCCC. While states must take all feasible human rights-consistent mitigation and adaptation measures to the full extent of their abilities to protect people from the harmful effects of climate change, such efforts will not be able to prevent all harms caused by climate impacts. Ignoring this fact amounts to denying remedy to the people who will be harmed. It is therefore necessary to treaty loss and damage as a distinct issue in climate negotiations.

Secondly, when assessing the losses and damages caused by climate change-related events, and especially non-economic losses, states must consider the adverse effects of climate change on the enjoyment of human rights, such as the rights to life, health, food, adequate housing, education, work, culture and self-determination. In this regard, the UNFCCC definition of non-economic losses should be broadened.[706] Affected individuals and groups should be provided the opportunity to take part in such assessments as their involvement can help determine the magnitude of the losses, including the impacts on the enjoyment of human rights that do not have a measurable economic value.

Thirdly, states have an obligation to provide adequate resources (such as funds, technology transfer and technical advice) for loss and damage not only under environmental law[707] but also under human rights law. Based on the duty of international co-operation, all states in a position to provide resources have the obligation to do so in order to respect, protect and fulfil human rights (see section 10). In addition, based on the obligation to provide an effective remedy, all states that have failed to take steps within their ability to limit emissions or to adapt to climate change are collectively responsible for the loss and damage resulting in human right violations within their territory and abroad in accordance with their respective contribution to the harm caused (see section 8.3).[708] Thus, countries that have contributed the most to climate change and those with the most available resources have a heightened obligation to provide resources to redress loss and damage, as well as to support developing countries in climate change mitigation and adaptation. Therefore, **wealthy industrialized countries must provide adequate financial means, technical support and access to remedy, including compensation, to people in developing countries whose rights have been negatively affected as the result of loss and damage caused by the climate crisis.** This includes ensuring that new and additional finance is mobilized specifically to support and compensate people in developing countries for the losses and damages suffered.

As a consequence, within the UN climate negotiations, states should rapidly agree on adequate mechanisms to mobilize new and additional public finance, including by exploring innovative sources of funding, to provide means, support and remedy to all those whose rights have been negatively affected as the result of

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[704] Report of the Independent Expert on human rights and international solidarity, 1 April 2020, UN Doc. A/HRC/44/44, para. 48.
[705] Report of the Independent Expert on human rights and international solidarity, 1 April 2020, UN Doc. A/HRC/44/44, para. 48.
[706] The UNFCCC definition is quasi-economic and incomplete. It defines non-economic losses as life, health, mobility, territory, ecosystem services, Indigenous knowledge and cultural heritage. Although the loss of territory is considered, for example the negative impacts on the right to self-determination that displaced persons will experience context of the climate crisis are not considered. See UNFCCC, *Non-economic Losses in the Context of the Work Programme on Loss and Damage: Technical Paper,* 2013, unfccc.int/resource/docs/2013/tp/02.pdf www.unfccc.int/resource/docs/2013/tp/02.pdf
[707] The "Common but Differentiated Responsibilities and Respective Capabilities" (CBDR-RC) and the "Polluter Pays" principles (respectively Principles 7 and 16 of the 1992 Rio Declaration on Environment and Development; also included in Article 3.1 of the UNFCCC and incorporated into the Paris Agreement) reinforce the responsibility for wealthy, high-emitting nations to provide adequate support to poorer, climate vulnerable nations to deal with the impacts of climate change that cannot be addressed through mitigation or adaptation (Paris Agreement, p. 1).
[708] The International Law Commission Articles on State Responsibility state that where several states separately carry out internationally wrongful conduct that contributes to causing the same damage – such as where several states contribute to polluting a river by the separate discharge of pollutants: "the responsibility of each participating State is determined individually, on the basis of its own conduct and by reference to its own international obligations". See ILC "Draft articles on responsibility of international organizations with commentaries" in *Report of the International Law Commission on the Work of its 63rd session*, 2011, UN Doc. A/66/10, commentary to Article 47, para. 8.

loss and damage caused by the climate crisis in climate-vulnerable developing countries.[709] New financing facilities should ensure meaningful participation of the most affected groups, including children, women, Indigenous Peoples and marginalized groups, particularly those facing multiple and intersecting forms of discrimination, in policy design and decision-making phases.

[709] See also UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 91; UN Independent Expert on human rights and international solidarity, Report, 1 April 2020, UN Doc. A/HRC/44/44, paras 48 & 54(j). On examples of possible sources of finance see Act Alliance and others, *Climate Finance for Addressing Loss and Damage – How to Mobilize Support for Developing Countries to Tackle Loss and Damage*, November 2019, reliefweb.int/sites/reliefweb.int/files/resources/ClimateFinance_LossDamage.pdf; Stamp Out Poverty and others: Unpacking Finance for Loss and Damage – Lessons from Covid-19 for addressing loss and damage in vulnerable developing countries, 2021, stampoutpoverty.org/lessons-from-covid-19-for-addressing-loss-and-damage-in-vulnerable-developing-countries/

10. INCREASE INTERNATIONAL CO-OPERATION AND ASSISTANCE

The duty to engage in international co-operation and assistance towards realizing human rights represents a key extraterritorial obligation (ETO) of states and is clearly anchored in Article 2(1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR): "Each State Party to the present Covenant undertakes to take steps, individually and through international assistance and co-operation, especially economic and technical, to the maximum of its available resources, with a view to achieving progressively the full realization of the rights recognized in the present Covenant by all appropriate means, including particularly the adoption of legislative measures."

Environmental harms whose causes and effects are within the jurisdiction of one state can and should be addressed by that state. However, international co operation plays an important role in addressing climate change, especially considering that the least developed countries (LDCs), which are also the most exposed to climate impacts, often lack the human, technological and financial resources required to implement climate mitigation and adaptation measures at the speed and scale required by the urgency of the climate crisis.[710]

The obligation of international assistance and co-operation includes the duty to provide financial and technical for the realization of economic, social and cultural rights, and the requirement for states that require it to seek such support, in particular where this is necessary to fulfil a state's minimum essential levels of economic, social and cultural rights. This means that states that are unable to take sufficient mitigation and adaptation measures, as well as to address loss and damage, in a manner that would ensure continued enjoyment and progressive realization of economic, social and cultural rights for their population must seek (and cannot arbitrarily refuse) international assistance and co-operation to do so.[711]

The UN Human Rights Council has repeatedly called on the international community to enhance co-operation and assistance, affirming that "the global nature of climate change calls for the widest possible

[710] See for example UN Special Rapporteur on adequate housing, Report, 6 August 2009, UN Doc. A/64/255, para. 72: "some affected regions already face extreme levels of vulnerability and are not able to confront climate change impacts within their existing resources; so they therefore depend upon international support for adaptation". See also Amnesty International, "Urgent humanitarian intervention needed as millions face hunger due to devastating famine", 21 May 2021, bit.ly/3fO9tHK; Amnesty International, "Cyclone Idai: One month after devastating cyclone, more international assistance needed to protect people's rights", 15 April 2019, amnesty.org/en/latest/news/2019/04/cyclone-idai-one-month-after-devastating-cyclone-more-international-assistance-needed-to-protect-peoples-rights/; Amnesty International, "Cyclone Kenneth: The international community must step up to help Mozambique in its hour of need", 26 April 2019, amnesty.org/en/latest/news/2019/04/cyclone-kenneth-the-international-community-must-step-up-to-help-mozambique-in-its-hour-of-need/

[711] See O. De Schutter and others, "Commentary to the Maastricht Principles on Extraterritorial Obligations of States in the area of Economic, Social and Cultural Rights" (previously cited).

cooperation by all countries and their participation in an effective and appropriate international response, in accordance with their common but differentiated responsibilities and respective capabilities and their social and economic conditions".[712]

Based on the principle of common but differentiated responsibilities and respective capabilities (CBDR-RC) under environmental law and the duty of international co-operation under human rights law, all states in a position to do so must provide financial resources, capacity-building and technology transfer according to their capacity, capability and respective responsibility in causing climate change.[713] It is also a matter of international law and climate justice that, while each state has obligations to prevent and tackle climate change, they should do so to the full extent permitted by their capacities and according to their responsibilities. Countries that have contributed the least to the climate crisis should be supported in meeting their climate mitigation and adaptation goals, and in addressing loss and damage (see sections 5, 6 and 9). In particular, as pointed out by the UN Independent Expert on human rights and international solidarity, co-operation and assistance from wealthy industrialized countries is especially crucial to ensure that "the transformation of the fossil fuel economy does not perpetuate asymmetries between richer and poorer States and peoples" and that it instead "prioritizes the achievement of justice for the most vulnerable peoples, especially in the global South".[714]

Nevertheless, the lack of sufficient international assistance does not excuse any state from taking steps to comply as far as it can with its human rights obligations, and in the case of economic, social and cultural rights, from realizing these rights to the maximum of available resources. At the minimum, states should achieve essential standards of each of these rights for everybody without discrimination, addressing the specific needs of disadvantaged and marginalized groups, particularly those facing multiple and intersecting forms of discrimination, as a priority. In the context of climate change, even in the absence of sufficient international assistance, states are obliged to take the most ambitious measures possible to the full extent of their abilities to reduce greenhouse gas (GHG) emissions in the shortest practical time-frame and to support people under their jurisdiction to adapt to the effects of climate change. International co-operation and assistance is, however, crucial to facilitate fulfilment of human rights in the context of the climate crisis and to avoid putting an excessive burden on developing countries, in light of their limited contribution to climate change and their right to development (see section 3.9).

