

Climate change, human rights and sustainability

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Abstract

The aim of this paper is to explore the links between climate action, human rights and sustainability. The study is performed through an extensive literature review, combining aspects PRISMA guidelines and the Recursive Content Abstraction (RCA) analytical approach. First, we present the intrinsic relationship between climate change and SDGs, and how their compliance could be affected by climate change. Next, we analyze the evolution of human rights, and how present and future climate change impacts can harm the human rights of the first, second, third and fourth generations. We also discuss the importance of the government's policies and actions to protect and guarantee human rights within the actual reality of climate change effects, adaptation, and mitigation in the face of sustainable development goals (SDGs). We sustain that both national policies and international cooperation are necessary to affront the climate change challenges, guaranteeing the human rights at the same time. Based on the topics discussed, at the end the paper presents some final remarks.

JEL Classification: D63, K32, Q54, Q58, Q59.

Keywords: climate change, human rights, sustainability, justice, public policies.

Cambio climático, derechos humanos y sostenibilidad

Resumen

El objetivo de este artículo está orientado a explorar los vínculos entre la acción climática, los derechos humanos y la sostenibilidad. El estudio se realiza a través de una extensa revisión de la literatura, combinando aspectos de las directrices PRISMA y el enfoque analítico de Abstracción de Contenido Recursivo (RCA). Primero presentamos la relación intrínseca entre el cambio climático y los objetivos de desarrollo sostenible (ODS), y cómo su cumplimiento podría verse afectados por el cambio climático. A continuación, analizamos la evolución de los derechos humanos, y cómo los impactos presentes y futuros del cambio climático pueden perjudicar los derechos humanos de la primera, segunda y cuarta generación. También discutimos la importancia de las políticas y acciones gubernamentales para proteger y garantizar los derechos humanos dentro de la realidad actual de los efectos del cambio climático, la adaptación y la mitigación a la luz de los objetivos de desarrollo sostenible (ODS). Sostenemos que tanto las políticas nacionales como la cooperación internacional, son necesarios para enfrentar los desafíos del cambio climático, garantizando al mismo tiempo los derechos humanos. Con base en los temas discutidos, al final del documento se presentan algunos comentarios finales.

Clasificación JEL: D63, K32, Q54, Q58, Q59.

Palabras clave: cambio climático, derechos humanos, sustentabilidad, justicia, políticas públicas.

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1. Introduction

According to the Future We Want, the outcome document of the 2012 Rio+20 conference, sustainable development requires that we balance economic, social and human development with ecosystem conservation and restoration, in the face of new and emerging challenges. Sustainable development overlaps with the procedural components of human rights and provides a useful lens to discuss its three pillars – environmental, social and economic – all of which are affected by climate change. Climate justice provides a useful framework to discuss the impact of climate change on vulnerable and marginalized communities.

Similarly, we cannot achieve sustainable development and perform efficient climate action in a society with high rates of poverty or inequality (UNGA, 2013). Equity and justice form the core of sustainable development, which includes both inter- and intra-generational equity. The New Delhi Declaration on Sustainable Development also points out that justice is intrinsic to the sustainability debate (UN, 2002; Griggs, 2014).

Clean and healthy environment is necessary for the fulfillment of human rights, such as the rights to life, health, food, housing, self-determination, and informed participation (Heines and Eby, 2019). Anthropogenic climate change nowadays is the most important threat to the environment and human beings. The Global Risk Report (2021) highlights among the most likely risks for the next ten years extreme weather conditions, the failure of climate action and man-made environmental damage. While, among the risks with the greatest impact in the next decade, infectious diseases are in the first place, followed by the failure of climate action and other environmental risks; as well as livelihood crises.

The principle of equity is central to the attainment of sustainable development. It refers to both inter-generational equity (the right of future generations to enjoy a sound environment and secure livelihood) and intra-generational equity (the right of people within the current generation of fair access and equitable use of natural resources).

Thus, notions of fairness and justice are inherent in the concept of sustainable development, which is one of the principles embodied in the United Nations Framework Convention on Climate Change (UNFCCC). Without realizing this central element of sustainable development, it would not be possible to design a successful legal regime regarding climate change.

The latest assessment report from the Intergovernmental Panel on Climate Change (IPCC, 2021) describes how observed and predicted changes in climate will adversely affect billions of people and the ecosystems, natural resources, and physical infrastructure upon which they depend. These harmful impacts include unique extreme events that pose a direct threat to human lives and safety, as well as environmental degradation in medium term, that will undermine access to clean water, food, (UNEP, 2015), and other key resources that support human life.

The main objective of this article is to present the intrinsic relationship between climate change, human rights and sustainability. The methodology is based on an extensive literature review, combining aspects of the “Preferred Reporting Items for Systematic Reviews and Meta-Analyses

(PRISMA) guidelines², and the Recursive Content Abstraction (RCA) analytical approach³. The data were collected through a review of relevant materials including peer-reviewed papers, and official organization documents available on the internet. The documents were identified through a series of searches, using keywords associated with climate change, sustainability and human rights.

The paper is structured in three sections after this introduction. The second part presents how the compliance with the Sustainable Development Goals (SDGs) is directly intertwined with the climate change impacts and proper climate action. In the third part, we center on the linkages between climate change and human rights, beginning with a summary of the evolution of human rights. The fourth part is highlighting the necessary policies and actions that the governments must perform in order to avoid any harm caused on human rights by climate change direct and induced impacts. Finally, we present some concluding remarks.