Based on the duty of international co-operation, states must co-operate to achieve a swift and human rights-consistent transition towards a zero-carbon and resilient future in a time-frame that allows global average temperatures to remain below 1.5°C. This requires that all states who need assistance request it, and those states in a position to do so provide the necessary financial resources, capacity-building and technology transfer to those countries that would not otherwise be able to meet their climate targets alone, to support people to adapt to climate change or to cope with the losses and damages caused by the climate crisis.

The obligation to co operate also implies that states should share information transparently, and fully implement all the commitments they have made in the context of climate negotiations, including through the Paris Agreement, in a manner consistent with their human rights obligations and strengthen their commitments in the future to protect human rights against the effects of climate change.[715]

10.1 CLIMATE FINANCE

Within the UNFCCC, and specifically as a result of the negotiations at COP15 in 2009, developed countries committed to mobilize USD$100 billion a year for developing countries by 2020 from a "wide variety of sources, public and private, bilateral and multilateral, including alternative sources of finance".[716] In order to channel and manage these funds, COP15 established the Green Climate Fund (GCF), which became fully

[712] This formulation was included in all resolutions on human rights and climate change adopted by the HRC between 2011 and 2020. A similar formulation was also included in the 2009 resolution. For the text of all resolutions on human rights and climate change, see ohchr.org/EN/Issues/HRAndClimateChange/Pages/Resolutions.aspx

[713] See for example UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 46; UN Independent Expert on human rights and international solidarity, Report, 1 April 2020, UN Doc. A/HRC/44/44, para. 8.

[714] UN Independent Expert on human rights and international solidarity, Report, 1 April 2020, UN Doc. A/HRC/44/44, respectively paras 54 & 34.

[715] On this point, see UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, paras 80 & 88.

[716] Decision 2/CP.15, 30 March 2010, UN Doc. FCCC/CP/2009/11/Add.1, para. 8, unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf#page=4

operational in 2015.[717] At COP21 in 2015, developed countries repeated this commitment, as the decision accompanying the Paris Agreement extends the USD$100 billion-a-year goal through to 2025, and calls for a new more ambitious goal "from a floor of $100 billion a year",[718] although without specifying the final target. The agreement also broadens the donor base beyond developed countries by encouraging other countries to provide support "voluntarily". The Paris Agreement is based on a voluntary approach, however, and does not establish legally binding targets for climate finance from each country.

Even if the USD$100 billion a year target is reached, it is estimated that it represents "only a fraction of the finance needed to keep the average temperature increase to 2°C"[719] and is therefore largely inadequate to protect human rights in the face of the climate emergency. The Intergovernmental Panel on Climate Change (IPCC) calculated that an annual investment of USD$2.4 trillion is needed in the energy system alone between 2016 and 2035 to limit temperature rise to below 1.5°C from pre-industrial levels. That is around 2.5% of the world's GDP and represents only a part of the investments needed to tackle climate change.[720] The situation is even more concerning considering that the climate finance mobilized to date is far below the USD$100 billion per year goal.[721] There has been no official estimate of the total to date, and negotiators have never agreed what kind of finance officially counts as "climate finance". According to the OECD's most recent estimates, climate finance from developed countries amounted to USD$78.9 billion in 2018.[722] In 2020, Oxfam calculated that public climate finance in 2017-2018 amounted to an estimated USD$59.5 billion per year.[723] However, it also estimated that only a third of that amount actually reached developing countries, once loan repayments, interest, and finance not targeting climate action were subtracted. In particular, Oxfam pointed out that 80% of the funds were in the form of loans as opposed to grants, half of which were non-concessional, meaning that the loans were offered on ungenerous terms. This is consistent with the OECD's estimates that 74% of funds in 2018 were in the form of loans, and that there was a continued increase in the share of loans between 2013 and 2018.[724] The prevalence of loans as a form of climate finance has the consequence of ultimately increasing developing countries' debt and obligations to donors and reducing the resources available to fulfil human rights in the country.[725] It is also a blatant injustice, as countries with fewer resources are "forced to take loans to protect themselves from the excess carbon emissions of rich countries".[726]

Moreover, while the funds for adaptation rose faster in 2018 than in previous years,[727] much more finance needs to be raised to cover adaptation costs estimated to rise between USD$140 to $300 billion per year by 2030.[728] As a consequence, many developing countries, and particularly the least developed small island and low-lying states, face considerable difficulties in fulfilling their human rights obligations related to climate change adaptation.

In 2019, 27 countries pledged USD$9.8 billion to replenish the GCF for the period 2020-2023. However, this was less than the USD$10.3 billion raised for the first period (2015-2019) and not enough to fund the USD$15 billion pipeline of projects identified as necessary by the GCF as of December 2018.[729] The total

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[717] Although the GCF is designed as the main financial mechanism to deliver a large portion of climate funding, there are many other initiatives that make up the global architecture of climate finance. These include multilateral funds, such as the Global Environment Facility (GEF) under the UNFCCC, the Adaptation Fund (AF) under the Kyoto Protocol and others administered and/or operated by international organizations or multilateral development banks, as well as bilateral climate funds established by developed countries.
[718] UNFCCC, Addendum to the Report of the Conference of the Parties on its twenty-first session, held in Paris from 30 November to 13 December 2015, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 53.
[719] World Resource Institute, "Getting to $100 billion: Climate finance scenarios and projections to 2020", May 2015, wri.org/research/getting-100-billion-climate-finance-scenarios-and-projections-2020, p. 5. See also World Resource Institute, "Facts and Figures: The scale of needed investment", wri.org/our-work/project/climate-finance. The IPCC also calculated that an annual investment of $2.4 trillion is needed in the energy system alone between 2016 and 2035 to limit temperature rise to below 1.5°C from pre-industrial levels. That is around 2.5% of the world's GDP and represents only a part of the investments needed to tackle climate change. See IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 24.
[720] IPCC, *Special Report on Global Warming of 1.5°C, Summary for Policymakers* (previously cited), p. 24.
[721] Independent Expert Group on Climate Finance, *Delivering on the $100 billion climate finance commitment and transforming climate finance*, December 2020, un.org/sites/un2.un.org/files/100_billion_climate_finance_report.pdf
[722] OECD, *Climate Finance Provided and Mobilised by Developed Countries in 2013-2018* (previously cited).
[723] Oxfam, *Climate Finance Shadow Report 2020*, 2020, oxfamilibrary.openrepository.com/bitstream/handle/10546/621066/bp-climate-finance-shadow-report-2020-201020-en.pdf
[724] OECD, *Climate Finance Provided and Mobilised by Developed Countries in 2013-2018* (previously cited).
[725] ActionAid, *Mind the Adaptation Gap*, November 2015, actionaid.org/sites/default/files/mind_the_adaptation_gap_final_v2.pdf, p. 16.
[726] Oxfam, *Climate Finance Shadow Report 2020* (previously cited).
[727] Oxfam, *Climate Finance Shadow Report 2020* (previously cited).
[728] UNEP, "Cost of adapting to climate change could hit $500 billion per year by 2050", 10 May 2016, un.org/sustainabledevelopment/blog/2016/05/unep-report-cost-of-adapting-to-climate-change-could-hit-500b-per-year-by-2050/. The last UNEP Adaptation Gap report confirmed that "a major adaptation gap persists". See UNEP, *Adaptation Gap Report 2018, Executive Summary* (previously cited).
[729] Climate Home News, "Green Climate Fund replenishment fails to fill hole left by Trump's US", 25 October 2019, climatechangenews.com/2019/10/25/green-climate-fund-replenishment-fails-fill-hole-left-trumps-us/

amount pledged also fell short of what civil society organizations active in the GCF had collectively advocated for, namely a doubling of all individual developed country contributions.[730]

Finally, wealthy industrialized countries have not yet made precise financial commitments or mobilized any additional or dedicated resources for loss and damage caused by the effects of climate change (see section 9).

Based on the duty of international co-operation and assistance and on the duty to provide remedy for human rights violations, wealthy industrialized countries must significantly increase funding for human rights-consistent climate initiatives in less wealthy countries to jointly meet and go beyond the agreed annual target of USD$100 billion. This means that they should make concrete pledges reflecting their level of responsibility and capacity with a specific timeline for delivery. At international climate negotiations within the UNFCCC, they should adopt a higher target that matches actual needs for support from developing countries. They should also specifically raise new and additional finance to support and compensate people in developing countries whose rights have been negatively affected as the result of loss and damage caused by the climate crisis.

All states should ensure that climate funding is additional to existing commitments for overseas development assistance, that climate finance to low-income countries is in the form of grants, not loans, and that a better balance is achieved between mitigation and adaptation funding.[731]

Although the economic impacts of COVID-19 are putting even the economies of wealthier countries under pressure, this should not be used as a reason to reduce, or fail to increase, international co-operation and assistance, including climate finance, to developing countries.[732]

Moreover, states and international organizations should ensure that projects supported by national and international climate finance mechanisms respect and protect all human rights, and that climate projects that specifically advance the enjoyment of human rights, including promoting gender justice and fulfilling the rights of Indigenous Peoples, are prioritized (see section 7).[733]

States should support policies and implementing mechanisms within intergovernmental organizations of which they are members to ensure that these institutions act in conformity with the human rights obligation of their members. In particular, they should oppose any financing and investing in projects, activities and industries that drive fossil fuel expansion and deforestation and support phasing out existing funding and investments on a timeline aligned with the 1.5°C imperative.

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[730] L. Schalatek, "Pledges in Paris were a start, but not yet enough to signal real GCF replenishment ambition", Henrich Boll Stiftung, 29 October 2019, us.boell.org/en/2019/10/29/pledges-paris-were-start-not-yet-enough-signal-real-gcf-replenishment-ambition

[731] See also UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, paras 68 & 87.

[732] Amnesty International, *Responses to COVID-19 Must Not Ignore the Climate Crisis* (Index: POL 30/2327/2020), 14 May 2020, amnesty.org/en/documents/pol30/2327/2020/en/

[733] UNEP, *Climate Change and Human Rights* (previously cited), p. 41; UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 1 February 2016, UN Doc. A/HRC/31/52, para. 61.

11. SAFEGUARD THE RIGHTS OF PEOPLE DISPLACED OR AT RISK OF DISPLACEMENT

Since there is no accepted legal definition or terminology to refer to movements of people in the context of climate change, "climate-related human mobility" is often used as an umbrella term in this context.[734] It refers to all forms of movement related to climate change, whether they are primarily forced or voluntary, temporary or permanent, internal or cross-border. The form of movement is influenced by the type of climate-related impact, the specific socio-economic and political context, as well as individual factors such as age, gender and income.

For example, it has been documented that people displaced as a consequence of rapid-onset weather events tend to move primarily within the borders of their country and on a temporary basis, although sometimes their displacement can become protracted.[735] In contrast, people facing slow onset climate events that have potentially lasting and irreversible impacts on the environment often migrate internally or across borders temporarily or permanently as a way to adapt to adverse environmental conditions. When climate change and environmental degradation makes living conditions incompatible with a life with dignity, those affected may end up experiencing long-term displacement either internally or across-border – in the latter case therefore requiring international protection. In some cases and as a measure of last resort, some communities might be in need of being permanently relocated elsewhere as a way to save lives and avoid the worst impacts of forced displacement.[736] In some contexts, the interaction between rapid- and slow-onset events also act as an important driver of climate-related human mobility, creating specific challenges. Some small low-lying island states face an existential threat as either their entire territory is predicted to become uninhabitable in the next few decades or internal relocations would put excessive pressure on hosting communities given the limited availability of safe areas to relocate people to.[737] While human rights

[734] Human mobility in the context of climate change refers to all forms of movement related to climate change: forced displacement (understood as primarily forced movements), migration (understood as primarily voluntary movements), evacuations (understood as the rapid movement of persons away from the immediate threat or impact of a disaster to a place of shelter) and planned relocations (understood as planned processes to settle persons or communities to a new location away from areas at risk of severe climate impacts). See Nansen Initiative, *Agenda for the Protection of Cross-Border Displaced Persons in the Context of Disasters and Climate Change* (Protection Agenda), Volume I, 2015, nanseninitiative.org/wp-content/uploads/2015/02/PROTECTION-AGENDA-VOLUME-1.pdf and Committee on International Law and Sea-level Rise, Sydney Declaration of Principles on the Protection of Persons Displaced in the Context of Sea Level Rise, 2018, ila-hq.org/images/ILA/Resolutions/ILAResolution_6_2018_SeaLevelRise_SydneyDeclaration.pdf

[735] OHCHR, *The Slow Onset Effects of Climate Change and Human Rights Protection For Cross-Border Migrants*, 22 March 2018, UN Doc. A/HRC/37/CRP.4

[736] J. McAdam and E. Ferris, "Planned relocations in the context of climate change: Unpacking the legal and conceptual issues", 2015, Cambridge Journal of International and Comparative Law, unfccc.int/files/adaptation/groups_committees/loss_and_damage_executive_committee/application/pdf/mcadam_and_ferris.pdf

[737] W. Kalin, "Conceptualising climate-induced displacement", in J. McAdam (editor), *Climate Change and Displacement: Multidisciplinary Perspectives*, 2010.

principles and standards must be applied in all contexts, a toolbox of measures capable of addressing the needs of people moving in all those different contexts needs to be made available by states, with the support of international and regional organizations.

The impacts of the climate crisis are already a significant driver of human mobility. According to data from the Internal Displacement Monitoring Centre, on average, 20.88 million people were internally displaced every year by weather-related events between 2008 and 2018.[738] In 2020, 30 million people were internally displaced by weather-related events.[739] The number of people on the move within or across national borders is anticipated to increase as both rapid- and slow-onset events are exacerbated by climate change.

However, there are currently no comprehensive statistics available for the number of people moving across borders in relation to climate change, nor a widely agreed methodology to predict how many people will move in the context of climate change. This is largely because establishing direct causality between the adverse effects of climate change and human mobility can be difficult. Migration and displacement are usually the result of a number of different factors, and climate change generally constitutes a threat multiplier, exacerbating the difficulties and challenges faced by marginalized people such as poverty, discrimination, lack of social protection and an adverse political context. So, even when climatic factors play an important role in forced displacement and migration, they can rarely be isolated as the main driver of mobility.[740] Also, effective mitigation and adaptation measures could reduce the number of people who have to move in the future. Despite these methodological challenges, some recent studies demonstrate that large numbers of people have migrated, or are likely to move, in response to climate-related impacts. Following analysis of numerous studies, in 2014 the IPCC projected with high confidence that without adaptation "hundreds of millions of people will be affected by coastal flooding and will be displaced due to land loss by year 2100".[741] A 2020 study also highlighted how, if mitigation measures are not sufficient, between 1 and 3 billion people could be living in areas that will become too hot for human habitation, with migration being one important survival strategy.[742]

The majority of those who move in relation to climate change do so within their country, generally from rural to urban areas, either because they are suddenly displaced as the result of a weather event or because the adverse effects of climate change force, or contribute to, their decision to move internally.[743] As a result, they may find themselves in temporary camps for displaced people, or may settle in urban informal settlements, often in insalubrious living conditions and/or in locations that are themselves particularly vulnerable to natural hazards and climate change impacts (see section 4.7).[744]

The protection of internally displaced persons primary falls to their own government under human rights law. The UN Guiding Principles on Internal Displacement[745] provide a useful compilation of applicable legal principles, derived from human rights law, refugee law and humanitarian law with respect to people "who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of... natural or human-made disasters, and who have not crossed an

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[738] See IDMC, *Disaster Displacement – A Global Review 2008-2018,* May 2019, internal-displacement.org/sites/default/files/publications/documents/201905-disaster-displacement-global-review-2008-2018.pdf. IDMC is the leading source of information and analysis on internal displacement worldwide. Their annual report provides figures of yearly internal displacements due to conflict and violence and disasters. The figures on disaster-related displacements include movements caused by weather-related events and those linked to geophysical hazards such as earthquakes and volcanic eruptions. Most weather-related displacements accounted for the period 2008-2018 are linked to rapid-onset events, as IDMC has only been able to obtain information on displacement triggered by slow-onset events such as drought and coastal and riverbank erosion since 2017. IDMC figures include both people displaced after a disaster and those evacuated preventively.

[739] IDMC, *Global Report on Internal Displacement 2021,* May 2021, internal-displacement.org/global-report/grid2021/. The report also noted that around 7 million people in 104 countries and territories were displaced as a result of disasters at the end of 2019. This includes people who fled disasters not only in 2019 but also in previous years.

[740] See for example R. Zetter, "Protecting people displaced by climate change: Some conceptual challenges", in J. McAdam (editor), *Climate Change and Displacement: Multidisciplinary Perspectives,* 2010, pp. 132-150; E. Ferris, "Governance and climate change-induced mobility: International and regional frameworks", in E. Manou and others (editors), *Climate Change, Migration and Human Rights,* 2017.

[741] IPCC, *Fifth Assessment Report: WGII* (previously cited), p. 364.

[742] C. Xu and others, "Future of the human climate niche" (previously cited).