2. Climate Change and Sustainable Development Goals (SDGs)

The main objective of the SDGs is to create better live conditions for the humanity to, protecting at the same time the environment, and guaranteeing the human rights of present and future generations. To access the impacts of climate change on the compliance with the SDGs is an important task in the face of the present environmental and civilization crisis. It is necessary to design pathways to achieve sustainability, considering the climate change scenarios (Nayen and Islam, 2021), and always protecting the human rights. Table 1 shows the linkage between the SDGs and climate change.

Table 1. Sustainable Development Goals (SDGs) and Climate Change

SDG	CONTENT	LINKS TO CLIMATE CHANGE
SDG1	End poverty worldwide	Has a sub-goal that refers to climate change: By 2030, reduce the vulnerability of the poor and all marginalized groups, and raise their resilience to extreme events and other socio-economic economic and environmental problems provoked or accelerated by climate change.
SDG 2	End hunger, achieve food security and foster sustainable agriculture	Refers to climate change impacts on crops and fisheries (floods, droughts, disease).
SDG 3	Water security	Refers to the need to reduce the number of people suffering affected by water scarcity, also it does not mention explicitly the climate change.
SDG 7	Universal access to clean, affordable and sustainable energy	The need to provide clean energy, is also related to limit the greenhouse gases emissions, and the access to energy by the marginalized population is a part of the resilience and adaptation.
SDG 13	Climate action	It is specifically on climate change and acknowledges that the UNFCCC is the main

² PRISMA is an evidence-based minimum set of items for reporting in systematic reviews and meta-analyses. According to PRISMA guidelines Scopus, Google Scholar databases and grey literature were searched (PRISMA, 2020).

³ For analysis, the configurative and recursive content abstraction (RCA) approach was used to summarize the information from the various sources in a concise and coherent manner.

		institution to address climate change and highlights the need to foster resilience and adaptive capacity to climate change impacts in short, medium and long term. It also stresses the need to integrate climate action into national strategies, and improve environmental education and capacity building regarding mitigation, adaptation, early warning and loss and damage. It also refers to vulnerable states and communities, including women and youth.
SDG 14	Life below water	Presents damage to the submarine life due to the sequestration of the CO ₂ by the oceans, migration of species, coral bleaching, etc.
SDG 15	Life on land	Protect and restore terrestrial ecosystems, avoid deforestation, desertification, and biodiversity loss. The forests are important for carbon sequestration. Many species are in danger of extinction, caused or accelerated by climate change.
SDG 16	Peace, justice and strong institutions	Promote peaceful and inclusive societies, provide access to justice for all, respecting the human rights (Newell, 2022). The strong institutions and the inclusive societies are very important for environmental protection and climate action.
SDG 17	Partnership for the goals	Renew the Global Partnership for Sustainable Development to guarantee the implementation of SDGs. The international cooperation is a key tool to foster sustainability and climate action. The green financing is a key tool to help the developing countries to perform adaptation and mitigation.

Source: produced by the authors.

3. Climate Change and Human Rights

The nature of the linkages between the environment and human rights has been debated for years. However, it has long been recognized that a clean, healthy and functional environment is integral to the enjoyment of human rights, such as the rights to life, health, food and an adequate standard of living (OHCHR, 2015). Some of the most representative international instruments are the International Covenant on Civil and Political Rights and Economic, Social and Cultural Rights, the American Convention on Human Rights, the Convention on Biological Diversity and its protocols, the Ramsar Convention, the Paris Agreement, the Convention United Nations Framework on Climate Change, just to mention some treaties or conventions in the global context. This recognition is reason for the creation of the multilateral environmental agreements (MEAs) to prohibit illegal trade in

wildlife, to preserve biodiversity and marine and terrestrial habitats, to reduce transboundary pollution, and to prevent other behaviors that harm the planet and its residents (Ivanova, 2007). At the same time, adherence to human rights—such as those that ensure public access to information and participation in decision making—contributes to more just decisions about the utilization and protection of environmental resources, and protects against the potential abuse under the auspices of environmental action. Thus, domestic environmental laws and MEAs can both be strengthened through the explicit incorporation of human rights principles, even as they already contribute to the realization of human rights.

3.1 Evolution of the human rights

Human rights were conceived as the emergence, evolution and consolidation of fundamental rights, from the perspective of their generation. Initially these arise as protection of the most precious individual values such as freedom and equality, known as First Generation Human Rights (Alexandrescu et al., 2021). Later they evolve from that original individuality to a collective coverage as follows (UNESCO, 1991): a) Liberty rights; b) Equality rights; c) Rights of autonomy; d) Rights of civic and political Participation; e) Rights to protection (by the State).

The Second and Third Generation Rights would come, are also known as Social and Collective Rights, and are manifested in the context of the national community or of world humanity. Some examples are the right to peace, environmental rights, rights of minorities, rights of gender, rights of nature, and the human right to water.

Many other fundamental rights have been developed after the world wars. They would emerge from the second half of the 20th century and especially in the last third of the present century (Soriano Castro, 2015). Many of them are still in the process of being admitted and recognized. The human right to safe environment was formally recognized by the General Assembly of the United Nations on July 27, 2022.

The so-called Fourth Generation Rights are based on the need to ensure access to information and communication technologies for all individuals. Technology arises out of necessity and its purpose is to make resources more efficient and to make our daily lives easier and more practical. Beyond these, the technology helps monitoring the recent developments related to the environment, climate change and impacts on livelihoods.