[743] See for example M. Bradley & J. McAdam, "Rethinking durable solutions to displacement in the context of climate change", 2012, Brookings-LSE Project on Internal Displacement, brookings.edu/~/media/research/files/papers/2012/5/14-displacement-bradley-mcadam/05-displacement-bradley-mcadam.pdf

[744] UN Special Rapporteur on the human rights of internally displaced persons, Report, 9 August 2011, UN Doc. A/66/285; Overseas Development Institute and United Nations Development Program, *Climate Change, Migration and Displacement: The Need For a Risk-Informed and Coherent Approach,* 2017, odi.org/publications/10977-climate-change-migration-and-displacement-need-risk-informed-and-coherent-approach; ActionAid and others, *Costs of Climate Inaction: Displacement and Distress Migration*, 18 December 2020, actionaid.org/publications/2020/costs-climate-inaction-displacement-and-distress-migration#downloads

[745] Representative of the United Nations Secretary-General on Internally Displaced Persons, Addendum to the report submitted pursuant to Commission Resolution 1997/39: *Guiding Principles on Internal Displacement,* 11 February 1998, UN Doc E/CN.4/1998/53/Add.2.

internationally recognized State border".[746] The African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa (known as the Kampala Convention) specifically requires states who have joined it to "take measures to protect and assist persons who have been internally displaced due to natural or human made disasters, including climate change".[747]

11.1 INTERNATIONAL PROTECTION OF PEOPLE DISPLACED ACROSS BORDERS IN THE CONTEXT OF CLIMATE CHANGE

Many people displaced across borders in the context of climate change may qualify as refugees under the 1951 Refugee Convention.[748] The UN High Commissioner for Refugees (UNHCR) has recently clarified that refugee claims made in the context of climate change or a disaster may satisfy all of the criteria set out in the Convention (well-founded fear of persecution on account of one or more of the five Convention grounds).[749] This is especially true for people who are already marginalized or at risk of human rights abuse. For example, members of particular populations may have a well-founded fear of being persecuted "as resources may diminish and access may be denied in a discriminatory manner, amounting to persecution for one or more Convention grounds".[750] Other examples include "situations in which a government withholds, or deprioritizes protection by denying relief aid to specific populations; where post-disaster relief is politicized; or where the environment, its natural resources or ancestral lands are deliberately destroyed to persecute particular populations, i.e. promoting or deliberately failing to prevent environmental degradation as a weapon of oppression. Also relevant are situations where a government does not establish appropriate measures for preventing disasters whereby a particular population is disproportionately affected."[751]

Additionally, people displaced by the adverse effects of climate change and disasters can be refugees under regional refugee criteria. Two regional instruments – the 1969 OAU Convention Governing the Specific Aspects of Refugee Problems in Africa, and the 1984 Cartagena Declaration on Refugees signed by Latin America states – extend refugee status to persons who flee their country of origin or nationality because of events or circumstances "seriously disturbing public order".[752] UNHCR has argued that the adverse effects of climate change and disasters may fall within the concept of events or circumstances "seriously disturbing public order".[753]

Although some people displaced across borders in the context of climate change may meet the definition of refugees, Amnesty International does not use the terms "climate refugees" or "environmental refugees".[754] These are designations that do not exist in international law and therefore do not result *per se* in the recognition of international protection needs. Amnesty International does not distinguish between different types of refugees (such as "political refugees" or "religious refugees", and so on). The organization

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[746] Principle 2. The revised Operational Guidelines on the Protection of Persons in Situations of Natural Disasters (UN Doc A/HRC/16/43/Add.5) and the Framework on Durable Solutions for Internally Displaced Persons (UN Doc. A/HRC/13/21/Add.4), both adopted by the Inter-Agency Standing Committee, also provide useful guidance for the protection of internally displaced persons.
[747] Article 5(4).
[748] Article 1(a)(2) of the Refugee Convention defines a refugee as a person who "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion, is outside his country of nationality and is unable or, owing to such fear, is unwilling to avail himself of the protection of that country".
[749] UNHCR, Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters, 1 October 2020, refworld.org/docid/5f75f2734.html
[750] UNHCR, Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters (previously cited), p. 5.
[751] UNHCR, Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters (previously cited), p. 6.
[752] Article 1(2), OAU Convention; and Conclusion 3, Cartagena Declaration.
[753] UNHCR, Legal considerations regarding claims for international protection made in the context of the adverse effects of climate change and disasters (previously cited), pp. 8-9.
[754] The notion of "climate refugee" is also seen as problematic by many affected people who do not see themselves as "refugees". For example, in the small Pacific island states of Kiribati and Tuvalu, the term "refugee" was seen "as invoking a sense of helplessness and a lack of dignity". See J. McAdam, "The Normative Framework of climate change-related displacement", 2012, brookings.edu/wp-content/uploads/2016/06/04032012_cc_paper_mcadamj.pdf The term and how it is often used, that is to raise the possibility of large numbers of people migrating or forced to move because of climate change, can also lead to a securitization of migration and be exploited by nationalist and xenophobic groups to call for even more exclusionary approaches to migration and asylum. On this, see Climate and Migration Coalition, "People are not the problem: Why national security is the wrong frame for migration linked to climate change", climatemigration.org.uk/people-are-not-the-problem-why-national-security-is-the-wrong-frame-for-migration-linked-to-climate-change/ However, some scholars, while recognizing the flaws of the "climate refugee" label, also point to its advantage of stressing the political nature of climate change and the responsibilities of countries that have most contributed to it: see for example F. Gemenne, "One good reason to speak of 'climate refugees'", May 2015, Forced Migration Review, Issue 49, fmreview.org/climatechange-disasters/gemenne

advocates for each person who has fled their country of origin or habitual residence and seeks international protection to have their case examined on an individual basis through fair and effective procedures.

Even when people do not qualify as refugees, the principle of non-refoulement under general human rights law, which prevents states from forcibly returning refugees to territories where their lives or freedom are threatened, will protect them from being returned to their country of origin or nationality when this would expose them to serious human rights violations on account of the impacts of climate change. There have been a number of individual cases taken to national courts on this basis. To date, for a variety of reasons, no case has been successful,[755] but one has reached the UN Human Rights Committee. In October 2019, the Committee adopted its views on the case of a man from Kiribati, Mr Teitiota, who claimed that New Zealand had violated his rights by deporting him and his family to Kiribati despite the serious impacts of climate change there. The Committee stated that Mr Teitiota's deportation had not been unlawful because he did not face an immediate danger to his life in Kiribati, and that the risks could potentially be mitigated over time through adaptation and other measures. However, the Committee recognized that climate change represents a serious threat to the right to life and that, in principle, it is unlawful for states to send people back to countries where their life would be at risk or they could be exposed to cruel, inhuman or degrading treatment as a result of climate change impacts.[756] This landmark decision opens the way for future climate-related claims to be positively adjudicated and establishes strong guidance for governments to take into account the human rights violations caused by the climate crisis when considering asylum applications and the opportunity of transfers of jurisdiction. It also confirmed the position of Office of the High Commissioner for Human Rights (OHCHR) and of many legal scholars who have highlighted the potential of human rights law to provide protection to people displaced in the context of climate change.[757]

In practice, some states have implemented discretionary measures to temporarily admit, on humanitarian grounds, people fleeing major disasters or to enable them to remain after the occurrence of a disaster.[758] In some cases, states have also used conventional migration categories (such as employment, family, student or tourist visas) to support entry and stay for people from areas hit by climate impacts.[759]

11.2 INTERNATIONAL RESPONSES TO HUMAN MOBILITY IN THE CONTEXT OF CLIMATE CHANGE

Acknowledging the need to strengthen their responses to human mobility in the context of climate change, states have been debating and negotiating this issue in different forums for more than a decade.

The Nansen Initiative was set up in 2012 by Norway and Switzerland and functioned until 2015 as an inter-state consultative process to "build consensus among states on key principles and elements to protect people displaced across borders in the context of disasters caused by natural hazards, including those linked to climate change".[760] It culminated in 2015 with the adoption of the Protection Agenda, endorsed by 109 states.[761] Its successor, the Platform on Disaster Displacement, also a state-led initiative, is tasked with supporting states and other stakeholders in the implementation of the Protection Agenda.

Under the UNFCCC, the issue of human mobility has been dealt with within the programme of works on loss and damage since 2012, particularly under the Warsaw International Mechanism for Loss and Damage (see section 9). The Paris Agreement's preamble recognizes the need to respect, promote and consider states'

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[755] See J. McAdam, "Protecting people displaced by the impacts of climate change: The UN Human Rights Committee and the Principle of *Non-Refoulement*", 2020, American Journal of International Law, Volume 114, Issue 4.

[756] In particular, the Committee stated that "without robust national and international efforts, the effects of climate change in receiving states may expose individuals to a violation of their rights under articles 6 or 7 of the Covenant, thereby triggering the *non-refoulement* obligations of sending states." See UN Human Rights Committee, Views: *Ioane Teitiota v. New Zealand*, adopted 24 October 2019, UN Doc. CCPR/C/127/D/2728/2016, para 9.11. See also Amnesty International, "UN landmark case for people displaced by climate change", 20 January 2020, amnesty.org/en/latest/news/2020/01/un-landmark-case-for-people-displaced-by-climate-change/

[757] See J. McAdam, "Protecting people displaced by the impacts of climate change: The UN Human Rights Committee and the Principle of *Non-Refoulement*" (previously cited); OHCHR, *Addressing Human Rights Protection Gaps in the Context of Migration and Displacement in Climate Change* (previously cited).

[758] For concrete examples see J. McAdam & S. Weerasinghe, "Climate change and human movement", in Ismangil and others (editors), *Climate Change, Justice and Human Rights*, 2020, Amnesty International Netherlands, amnesty.nl/content/uploads/2020/08/Verkenningen2020-climate-change.pdf?x55436 For a list of effective practices that states should adopt, see Nansen Initiative, *Protection Agenda*, p. 26.