In the context of the so-called Rights of Nature two main approaches exist: 1) Biocentrism, 2) Anthropocentrism. The first approach conceives the human being as a part of the ecological community, one more member of the biotic community. It is based on deep ecology that considers the intrinsic value of the nature, considering that the well-being and prosperity of the earth's species (human and non-human) have an intrinsic value (Scott, 2003).

Meanwhile, the second approach refers to the human being as the center of the universe, being then, from this position, that nature will serve the human being as a complement to fulfill the goals of self-realization. Under this position, respect for nature starts from the benefit that it represents for human interests by eco-systemic services.

It is necessary to develop a research agenda, beyond the aforementioned theoretical positions, that incorporates environmental justice issues and explores the relationship that can be had in the face of an increasingly felt impact of climatic variations on the viability of survival and

sustainability of human life (Newell et al., 2021). Let us remember that the UNFCCC defines this as a change in the climate attributed directly or indirectly to human activity, which accumulates GHG in the atmosphere, thus causing global warming.

The Human Right to the environment as one of the so-called “third generation rights.” it cannot be analyzed from the approach that has traditionally corresponded to another category of rights, whose axiological basis and purposes are completely different.

The recognition of legal personality and, therefore, rights to nature has a double dimension: the first is the objective or ecological, which protects the environment as a fundamental legal right in itself, which attends to the defense and restoration of nature and its resources regardless of its repercussions on the human being, and the second is subjective or anthropocentric. It is even affirmed, that the violation of any of these two dimensions constitutes a violation of the human right to the environment.

In this context, there are some guiding principles: a) Precautionary principle (Article 15 of the Rio Convention on Environment and Development) environmental damage requires a broad interpretation in light of the precautionary principle; b) Principle *in dubio pro natura* (in any environmental conflict, the interpretation that favors the conservation of the environment must always prevail); c) Principle of citizen participation (Declaration of Rio de Janeiro enshrines the principle of citizen participation in environmental matters); d) Principle of non-regression that implies that the authorities cannot reduce or affect the level of environmental protection achieved, unless it is absolutely and duly justified. (United Nations Conference on Sustainable Development formulated the obligation of all States not to go back and affect the thresholds of environmental protection already acquired).

3.2 How climate change affects human rights

In 2007 the Malé Declaration was adopted, promoted by a group of small vulnerable states. For the first time governments recognized that climate change has clear implications for the enjoyment of human rights, and was actualized in 2021 (OHCHR, 2021). And in 2008, the United Nations Human Rights Council adopted the first resolution linking climate change to impacts on human rights. In addition, the Office of the High Commissioner for Human Rights (OHCHR) produced the first report explaining the linkage. Moreover, in 2010, the members of the UNFCCC agreed in Cancun that the parties should fully respect human rights in all climate actions. The relevance of human rights to climate change today is fully recognized. On Human Rights Day in 2014, the UN issued joint statement recognizing the threat climate change is representing to human rights, and calling on States to include the human rights at the core of climate change action. In the Geneva Pledge for Human Rights in Climate Action (2015), eighteen states committed to share best practices and data between two experts communities: in human rights and in climate experts. Thus, collective capacity would be generated to implement climate action that in full respect with the human rights (UNEP, 2015).

In Table 2, we discuss some of the most affected human rights by climate change.

Table 2. Human rights affected by climate change

HUMAN RIGHT	CLIMATE CHANGE IMPACT
The right to life	The Universal Declaration of Human Rights states that each person has the right to life, liberty and security. Also, according to the International Covenant on Civil and Political Rights (ICCPR) every human being has the right to life. All states have committed to respect, protect, and fulfil the right to life. Climate change clearly poses a threat to human life (hurricanes, floods, disease vectors, etc.). According to the IPCC, the risk of having further extreme weather events and the resulting endangerment of human lives is “moderate to high at temperatures of 1°C to 2°C above pre- industrial levels.” (IPCC, 2021). According to the report by the DARA and Climate Vulnerable Forum (2021) climate change is already responsible for approximately 400,000 deaths per year and that number is expected to rise to 700,00 by 2030.
The right to self-determination	The extreme events many times surpass the adaptation capacity of persons and states, being affected in first place the most vulnerable. Thus, the people must migrate to survive (Amnesty International, 2020). Article 1 of the UN Charter calls for respect of the self-determination of persons and this is challenged by climate change impacts. The warming of 1.5°C and the rising sea levels are a serious treat for the Small Island Developing States (IPCC, 2018) for their existence and for the livelihoods of their population.
The right to development	According to Article 55 of the UN Charter governments must promote conditions of socioeconomic progress and sustainable development. The Declaration on the Right to Development includes all three pillars of the UN Charter – peace and security, human rights and development. Development as an inalienable human right that entitles every human person to participate in the decisions about socioeconomic and political development, the implementation and monitoring of the development pathways, respecting all human rights. Climate change effects are causing abrupt and progressive damage to the economic development (Acevedo, 2016; Lafakis et al., 2019). According to the IPCC limiting the effects of climate change is necessary for the sustainable and inclusive, including poverty eradication. We can he same idea in the Sustainable Development Goals, especially Goal 13 on climate change.
The right to food	The right to food is enshrined in the Universal Declaration of Human Rights and the ICESCR. Article 11 of the ICESCR states that everyone has fundamental right to be free from hunger. In extreme cases, food insecurity caused by droughts or floods because of climate change has affected to great extend many developing countries, thus causing some reversal of the human rights gains. According to the IPCC, climate change undermines food security, and harms the right to food. The World Bank (2012) has estimated that a 2°C increase in average global temperature would put between 100 million and 400 million more people at risk of hunger and could result in over 3 million additional deaths from malnutrition each year. Moreover, vulnerable groups are at a greater risk. Therefore, the states must act individually and through international