[759] See J. McAdam and S. Weerasinghe, "Climate change and human movement" (previously cited).

[760] The Nansen Initiative, *Towards a Protection Agenda for People Displaced Across Borders in the Context of Disasters and the Effects of Climate Change*, nanseninitiative.org/secretariat/

[761] The Nansen Initiative, *Protection Agenda*, 2015 offers a list of best practices and recommendations for dealing with cross-border climate and disaster displacement.

obligations towards migrants, among others, in their responses to climate change. The decision adopting the Paris Agreement established a Task Force on Displacement to develop recommendations on measures "to avert, minimize and address displacement related to the adverse effects of climate change".[762] The recommendations were adopted at COP24 in 2018, and the Task Force is now supporting states to implement them.[763]

Following the adoption of the New York Declaration for Refugees and Migrants in 2016,[764] two non-binding documents – the Global Compact on Refugees (GCR) and the Global Compact for Migration (GCM) – were adopted in 2018. While the GCR acknowledges that "climate, environmental degradation and natural disasters increasingly interact with the drivers of refugee movements",[765] it only includes a generic reference to the need for states to "avoid protection gaps" when determining the status of those in their territory[766] and calls on relevant institutions to address "other protection and humanitarian challenges" such as "assist[ing] those forcibly displaced by natural disasters", including through practices such as temporary protection and humanitarian stay arrangements.[767]

In the GCM, states committed to a number of actions to "minimize the adverse drivers and structural factors that compel people to leave their country of origin", including in relation to "natural disasters, the adverse effects of climate change and environmental degradation".[768] They also committed "to adapt options and pathways for regular migration", including developing or strengthening "national and regional practices for admission and stay… of migrants compelled to leave their countries of origin due to sudden-onset natural disasters",[769] and to "develop and strengthen solutions for migrants compelled to leave their countries of origin due to slow-onset natural disasters, the adverse effects of climate change, and environmental degradation".[770]

Despite some differences due to the different approaches and requirements of the respective negotiating contexts, all the initiatives above reflect the understanding that human mobility in the context of climate change is a complex phenomenon that requires interventions to minimize, and ideally avoid, forced movement, and to provide solutions for those who are compelled to move. However, these initiatives do not specifically include climate justice considerations and do not reflect the obligation to provide a remedy to those whose rights have been violated in the context of climate change.

11.3 HUMAN RIGHTS OBLIGATIONS RELATED TO HUMAN MOBILITY IN THE CONTEXT OF CLIMATE CHANGE AND DISASTERS

States must follow their human rights obligations when adopting and implementing policies and measures regarding human mobility in the context of climate change and disasters. In particular:

- States should reduce the likelihood and extent of climate-related displacement, both internally and across borders, by fully implementing their human rights obligations to mitigate climate change, to support people to adapt to its effects and to protect people from disasters domestically and through international co-operation, as well as by implementing their commitments under the Sustainable Development Goals (SDGs), the Sendai Framework for

[762] See UNFCCC Decision 1/CP.21, 29 January 2016, UN Doc. FCCC/CP/2015/10/Add.1, para. 49. It is worth noting, however, that during the negotiations for the Paris Agreement, developing and least developed states included a reference in the draft text to the establishment of a "climate change displacement coordination facility", that would have provided support for emergency relief, assisted in providing organized migration and planned relocation, and undertaken compensation measures. However, due to the opposition of developed countries, parties had to settle for the Task Force, which was designed with a much less operational role and more as an advisory body. On this see J. McAdam, "From the Nansen Initiative to the Platform on Disaster Displacement: Shaping international approaches to climate change, disasters and displacement", 2016, University of New South Wales Law Journal, Volume 39, Issue 4, pp. 1518-1546.
[763] The recommendations are included as annex to COP24 Decision 10/CP.24, UN Doc. FCCC/CP/2018/10/Add.1, pp. 43-45. For more information on the Task Force, see unfccc.int/process/bodies/constituted-bodies/WIMExCom/TFD
[764] Resolution adopted by the General Assembly on 19 September 2016, New York Declaration for Refugees and Migrants, 3 October 2016, UN Doc. A/RES/71/1.
[765] Report of the United Nations High Commissioner for Refugees, Global Compact on Refugees, UN Doc (A/73/12 (Part II), para. 8.
[766] Para. 61.
[767] Para. 63.
[768] Global Compact for Safe, Orderly and Regular Migration, 11 January 2019, UN Doc. A/RES/73/195, para. 18.
[769] Global Compact for Safe, Orderly and Regular Migration, para. 21(g).
[770] Global Compact for Safe, Orderly and Regular Migration, para. 21(h).

Disaster Risk Reduction and the Paris Agreement.[771] Guided by their human rights obligations, states should also take measures to tackle socio-economic inequality and discrimination, as these magnify the risk of displacement. Governments should ensure human mobility considerations are integrated in national plans such as nationally determined contributions (NDCs), National Adaptation Plans and national disaster risk reduction plans in order to identify displacement risks and address them through relevant national planning processes.[772] Efforts to address the root causes of displacement in the context of climate change should be centred on protecting human rights. States should not make the provision of international co-operation and assistance to other countries dependent upon efforts to prevent people from migrating.

- States must ensure that if permanent planned relocations are necessary as a measure of last resort to protect people from the unavoidable impacts of climate change (for example when areas have become too dangerous for human habitation), the human rights of both the displaced and the host communities are respected, protected and fulfilled throughout the relocation process. This includes avoiding forced evictions, respecting cultural practices and traditions, providing access to information, in-depth consultation and genuine participation of the affected populations at all stages of the process, ensuring the right of free, prior and informed consent of Indigenous Peoples, paying particular attention to facilitating the participation of women and marginalized groups; protecting the community's adequate standard of living; respecting their right to self-determination; and ensuring access to remedy if human rights violations occur in the process.[773] The same guarantees should be ensured for the preventive evacuation of people in the face of impending disasters.
- States should fulfil their obligations under international law in relation to the rights of internally displaced persons (IDPs) and ensure these are reflected in domestic laws and policies. African states should ratify and implement the African Union Convention for the Protection and Assistance of Internally Displaced Persons in Africa.
- States should enhance safe and regular migration pathways that respect, promote and realize human rights, including labour rights, in line with international law, and provide a wide range of mobility opportunities, such as work visas and visas for educational purposes or family ties.[774] This is particularly important to ensure that those who live in areas where climate change is negatively impacting their human rights have the option to migrate safely and regularly. In designing safe and regular migration pathways, governments should identify and address the specific barriers faced by disadvantaged and marginalized groups.
- States should ensure, including by amending domestic legislation, that relevant authorities take into account the risk of human rights violations caused by the impacts of climate change when deciding admission and when reviewing claims for international protection. Governments should not remove people to any place where they would face a real risk of human rights violations as a result of the adverse effects of climate change. Governments should also respect, protect and fulfil the rights of those who are allowed to stay based on the above grounds, in accordance with states' human rights obligations to all within their territory and jurisdiction.
- States should ensure the meaningful, effective and informed participation of all persons, and especially migrants, refugees, asylum-seekers, IDPs and all those most impacted by the

[771] See also OHCHR, *Addressing Human Rights Protection Gaps in the Context of Migration and Displacement in Climate Change*; OHCHR, "Key messages on human rights, climate change and migration", ohchr.org/Documents/Issues/ClimateChange/Key_Messages_HR_CC_Migration.pdf

[772] Global Compact for Safe, Orderly and Regular Migration, para. 18(j); Recommendations from the report of the Executive Committee of the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts on integrated approaches to averting, minimizing and addressing displacement related to the adverse impacts of climate change, UN Doc. FCCC/CP/2018/10/Add.1, para 1.g(iv).

[773] See Brookings Institution, Georgetown University & UNHCR, *Guidance on Protecting People from Disasters and Environmental Change Through Planned Relocation*, 2015, brookings.edu/wp-content/uploads/2016/06/GUIDANCE_PLANNED-RELOCATION_14-OCT-2015.pdf; UNHCR, Georgetown University & International Organization for Migration, *A Toolbox: Planning Relocations to Protect People from Disasters and Environmental Change*, 2017, environmentalmigration.iom.int/toolbox-planning-relocations-protect-people-disasters-and-environmental-change. See also UN Special Rapporteur on the human rights of internally displaced persons, Report, 21 July 2020, UN Doc. A/75/207, para. 46.

[774] See for example Amnesty International, *Recommendations for the Global Compact on Migration* (Index: IOR 40/7708/2018), 1 February 2018, amnesty.org/en/documents/ior40/7708/2018/en/

climate crisis, to participate in national, regional and international decision-making processes related to climate change and human mobility.[775]

- Based on the duty of international co-operation, states should co-operate to implement the recommendations of the Task Force on Displacement and both Global Compacts, including by strengthening regional co-operation with the aim of facilitating admission and by providing durable solutions to people who move on account of the adverse effects of climate change.[776]
- States should co-operate to ensure adequate resources are available to respond to human mobility in the context of climate change. This includes ensuring that existing climate finance can be allocated to measures aimed at reducing the risk of displacement. It also requires states to mobilize new and additional finances to provide means, support and remedy, including compensation, to people and communities, including Indigenous Peoples, who have been displaced or may be relocated as the result of loss and damage caused by the climate crisis in climate-vulnerable developing countries (see section 9).
- Under the principle of common but differentiated responsibilities and human rights law, as well as being a matter of climate justice, states that are most responsible for climate change must accept their collective responsibility to provide a remedy to affected persons in accordance with their contribution to the harm. This includes providing their fair share of climate finance to support an international mechanism on loss and damage and establishing clear protection mechanisms to accept and integrate in their territory displaced people who cannot return to their countries on account of the impacts of climate change. They should co-operate to support people who need to relocate because their country is becoming uninhabitable due to climate change. States should ensure that following a genuine consultation process, the affected people are able to re-establish themselves and maintain their collective identity and right to self-determination in a safe and adequate location that ensures all their human rights are guaranteed.

[775] OHCHR, *Addressing Human Rights Protection Gaps in the Context of Migration and Displacement in Climate Change* (previously cited), para. 66(i).
[776] OHCHR, *Addressing Human Rights Protection Gaps in the Context of Migration and Displacement in Climate Change* (previously cited), para. 66(l); UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 15 July 2019, UN Doc. A/74/161, para. 68.

12. RECOGNIZE THE RIGHT TO A SAFE, CLEAN, HEALTHY AND SUSTAINABLE ENVIRONMENT

The right to a safe, clean, healthy and sustainable environment is enjoying growing recognition from around the world. The constitutions of 110 countries include this right.[777] At regional level, it is enshrined in a variety of human rights instruments.[778] The UN Special Rapporteur on human rights and the environment notes that 156 out of 193 UN members states recognize this right either in their constitution or because they are party to a regional instrument that recognizes it.[779] However, while there has been some progress towards recognition of such a right, including through a joint statement on behalf of 69 states in March 2021 delivered at the Human Rights Council,[780] the UN member states have yet to explicitly and collectively recognize this right.

Since 2018, two successive UN Special Rapporteurs on human rights and the environment have called on states through the UN to officially recognize the right to a safe, clean, healthy and sustainable environment. This call has been endorsed by over 50 other UN independent experts, 15 UN entities and several other

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[777] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 30 December 2019, UN Doc. A/HRC/43/53, para. 10.

[778] See Article 24, African Charter of Human and People's Rights; Article 18, Protocol to the African Charter on Human and Peoples' Rights on the Rights of Women in Africa; Article 11, Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (more commonly known as the "Protocol of San Salvador"); Article 38, Arab Charter on Human Rights, which includes the right to a healthy environment as part of the right to an adequate standard of living that ensures wellbeing and a decent life; Para. 28(f) of the Human Rights Declaration adopted by the Association of Southeast Asian Nations in 2012 incorporates a "right to a safe, clean and sustainable environment" as an element of the right to an adequate standard of living. See also Article 1, Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) of 1998, drafted under the auspices of the UN Economic Commission for Europe, which refers to "the right of every person of present and future generations to live in an environment adequate to his or her health and well-being"; and Article 4, Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), concluded under the auspices of the UN Economic Commission for Latin America and the Caribbean and entered into force on 22 April 2021, which requires that "each Party shall guarantee the right of every person to live in a healthy environment".

[779] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 30 December 2019, UN Doc. A/HRC/43/53, paras 9-13.

[780] Costa Rica ONU Ginebra, Twitter post, 9 March 2021, twitter.com/CRONUGVA/status/1369235006888030211: "@MDVinGeneva delivered a JST at #HRC on behalf of the core group on HHRR and the environment and more than 60 countries. We are aware of the linkages between HHRR and the environment". The text of the statement and the list of signatories are also available at childrenvironment.org/blog/core-group-statement

intergovernmental bodies.[781] More than 1,100 civil society organizations, including Amnesty International, Indigenous Peoples' groups and social movements, have called on the UN Human Rights Council to recognize the universal human right to a safe, clean, healthy and sustainable environment without any further delay.[782]

Such recognition is more urgent than ever. The COVID-19 pandemic has shown with devastating clarity how closely our wellbeing is linked to our relationship with nature. Environmental degradation, deforestation and biodiversity loss create the conditions for the type of animal-to-human transmission of viruses that repeatedly result in fatal epidemics.[783] A UN resolution on the right to a safe, clean, healthy and sustainable environment would put this right on equal footing with other human rights, acknowledging that a healthy environment, including a safe climate, is indispensable for a life of dignity and security and highlighting each generation's responsibilities toward future generations. It will create the basis to strengthen the environmental policies and legislation of states, provide wider support and legitimacy and thus improve their environmental performance. Research has shown that the recognition of this right leads to improved environmental outcomes, including cleaner air, enhanced access to safe drinking water and healthy and diverse food, and reduced GHG emissions – all of which are necessary to guarantee the enjoyment of many other human rights.[784] A UN resolution would also increase recognition and appreciation of the work of environmental defenders.

States should adopt and implement national legislation that recognizes and implements the right to a safe, clean, healthy and sustainable environment. At the UN, states should support the recognition by the UN of the right to a safe, clean, healthy and sustainable environment.

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[781] For example, see OHCHR, Joint Statement by UN human rights experts for World Environment Day: Recognition of the right to a healthy environment key to address the environmental crisis and protect human rights, 4 June 2021, ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=27130&LangID=E; Joint statement of UN entities on the right to healthy environment, 8 March 2021, unep.org/news-and-stories/statements/joint-statement-united-nations-entities-right-healthy-environment; Statement by UN High Commissioner for Human Rights, 1 July 2020, ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=26022&LangID=E; Remarks by Afshan Khan, UNICEF Regional Director, on behalf of Henrietta Fore, UNICEF Executive Director, 25 February 2020, unicef.org/press-releases/remarks-afshan-khan-unicef-regional-director-behalf-henrietta-fore-unicef-executive; Statement by Inger Andersen, Executive Director of UNEP, video message, 5 February 2020, youtube.com/watch?v=YE6db-2f9gk; Statement by Commissioner for Human Rights of the Council of Europe, 4 June 2019, coe.int/en/web/commissioner/-/living-in-a-clean-environment-a-neglected-human-rights-concern-for-all-of-us; Statement by Independent Permanent Human Rights Commission of the Organization of Islamic Countries, 26 November 2019, oic-iphrc.org/ckfinder/userfiles/files/Final%20Outcome%20document%20of%2016th%20%20Session%20Thematic%20Debate%20on%20Environmental%20Protection%20and%20Climate%20%20Change.pdf; European Parliament Resolution on an EU legal framework to halt and reverse EU-driven global deforestation, 22 October 2020, Doc. P9_TA-PROV(2020)0285, para. 63.

[782] See healthyenvironmentisaright.org/ See also other joint oral statements to the UN Human Rights Council: Amnesty International, *Joint statement to the HRC to recognize the right of all to a safe, clean, healthy and sustainable environment* (Index IOR 40/3876/2021), 9 March 2021, amnesty.org/en/documents/ior40/3876/2021/en/; Amnesty International, *HRC-43: Long overdue: The Human Rights Council should finally recognize the right to a safe, clean, healthy and sustainable environment: Joint NGO statement* (Index: IOR 40/1895/2020), 2 March 2020, amnesty.org/en/documents/ior40/1895/2020/en/; Amnesty International, *HRC40: States must fulfil their human rights obligations relating to clean air: Joint NGO statement* (Index: IOR 40/9965/2019), 4 March 2019, amnesty.org/en/documents/IOR40/9965/2019/en/.

[783] For references see footnote no. 408.

[784] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 30 December 2019, UN Doc. A/HRC/43/53.

13. HOLD CORPORATIONS TO ACCOUNT FOR CLIMATE CHANGE

13.1 BUSINESS' CONTRIBUTION TO THE CLIMATE CRISIS

Certain businesses – particularly the fossil fuel industry and large-scale agri-businesses and their financiers – bear an important responsibility for the climate crisis.

The world's producers of oil, gas and coal have always been among those most responsible for climate change – and this continues today. Research shows that just 100 fossil fuel-producing companies are responsible for 71% of global greenhouse gas (GHG) emissions since 1988.[785] These companies are now referred to as "carbon majors". There is also growing evidence that major fossil fuel companies have known for decades about the harmful effects of burning fossil fuels and have attempted to suppress that information and block efforts to tackle climate change, including through direct lobbying.[786]

The global agro industrial food system, and the handful of multinational corporations that control it, is dominated by a small number of commodity crops, reliant on high inputs such as fertilizer, pesticides and water, and associated with high GHG emissions. Large-scale agri-business plantations have also often been associated with deforestation and land degradation, alongside forced evictions of Indigenous Peoples and other rural communities, attacks on environmental human rights defenders (HRDs) and other human rights violations (see section 5.6).

Private financial institutions, such as banks, asset managers and insurance companies, also play a key role in driving the climate crisis, especially when they fund fossil fuel companies and businesses linked to deforestation without any climate-related conditions.