	cooperation, to ensure an equitable distribution of world food supplies in relation to need.
The right to water and sanitation	Although the right to water is not explicitly recognized in the ICESCR, according to the Committee on Economic, Social and Cultural Rights, the human right to water means that the human beings must have access to sufficient, accessible and affordable water for personal uses. The United Nations General Assembly recognized the right to safe and clean drinking water and sanitation as a human right that essential for life and other human rights (UNGA, 2010). Another legal instrument that recognizes the right to water is the Convention on the Elimination of Discrimination against Women. According to the IPCC (2021) climate change impacts will reduce surface water and groundwater. The most affected areas are in the dry subtropical regions. The IPCC (2022) also found that climate change will increase the water scarcity in cities, In the rural areas the lack of water is affecting directly the livelihoods of the population.
The right to health	The climate change effects create changes in the physical environment that affect human health The human right to health is presented in the Universal Declaration of Human Rights and in Article 12 of the ICESCR, stating that all persons have the right to health. According to World Bank (2010, 2012), climate change will cause increasing health impacts due to high malnutrition, proliferation of vector-diseases. Also, the contamination of the air leads to respiratory problems and lung cancer. Other risk are the heat waves, particularly dangerous to old persons. The recent report of the IPCC found that climate change is expected to affect the health in many regions and especially in tropical regions and developing countries (IPCC, 2022). Climate change is related to zoonosis disease ((Kilpatrick and Randolph, 2012; Tastan y Ak Can, 2019). When the role of infectious agents was discovered in the late 19th century, it has been noted that climatic conditions affect epidemic diseases. The emergence and spread of Covid-19 were not only predictable, but it was predicted the appearance of other viral outbreak in wildlife that would be a threat to public health (Schmid et al., 2015; Ryan et al., 2019).
The right to housing	The Article 11 of the ICESCR states that all persons have the right to adequate housing that is an important component of the wellbeing. The human right to housing is an important requisite to enjoy all of central importance for the enjoyment of all economic, social and cultural rights. The right to housing is endangered by climate change by extreme events, erosion and flooding. Some territories could result inhabitable and the persons will be forced to migrate (Yates et al., 2022). Sea level rise is a risk for the human settlements in low-lying areas. These impacts are expected to continue in long term, even if the raise of temperature is controlled stabilized as a result of the Paris Agreement

	<p>Climate change may literally erase low-lying island States from the map, that is why it is important guaranteeing the displaced inhabitants of these areas migration with dignity.</p>
<p>The right to education</p>	<p>According to the Article 13 of the ICESCR this right, guarantees to all persons compulsory free primary education. Also, the governments are called to realize in medium term free and inclusive secondary education. However, the impacts of climate change and the actions of mitigation and adaptation threaten the ability of States to expend maximum available resources for the progressive realization of the right to education and can press children to work instead to study.</p> <p>However, funds originally oriented to providing quality education, are used to address climate change impacts. Failure to guarantee the right to education and the diversion of funds from education, not only harms but also creates long-term impacts for the development, and could affect other human rights.</p> <p>Environmental education should be implemented for all the ages to generate informed and conscious people that can be part of the decision making on conservation of natural resources and sustainable development.</p>
<p>The right to meaningful and informed participation</p>	<p>The ICCPR guarantees to all persons the right to participate in public affairs and to vote. The Declaration on the Right to Development states that all persons are entitled not only share the benefits, but to participate in the formulation, implementation and monitoring of policies and actions for socioeconomic, cultural and political development and therefore, be active agents of the development process. Governments have the right and the duty to formulate national development policies to guarantee the sustainable development and the wellbeing of the population. The planning must be performed bottom-up with the participation of all the segments of the population with gender approach, and inclusive to all vulnerable groups (including disabled persons).</p> <p>All the population must be informed according to the Article 19 of the ICCPR, which presents the right to freedom of expression, including the right to seek, receive, share and publish information and ideas about different topics.</p> <p>Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision- making processes. States shall facilitate and encourage public awareness and participation by making information widely available. The bottom-up approach to the formulation of public policies must be enabled and encouraged. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided. Given that persons, groups and peoples in vulnerable situations face greater risk and threats from climate change, it is particularly</p>

	important that the right to meaningful and informed participation in decisions likely to affect their rights and survival is honored. In addition to being a human rights obligation, ensuring meaningful and informed participation of all persons in climate policy should also improve outcomes. According to the IPCC, recognition of diverse interests, circumstances, social-cultural contexts and expectations can benefit decision-making processes and consequently, enables an effective and rights-based approach to tackling the threat of climate change.
The rights of future generations	The rights of future generations are not formally recognized in the main human rights instruments. Only the rights of children are formally recognized. However, the recognition of the rights of future generations is very important according to the definition of the sustainable development and the ODSs. The most important in this context is the principle of equity. The Stockholm Declaration of the United Nations Conference on the Human Environment states that the conservation of the optimal conditions of the environment in intra-and intergenerational context must be the most important goal for all countries and individuals. Additionally, protecting the environment for present and future generations is the necessary premise to exercise the right to freedom, equality and optimal quality of life. Moreover, according to the Rio Declaration the right to development must be equitably applied meet to present and future generations. Other documents that reaffirm the links between the environment, climate change, sustainable development and human rights are the Vienna Declaration, the 2002 Johannesburg Declaration, and the Paris Agreement.

4. Obligation of the governments to guarantee the human rights in the face of the impacts of climate change

Climate change affects almost all of internationally recognized human rights (Devandas Aguilar et al., 2015). Governments must perform adequate policies and actions for efficient climate action to limit the raise of the temperature (mitigation) and to affront the adverse climate change impacts (adaptation). The former will guarantee the human rights of the persons within an intra-and intergenerational context.

1. Climate Change Mitigation. In order to advance in the mitigation of climate change and to prevent its negative impact on human rights, governments have an obligation to respect and protect, the human rights of all persons without discrimination. If the present and future negative impacts of climate change are not properly addressed, the fulfillment of human rights cannot be guaranteed. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2021) confirms that climate change is caused by anthropogenic influence caused by economic development based on fossil fuels, and consequent emissions of greenhouse gases. As already showed in the previous part of the paper, climate change can harm the fulfillment of human rights to health, housing, water and food. These negative impacts are particularly severe for vulnerable groups

of the population (women, children, indigenous groups, migrants, etc.), and people in poor developing countries. That's why, governments have to include the mitigation in the national development plans and strategies (Laws, regulations, taxes, etc).

2. Adaptation to climate change effects. Governments must implement policies and actions to adapt to climate change impacts and increase the resilience in geographical and sectoral context. That will ensure the human rights to housing, water, food, etc. To ensure that all persons have the necessary capacity to adapt to climate change, states must ensure that appropriate adaptation measures are taken to protect and fulfil the rights of all persons. Special attention must be granted to the population in most endangered areas (e.g., small islands, coastal zones, tropics and sub-tropics). Governments must build the enabling environment for climate change adaptation, that includes regulations, environmental education and capacity building (See and Wilmsen, 2022). Also, sufficient financial resources must be oriented to adaptation policies. Here is important to guarantee the access of the developing countries to the green climate funds that enable them to perform climate action, without the need to withdraw resources from priority activities, as combat the poverty, education and other. In this context, gender issues have to be prioritized (UNWW, 2009). Adaptation, loss and damage, human rights and sustainable development are all areas where there are clear or potential overlaps, synergies, and conflicts with the cooperation underway in relation to mitigation. In addition, these areas are all sites within the multi-level framework that characterizes climate governance where activity takes place that may complement international cooperation on climate mitigation under the Paris Agreement and UNFCCC regime (IPCC, 2022). Considering emerging climate change litigation that pursues rights claims, Peel and Osofsky (2018) argue that the common characteristics of the limited number of cases show increased use by litigants of human rights arguments and the courts are more and more receptive to this specific approach. As an example, we can mention the successful Dutch landmark Urgenda climate case. According to the adopted human rights approach based on the obligations under the UNFCCC climate regime and climate science, as a result the court decided to order the mitigation of CO₂ emissions by 25 per cent by end-2020 compared to 1990. This tendency to affront the lack of mitigation action by government under the argument of human rights violation, is expected to continue and contribute to the active governmental action in the mitigation area.

3. Prevent, assess and remedy human rights harms caused by climate change. The Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, and other human rights instruments require that the governments must provide effective remedies for human rights violations. Climate change impacts already provoked human rights damage to people all over the world (sea-level rise, floods, droughts, fires, hurricanes, scarcity of water. Additionally, for most vulnerable countries and communities, the survival could be endangered (Devanandas Aguilar et al, 2015). Communities and persons affected must have access to instruments, such as judicial and other compensatory mechanisms (Davis and Ramírez-Andreotta, 2021). The Paris Agreement is introducing the concept of loss and damage to highlight the obligations to remedy the irreversible negative impacts. The obligations of governments in the context of climate change extend to all inhabitants and to loss and damage on national and international level. The climate action of the governments must be monitored and accountability to the stakeholders must take place if the actions are insufficient or some human rights are harmed, both by lack of action or by inadequate climate policies (Van Bommel and Hoffken, 2021). According to the United Nations Guiding

Principles on Business and Human Rights governments must also take adequate actions to protect all persons from human rights harms caused by businesses; to ensure that their own activities and the public-private partnerships respect human rights, and contribute to affront already caused loss and damage (Campello Torres et al., 2021). Businesses, similarly to the governments are also duty-bearers. The World Business Council on Sustainable Development (WBCSD) is a global, CEO-led organization of over 200 leading businesses that collaborate to guarantee the socioeconomic transformation to a sustainability. All business sectors and all major economies participate in the WBCSD, representing a combined revenue of more than USD \$8.5 trillion and with 19 million employees. The WBCSD enhances the companies contribution to sustainability through instruments, services, capacity building, experiences, and successful cases. It includes a Global Network of almost 70 national business councils in the world. The main vision is to create by 2050 life conditions, that include prosperity, sound environment and wellbeing for all inhabitants of the planet. Vision 2050 explored what a sustainable world would look like, how these conditions could be achieved, and the important component of companies contributions in making that vision a reality. The report Action 2020 specified the roadmap of for business actions and solutions. (WBSCD, 2019). Additionally, some climate actions, as mitigation or geoengineering can be harmful to human rights (Pottier, 2018; Wiedling et al., 2020). Governments and private enterprises must be accountable for their climate impacts, and participate responsibly in climate policies with human rights approach. The responsibility of businesses is important as well, to comply with the international obligations of the country.