13.2 STATES' OBLIGATIONS TO REGULATE BUSINESSES

Under international law, states have an obligation to protect all persons against human rights harms caused by businesses, including harms resulting from businesses' contributions to climate change, through regulation, oversight, investigation, adjudication and punishment.[787] Where states can control or influence

[785] Climate Accountability Institute, *Carbon Majors*, climateaccountability.org/carbonmajors.html. See also CDP, *Carbon Majors Database, Carbon Major Report 2017*, b8f65cb373b1b7b15feb-c70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf?1499691240

[786] CIEL, *Smoke and Fumes: The Legal and Evidentiary Basis for Holding Big Oil Accountable for the Climate Crisis*, 2017, ciel.org/wp-content/uploads/2019/01/Smoke-Fumes.pdf; Influence Map, "Big oil's real agenda on climate change", 2019, influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddc

[787] Principle 1, UN Guiding Principles on Business and Human Rights.

(consistently with international law) the conduct of corporations within their territory or under their jurisdiction, they must ensure that those businesses respect human rights throughout their global operations.[788] States must also ensure effective remedy for the harm caused by businesses.[789]

To comply with their obligation to protect human rights from harms caused by businesses due to their contribution to climate change, states must:

- Adopt regulations and policy measures to ensure that businesses reduce emissions across their operations and value chains as soon as possible and by at least 45% by 2030 compared with 2010 levels, and to zero before 2050, in line with Intergovernmental Panel on Climate Change (IPCC) recommendations. This includes requiring companies to provide full disclosure of their GHG emissions. It also includes requiring companies to set clear emissions reduction targets, consistent with the IPCC scientific evidence for their operations and supply chains, without excessively relying on offsets and carbon removal mechanisms.
- Adopt and enforce laws obliging all business enterprises, including financial institutions, to respect human rights and conduct human rights and environmental due diligence on their global operations, value chains and business relationships. Mandatory reporting should include climate impact assessments. Such laws should also establish liability for damage, including criminal liability.
- Require business enterprises, including financial institutions, to regularly and publicly report on their due diligence policies and their implementation, their impact assessments, their communications and consultations with potentially and actually affected right-holders, and their measures to mitigate risks and the impact of these. The environmental and human rights risks covered by corporate due diligence must include those linked to climate change.
- Ensure that financial regulators, such as central banks, take regulatory action to accelerate the financial industry's alignment with the threshold of 1.5°C of warming. This includes, for example, the requirement to incorporate climate scenarios within central bank stress tests, make climate risk disclosure mandatory, and changes to capital requirements that impose higher requirements on fossil-fuel lending. Central banks should also disclose their own exposure to high-carbon assets, and restrict the ability of commercial banks to offer high-carbon loans as collateral for central-bank funding.
- Ensure that climate-related policy-making and the enforcement of human rights and environmental due diligence requirements are protected from undue corporate influence, including from fossil fuel, agri business and other industries responsible for high GHG emissions.
- Take appropriate steps to ensure, through judicial, administrative, legislative or other appropriate means, that people who have suffered human rights abuses as a result of corporations' climate impacts or their actions to respond to climate change have access to effective remedy.

To accelerate the phasing out of fossil fuels, states must adopt legislation requiring all energy producers within their jurisdiction to phase out all fossil fuels by specified dates and as quickly as possible based on their capacities and responsibility for emissions. To maximize the law's impact, states should consider a tax on profits of energy companies that are derived from fossil fuels (additional to general corporate taxes), designed to ensure that fossil fuels are less profitable than renewable energy. This would differ from existing forms of "carbon taxes" and other carbon pricing, which are based on governments setting a price per tonne on carbon and then applying a levy on either the production, the distribution or the use of fossil fuels based on how much CO_2 their combustion emits. A tax on profits derived from fossil fuels rather than on turnover is less likely to be passed on to consumers. In addition, targeting profits directly creates a clear incentive for investors and managers of corporations to switch to renewable energy. This is logical and just because it is energy producers, rather than energy users, who are in a stronger position to influence the shape of energy production and use. As with carbon taxes, measures should be taken to ensure that the tax does not result in an excessive burden for lower-income households.[790] These could for example include prohibiting

[788] Principle 25(c), Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social and Cultural Rights, etoconsortium.org/nc/en/main-navigation/library/maastricht-principles/?tx_drblob_pi1%5BdownloadUid%5D=23
[789] Principle 25, UN Guiding Principles on Business and Human Rights.
[790] Amnesty International Canada, "Political and constitutional divisions do not excuse failure to comply with human rights obligations related to climate change", 12 February 2019, amnesty.ca/news/political-and-constitutional-divisions-do-not-excuse-failure-comply-human-rights-obligations

companies from passing on the cost to consumers,[791] or accompanying the tax with measures such as rebates, tax reductions or subsidies in renewable energy and public transport.[792]

Revenues from carbon pricing should be used to support measures for a human-rights consistent transition and, in the case of wealthier states, part of the revenues should also be allocated to support people in developing countries whose rights have been affected by climate change.

13.3 HUMAN RIGHTS RESPONSIBILITIES OF BUSINESSES IN THE CONTEXT OF CLIMATE CHANGE

The UN Guiding Principles on Business and Human Rights establish the independent responsibility of businesses to respect human rights.[793] This requires businesses to "avoid causing or contributing to adverse human rights impacts through their own activities, and address such impacts when they occur" and also to "seek to prevent or mitigate adverse human rights impacts that are directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts."[794]

The UN Guiding Principles on Business and Human Rights also require businesses to take measures to remedy human rights abuses that they have caused or contributed to.[795]

The human rights responsibilities of corporations, including financial institutions, extend to identifying, preventing, mitigating and accounting for human rights harms resulting from their contribution to climate change.[796] Such responsibilities apply even in the absence of clear domestic regulation on climate change.

The Paris Agreement, as the first-ever universal, legally binding global climate change agreement that has been rapidly and widely ratified, sets out a global framework to avoid dangerous climate change, which corporations cannot ignore. The responsibility of corporations to respect human rights compels them to align their operations to the objectives of the Paris Agreement.

In May 2021, in a case brought in the Netherlands by Milieudefensie (Friends of the Earth Netherlands), six other NGOs and over 17,000 individual co-plaintiffs against Royal Dutch Shell (RDS),[797] The Hague District Court found RDS in violation of the standard of care under Dutch law. It ordered RDS to cut its global carbon emissions by 45% by the end of 2030 compared with 2019 levels, stressing that "this reduction obligation relates to the Shell group's entire energy portfolio and to the aggregate volume of all emissions".[798] Among other arguments, the Court anchored its decision in the responsibility of business enterprises to respect human rights enshrined in the UN Guiding Principles on Business and Human Rights.[799] The Court stressed RDS' duty to identify and assess the impacts of all its emissions, including those from their entire supply chain, as part of companies' responsibility to identify and assess any actual or potential adverse human rights impacts of their activities or resulting from their business relationships.[800] Significantly, the Court interpreted the applicable standard of care to include RDS's emissions resulting from its entire value chain (including the end-users of the products RDS produces and trades) which amount to approximately 85% of

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[791] ActionAid, *Market Solutions to Help Climate Victims Fail Human Rights Test*, 2019, actionaid.org/sites/default/files/publications/Loss%20and%20Damage%20Finance%20and%20Hum....pdf

[792] Sustainable Prosperity, "Carbon pricing, social equity and poverty reduction", 2011, institute.smartprosperity.ca/sites/default/files/publications/files/Carbon%20Pricing%2C%20Social%20Equity%20and%20Poverty%20Reduction.pdf

[793] The UN Guiding Principles on Business and Human Rights were developed in 2011 by the Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises and later endorsed by the Human Rights Council. They do not intend to create new international legal obligations but to clarify those already existing.

[794] Principles 13, UN Guiding Principles on Business and Human Rights.

[795] Principles 22 & 31, UN Guiding Principles on Business and Human Rights.

[796] See for example, OHCHR, *Human Rights, Climate Change and Business. Key messages*, ohchr.org/Documents/Issues/ClimateChange/materials/KMBusiness.pdf; UN Special Rapporteur on the human rights of internally displaced people, Report, 1 July 2020, UN Doc. A/75/207, paras 59-60.

[797] The plaintiffs claimed RDS's contributions to climate change violate its duty of care under Dutch law and human rights responsibilities and sought a ruling from the court ordering RDS to reduce its carbon emissions by 45% by 2030 compared with 2010 levels and to zero by 2050. See climatecasechart.com/climate-change-litigation/non-us-case/milieudefensie-et-al-v-royal-dutch-shell-plc/

[798] The Hague District Court, *Milieudefensie and others v. Royal Dutch Shell PLC*, Case C/09/571932 / HA ZA 19-379, 26 May 2021, uitspraken.rechtspraak.nl/inziendocument?id=ECLI:NL:RBDHA:2021:5339&showbutton=true, paras 4.4.1 and 5.3.

[799] Paras 4.4.11- 4.4.21. The Court also referred to Articles 2 and 8 or the European Convention for the Protection of Human Rights and Fundamental Freedoms and to Articles 6 and 17 of the International Covenant on Civil and Political Rights, dismissing RDS' argument that these human rights offer no protection against dangerous climate change (see paras 4.4.9-4.4.10).