4. Provide maximum available resources for sustainable, human rights-based development. According to human rights approach under core human rights treaties, governments are acting individually and collectively to mobilize and allocate the resource from green climate funds for the progressive realization of socioeconomic and cultural rights, as well as for the advancement of civil and political rights and the right to development (Conversi, 2020). The failure to mobilize available resources to guarantee the human rights and prevent damage caused by climate change turns ineffective this obligation (Yazar and York, 2022). The access to resources to address climate change must not compromise other efforts of governments to pursue the right to water access, housing, etc., and the right to development (Siders and Ajibade, 2021). Some innovations (as carbon taxes) can be designed to internalize environmental externalities and mobilize additional resources to finance mitigation and adaptation efforts that benefit the poorest and most marginalized. The industrialized countries should recognize their historic responsibility of CO₂ emissions and contribute funds to enable the climate action in the developing countries (Anantharajah and Setyowati, 2022). The investments to the development projects must be in line with the principles of environmental justice and just transition (Weber and Cabras, 2021), including the public-private partnership (PPP).

5. Ensure equity, equality and non-discrimination in climate action. According to the Rio Declaration on Environment and Development, the Vienna Declaration and 'The Future We Want' (Rio+20) all countries are entitled to perform sustainable development. That would satisfy the rights of present and future generations to achieve equity and sustainability. The UN Framework Convention on Climate Change calls for States to protect future generations and to perform climate

action "on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities". It is true that climate change can affect all the people in all the regions, but those who have contributed the least to greenhouse gas emissions (i.e., the poor, children, and future generations) are those most affected (Ivanova et al., 2020). Equity in climate action means that the results of mitigation and adaptation should benefit people in poor developing countries, small island developing states, indigenous and vulnerable groups, and future generations. Since the Paris Agreement was introduced the concept of The Just Transition that is almost mainstreamed. Originating from civil society discourse and activism around issues of environmental and, primarily, labor/workers' rights, it is now inextricably linked to the equity and justice assumptions of climate action, as well to the implicit and explicit principles of equity in the UNFCCC (2010). This was explicitly recognized in the Paris Agreement (2015) and the Just Transition Declaration (2018) signed by 53 countries at COP 24, which recognized the need to factor in the needs of workers and communities to build public support for a rapid shift to a zero-carbon economy (Shelton and Eakin, 2022). The states, private sector and NGOs must explore innovative pathways to just transition (CSIS, 2021). The principles of the Just Transition are progressively adopted by climate finance and investment (Ivanova, 2022).

Governments have committed to guaranteeing equality and non-discrimination (OHCHR, 2019, 2022). Climate action must incorporate the human rights approach and avoid inequalities within and between regions and communities (for example, indigenous groups). For example, indigenous peoples' rights should be fully reflected in line with the United Nations Declaration on the Rights of Indigenous Peoples and actions likely to impact their rights should not be taken without their free, prior and informed consent. All policies and actions for climate change must include a gender approach (Farhana, 2021). Also, the rights of children, migrants, disabled people, and other vulnerable groups must be effectively protected.

6. Environmental education and research, and fair access to technologies and innovation. Environmental education as an institutionalized concept emerged in the 70s practically oriented towards sustainable development and the implementation of Agenda 21 of the United Nations Environment Program (UNEP). Its role is reinforced in the Agenda 2030. The environmental education is crucial to advance the ODSs and will inform the people and build capacities to address environmental and climate change issues (Rangel and Ivanova, 2021). The holistic education must include environmental issues and climate justice (Callum McGregor, 2021). The International Covenant on Economic, Social and Cultural Rights recognizes the right of persons and communities to have access to the scientific advances. Innovation and human capacities are the basis for the expansion of the knowledge-based economy (KBE). And the KBE is crucial for the green economy as the success of the Asia-Pacific countries proved (ADB, 2018; Ivanova, 2021). All governments should actively support the development of new climate mitigation and adaptation technologies, such as technologies for water saving, sustainable agriculture, renewable energies, etc. Very important is also to guarantee the access to green technologies through financing facilities, green investment, technology transfer and capacity building. The internationalization of production is creating new incentives and opportunities, and generating new pressures for knowledge acquisition. Unlike most other economic goods, knowledge often has 'public good' characteristics and increasing returns to scale. Therefore, its growing importance raises new challenges for public policy (Ivanova, 2021). The technology transfers between countries are important to ensure just and effective international

climate action, being very important the transfers North-South, but gaining place also the transfers South-South. The global intellectual property regimes must not obstruct the access to green technologies, and create incentives to meet the ODSs. Also, it is important to protect the right of indigenous peoples to participate in decision making and benefit from the use of their knowledge, and ancestral practices.

Additionally, climate change research must be promoted to present the current data and the tendencies in the expected impacts of climate change. The organizational and technological innovation are also very important areas for just climate action (Klinsky et al., 2017; Nayen and Islam, 2021).

The sensitivity and culture of the society and the educational institutions is very low regarding the environmental issues (disinterest, apathy and minimal commitment to environmental and educational problems in general). The prevalence of the top-down approach in planning is hindering the population to participate with its particular visions in the decisions and actions on the development due to top-down approaches to planning. Additional difficulties to involve the population are the unemployment, migration, addictions, and loss of values that lead to social disintegration. Additionally, because of discontinuity the environmental education and promotion programs and campaigns are not very efficient. Their teaching approaches and instruments often do not correspond to the socioeconomic and cultural specificities of regions or communities (Rangel and Ivanova, 2021).

7. Meaningful and informed participation of all the population in the sustainable development and climate action policies. The International Covenant on Civil and Political Rights and other human rights instruments guarantee all persons the right to free, active, meaningful and informed participation in public affairs. The public participation in climate action plans and strategies is critical for the implementation of mitigation and adaptation instruments, adequate for specific regions, socioeconomic and cultural characteristics. This is requiring well established participatory institutions and processes, that guarantee transparency of the access to information on climate change impacts and the pathways to affront these.

The scenarios of the present and future climate change impacts must be important part of the risk atlases. The early warning systems must be accessible by all population, including islands and remote areas (Dolšak and Prakash, 2022). All population groups must be informed on the actions planned in adaptation and mitigation in the regions and local communities of their residence. In this process is very relevant to comply with human rights related to participation of highly vulnerable persons and communities in decision-making processes and to avoid any adverse effects of climate action. The bottom-up approach to the formulation and monitoring of climate change policies must be further promoted. Moreover, climate action should be assessed regarding the respect and fulfillment of human rights. To make such assessment efficient, human rights indicators should be developed and periodically monitored.

8. International cooperation. The UN Charter, the International Covenant on Economic, Social and Cultural Rights, and other human rights instruments impose upon governments the duty to cooperate to ensure the realization of all human rights. The ODSs also contemplate the international cooperation as an important requisite for sustainability. Climate change is endangering

human rights, human lives and livelihoods in all the planet, with transborder and transregional impacts. States should share resources, knowledge and technology in order to address climate change. That's why it must be affronted by all the countries, considering the historical responsibility of the developed states. In this context, the green climate funds and special financing instruments by the regional developments banks are created, that are additional to existing official development aid (ODA). Another problem that implies the international community, are the climate migrants, and the special assistance required by the small island developing states. According the UN Common Understanding of a Human Rights based approach to Development Cooperation, all the international collaboration must be relevant to human rights principles and should be oriented in first place to most vulnerable regions, communities and persons.

5. Final remarks

The 2030 Agenda marks a change in the way nations consider their present and future development. The idea of economic growth without considering the impacts on the environment and human beings, is now substituted by the sustainable development that values equally the economic, social and environmental pillars, with special attention to human rights and vulnerable groups. The new framework finally includes key human rights principles like universality and inalienability, indivisibility, interdependence and interrelatedness, non-discrimination and equality, participation and inclusion, accountability and the rule of law.

The UNFCCC is a framework convention and it is open to evolution and continuing negotiations. The Paris Agreement (2015) established a high level of ambition of climate action that is protecting the human rights from the negative effects of climate change. During the COP 26 in Glasgow (2021) the concepts of loss and damage were introduced, that further protect human rights. Generally, in climate change negotiations, the human rights principles of transparency, participation and accountability have an important role. Participation is a basic human right in itself, and a precondition or catalyst for the realization and enjoyment of other human rights (UNFCCC, 2015). The legal obligations of governments and businesses to address climate change are the subject of growing consensus (Oslo Principles on Global Climate Change Obligations, 2015).

Sustainable development requires the generation and application of creative ideas and innovative designs and techniques. For this reason, the UN must collaborate with governments, the private sector, development agencies and civil society organizations (CSOs) to provide strong institutional and financial support to universities and other research institutions. Appropriate legal frameworks and strict enforcement of regulations to ensure that all stakeholders comply with the SD agenda and respect the human rights must support all of this.

There must be constant education on sustainability and the impact of climate change by the UN, governments, schools, universities, as well as civil society organizations, for all world inhabitants. Awareness programs should be aimed at ensuring that the residents of each country understand the concept and principles of sustainable development and climate action, and are committed to responsible environmental, economic, and social behavior, as well as participation in the formulation of policies.

Climate action is an intrinsic component of sustainability. Climate justice requires that climate action is consistent with existing human rights agreements, obligations, standards and

principles. Communities, countries and regions that have contributed the least to climate change are exposed to mayor impacts and damage by climate impacts. These must be active participants in the formulation of climate policies and primary beneficiaries of climate action and cooperation.

The basic human rights principles of equality and non-discrimination require action to address and remedy the disproportionate impacts of climate change on the most marginalized and to ensure that climate actions benefit persons, groups and peoples in vulnerable situations and reduce inequalities. The Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights (ICCPR) and other human rights instruments make it clear that the human rights of all persons must be properly safeguarded. The main characteristics of a human rights-based approach are the following: (1) In the formulation of strategies, policies and actions, the main objective should be to fulfill human rights; (2) The specific human rights holders should be identified, empowered, and involved in the policies formulation and monitoring; (3) Principles of international human rights law should guide all policies, and also their implementation and assessment of the outcomes.

Government's policies and actions therefore require international cooperation, including financing, green investment, technology transfer and capacity-building support, to advance towards a socioecological transformation based on carbon-neutral economy, green technology and sustainable development. To achieve this scenario, the people must be empowered to participate in policy formulation and monitoring, and that will enable respect and compliance with all human rights for the whole world population.

To wrap up, the 2030 Agenda has five general axes, known as the five Ps: people, planet, prosperity, peace and partnerships, which encompass the 17 SD, and all five axes are intrinsically connected to human rights. Finally, we hope that this paper will contribute to further consider the human rights approach to mitigation and adaptation policies and instruments, with broad participation of people, communities and countries, and within a sustainability framework.