[800] Para 4.4.20.

its emissions.[801] In this context, the Court found that "the CO2 emissions for which RDS can be held responsible by their very nature pose a very serious threat, with a high risk of damage to Dutch residents and the inhabitants of the Wadden region," leading to "serious human rights impacts."[802] Accordingly, the Court concluded RDS may be required to take "drastic measures and make financial sacrifices to limit CO2 emissions to prevent dangerous climate change." [803]

Following a petition from Filipino survivors of the 2013 Typhoon Haiyan and other extreme weather events, along with more than a dozen organizations including Greenpeace Southeast Asia-Philippines, the Commission on Human Rights of the Philippines investigated the responsibility of the world's 47 largest oil, gas and coal companies (known as "carbon majors") for the human rights abuses resulting from climate change. In December 2019, the Commission, represented by Commissioner Roberto Cadiz, announced the preliminary findings, stating that carbon majors could be held accountable for violating the rights of the Philippines' citizens for the damage caused by climate change. He stressed that carbon majors "definitely have an obligation to respect human rights", as enunciated under the UN Guiding Principles on Business and Human Rights, and a clear responsibility to invest in clean energy. He also indicated that it may also be possible to hold companies criminally accountable under domestic law "where they have been clearly proved to have engaged in acts of obstruction and wilful obfuscation."[804]

In 2019, the UN Special Rapporteur on human rights and the environment wrote: "The five main responsibilities of businesses specifically related to climate change are to reduce greenhouse gas emissions from their own activities and their subsidiaries; reduce greenhouse gas emissions from their products and services; minimize greenhouse gas emissions from their suppliers; publicly disclose their emissions, climate vulnerability and the risk of stranded assets; and ensure that people affected by business-related human rights violations have access to effective remedies. In addition, businesses should support, rather than oppose, public policies intended to effectively address climate change."[805]

Corporations must carry out their responsibility to respect human rights in the context of climate change and align their operations and business models to the objectives of the Paris Agreement, specifically to the imperative of limiting the increase in global average temperatures to 1.5°C above pre-industrial levels.

Corporations should do the following to comply with their responsibilities:

- Ensure that their operations, as well as those of their subsidiaries and suppliers, adhere to international environmental and human rights standards.[806] Businesses must continuously and proactively identify, mitigate, and address actual and potential risks for people and the environment linked to their operations, products and business relationships and provide adequate remediation in case of adverse impacts. Businesses must also comply with all existing laws, or international environmental standards (whichever is stronger) pertaining to the climate crisis, protection of the environment, health and safety, natural resource extraction and management, wildlife conservation, waste management, hazardous material activity, and air, water, land and groundwater pollution.
- Commit to and put in place specific plans to reduce emissions across their operations and value chains as soon as possible and by at least 45% by 2030 compared with 2010 levels and to zero before 2050, in line with the recommendations of the IPCC. They should do so without excessively relying on offsets and carbon removal mechanisms, and implement detailed action plans to operationalize such commitments. In particular, energy producers and providers must expeditiously phase out the production and use of fossil fuels – including

[801] Para 2.5.5 and 4.4.19.
[802] Para 4.4.54
[803] Para 4.4.53.
[804] The Climate Docket, "Carbon Majors can be held liable for human rights violations, Philippines Commission rules", 9 December 2019, climatedocket.com/2019/12/09/philippines-human-rights-climate-change-2/. See also Amnesty International, "Philippines: Landmark decision by Human Rights Commission paves the way for climate litigation", 9 December 2019, amnesty.org/en/latest/news/2019/12/landmark-decision-by-philippines-human-rights-commission-paves-way-for-climate-litigation/
[805] UN Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, Report, 4 October 2019, UN Doc. A/74/161, para. 72.
[806] The UN Guiding Principles on Business and Human Rights outline what is expected from business enterprises to fulfil their responsibility. See UN Office of the High Commissioner for Human Rights, *Guiding Principles on Business and Human Rights: Implementing the United Nations "Protect, Respect and Remedy" Framework* (2011), UN Doc. HR/PUB/11/04, ohchr.org/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf. The OECD Due Diligence Guidance for Responsible Business Conduct, which was adopted in May 2018, offers practical guidance on human rights, environmental due diligence and corruption for businesses. See oecd.org/investment/due-diligence-guidance-for-responsible-business-conduct.htm

by shifting their portfolio towards human renewable energy produced consistently with human rights.

- Financial institutions, such as banks, asset managers and insurance companies, should stop financing and investing in new projects, activities and industries that drive fossil fuel expansion and deforestation. They should phase out existing funding and investments on a timeline aligned with the 1.5°C imperative, ensuring that funding and investments for the most polluting fossil fuels and forms of production, such as coal, peat, fracking and tar sands, are phased out as soon as responsibly possible, or by 2030 at the latest in wealthy industrialized countries and by 2040 in all other countries.
- As part of their responsibility to implement human rights and environmental due diligence, companies should identify, prevent, reduce and account for GHG emissions, throughout their global operations, and make relevant information about their emissions and mitigation efforts public, including of all their subsidiaries, affiliates and supply chain.
- When planning to engage in climate change mitigation and adaptation activities, including those related to the production of renewable energy and associated technology, companies must conduct, at all stages of the due diligence process, effective, meaningful and informed consultations with both affected and potentially affected rights-holders, including but not limited to workers and specific groups such as Indigenous Peoples, people facing racial discrimination and minorities, respecting established rights and standards on consultation and communication such as free, prior and informed consent.
- Businesses should be accountable for their climate impacts and human rights harms and ensure affected people have access to remedies. If harm occurs, business enterprises are responsible for providing a remedy or co-operating in remediation efforts. They should engage in solutions and remediation, not simply disengage from a country or region.[807]
- Refrain from lobbying governments whether directly or indirectly through trade associations for policies and decisions that perpetuate the carbon-based economy. They should also refrain from supporting public information campaigns based on inaccurate, misleading and unfounded assertions that make it more difficult for the public to access accurate information and make informed decisions.

[807] For example, see M. Dummett, *The Cobalt Supply Chain's Choice*, Benchmark Quarterly, 2020, Issue 22.

14. CONCLUSIONS

The climate crisis is one of the most critical threats to human rights faced by humanity. As illustrated in this document, climate change is already wreaking havoc on the lives of millions of people, deepening inequalities and discrimination, and threatening the enjoyment of most of our rights.

It is not an unexpected crisis, nor one that is outside of human control. Just as states and corporations are responsible for it, they have the responsibility – and the capacity – to tackle it.

States can and must take decisive action now to reduce greenhouse gas (GHG) emissions at the scale and pace required by scientific evidence, and to support people to adapt to the unavoidable effects of climate change. Businesses across a range of sectors, including finance, must also take urgent action to rapidly reduce and ultimately eliminate GHG emissions and other practices damaging to the environment.

In addition, wealthier states must provide sufficient resources to support developing countries to tackle the climate crisis through climate change mitigation and adaptation measures. In particular, states that have a greater responsibility for the climate crisis – due to their higher than average per capita current and past emissions – must ensure remedy to affected people based on the extent of their contribution to this harm. Governments, corporations and international organizations must ensure that actions taken to address the climate emergency do not violate human rights, and that the transition to decarbonized and more resilient economies and societies is just, fair and inclusive for all, contributing to correcting existing imbalances in terms of enjoyment of and access to rights.

In the context of the COVID-19 pandemic and its economic fallout, it is crucial that states do not miss the opportunity to align the economic recovery with the imperative of tackling the climate crisis. Fiscal recovery measures should facilitate the transition to a zero carbon economy and resilient and just society, rather than entrenching our dependency from fossil fuels and deepening inequalities.

The above are not just moral imperatives. As this document shows, they are actions grounded in human rights standards and principles. As such, states and corporations that fail to comply face not just moral condemnation. They also stand responsible for their failure to protect human rights in the face of the climate emergency and they can be held accountable under human rights law.

Human rights activists can support and be guided by those who are on the front line of the climate crisis, and who have been leading the struggle for climate justice for a long time. They can amplify the framing of climate change as a human rights crisis, campaign for climate policies, measures and projects with human rights at their heart and contribute to holding polluters to account.

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STOP BURNING OUR RIGHTS!

WHAT GOVERNMENTS AND CORPORATIONS MUST DO TO PROTECT HUMANITY FROM THE CLIMATE CRISIS

The climate emergency is a human rights crisis of unprecedented proportions. It is already wreaking havoc on the lives of millions of people, deepening inequalities and discrimination, threatening the enjoyment of most of our rights and the future of humanity.

States' efforts to tackle climate change remain far below what is required to avoid the most devastating impacts for people and the planet. Despite their duties under international law, the vast majority of wealthy industrialized countries are failing to phase out emissions fast enough and to provide sufficient financing and support to developing countries for a just transition to zero-carbon economies and resilient societies.

States violate human rights when they fail to take adequate action to reduce carbon emissions, including by rapidly phasing out fossil fuels, to support people to adapt to climate change and to provide remedy for the losses and damages resulting from climate-related impacts. Businesses abuse human rights when they fail to reduce and ultimately eliminate emissions and other practices damaging to the environment.

This publication spells out states' human rights obligations and corporate responsibilities to tackle the climate crisis and shows how human rights are essential for a fast and fair decarbonization of our economies and societies.

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