References

- [1] Acevedo, S. (2016). Gone with the Wind: Estimating Hurricane and Climate Change Costs in the Caribbean. 40 pp. <https://www.imf.org/en/Publications/WP/Issues/2016/12/31/Gone-with-the-Wind-Estimating-Hurricane-and-Climate-Change-Costs-in-the-Caribbean-44333>
- [2] ADB (2018). Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific. Asian Development Bank. ISBN 9789292612856.
- [3] Alexandrescu, F., Anghel, I., Stănescu, S., Ștefănescu, L. & Pop, A. (2021). From environmental to climate justice: social-environmental expulsions and the emergence of a climate edge in Europe, *Globalizations*, 10.1080/14747731.2021.2009307, 19, 5, (760-780).
- [4] Amnesty International (2020) Climate Change. <https://www.amnesty.org/en/what-we-do/climate-change/>
- [5] Anantharajah, K. & Setyowati, A.B. (2022). Beyond promises: Realities of climate finance justice and energy transitions in Asia and the Pacific, *Energy Research & Social Science*, 10.1016/j.erss.2022.102550, 89, (102550).

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- [6] Callum McGregor, B. C. (2021). Towards climate justice education: views from activists and educators in Scotland, *Environmental Education Research*, 10.1080/13504622.2020.1865881, 27, 5, (652-668).
- [7] Campello Torres, P.H., Leonel, A.L., Pires de Araújo, G. (2021). Climate Injustice in Brazil: What We Are Failing Towards a Just Transition in a Climate Emergency Scenario?, *Towards a just climate change resilience*, 10.1007/978-3-030-81622-3_6, (81-107).
- [8] Conversi, D. (2020). The Ultimate Challenge: Nationalism and Climate Change, *Nationalities Papers*, Volume 48, Special Issue 4: Special Issue on Migrant Rights, Agency, and Vulnerability, pp. 625 – 636.
- [9] CSIS [Center for Strategic and International Studies] (2021). Pathways for Just Transition, https://justtransitioninitiative.org/wpcontent/uploads/2021/02/JTI_Pathways_Report_WEB.pdf
- [10] DARA and the Climate Vulnerable Forum, Second edition: A guide to the cold calculus of a hot planet, DARA and Climate Vulnerability Monitor, 2021, <https://daraint.org/climate-vulnerability-monitor/climate-vulnerability-monitor-2021>.
- [11] Davis, L.F. & Ramírez-Andreotta, M.D. (2021). Participatory Research for Environmental Justice: A Critical Interpretive Synthesis, *Environmental Health Perspectives*, 10.1289/EHP6274, 129, 2, (026001).
- [12] Devandas Aguilar et al. (2015). The effects of climate change on the full enjoyment of human rights. OHCHR, <http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=16049&LangID=E>
- [13] Dolšak, N. & Prakash, A. (2022). Three Faces of Climate Justice, *Annual Review of Political Science*, 10.1146/annurev-polisci-051120-125514, 25, 1, (283-301).
- [14] Farhana, S. (2021). Climate change, COVID-19, and the co-production of injustices: a feminist reading of overlapping crises, *Social & Cultural Geography*, 10.1080/14649365.2021.1910994, 22, 4, (447-460).
- [15] Griggs, D., Smith, M. S., Rockström, J., Öhman, M. C., Gaffney, O., Glaser, G. and P. Shyamsundar. (2014). An integrated framework for sustainable development goals. *Ecology and Society*, Vol. 19, Issue 4, pp.49-52. DOI: 10.5751/ES-07082-190449
- [16] Haines, A., Ebi, K. (2019), The imperative for climate action to protect health. *The New England Journal of Medicine* 380 (3): 263-273.
- [17] IPCC. (2018). Global Warming of 1.5 °. An IPCC special report on the impacts of global warming of 1.5 °C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change. <http://www.ipcc.ch/report/sr15/>
- [18] IPCC (2021). Summary for Policy Makers. V. Masson-Delmotte, P. Zhai, Y. Chen, L. Goldfarb, M. I. Gomis, J. B. R. Matthews, et al. (eds.), *Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*.
- [19] IPCC (2022). *Climate Change 2022: Impacts, Adaptation, and Vulnerability*. H.-O. Pörtner, D. C. Roberts, M. Tignor, E. S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.), *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*.
- [20] Ivanova Boncheva, A. (2007). “Los Acuerdos Ambientales Multilaterales y la Organización Mundial de Comercio: ¿colaboración o controversia? En: *Comercio Exterior*, Mayo, Vol. 57, #5, pp. 406-415.
- [21] Ivanova Boncheva, A. (2022). Finance for Climate Action: Postcovid-19 Recovery Challenges. *The Mexican Journal of Economics and Finance (REMEF)*, Vol. 17, Núm. 2: Abril - Junio DOI: 10.219.191 remef.
- [22] Ivanova Boncheva, A. (2021). “The Knowledge Based Economy in Asia and the Pacific: Links to the Sustainable Development Goals” en (Rangel Delgado, J. E. y A. Ivanova Boncheva, Ed.) *Knowledge Society and Education in the Asia-Pacific - Recent Trends and Future Challenges*, SPRINGER, ISBN 978-981-16-2332-5, <https://doi.org/10.1007/978-981-16-2333-2>

- [23] Ivanova, A., Zía, A., Ahmad, P. & Bastos-Lima, M. (2020). Climate mitigation policies and actions: access and allocation issues. *International Environmental Agreements: Politics, Law and Economics*, DOI 10.1007/s 10784-020-09483-7
- [24] Just Transition Declaration (2018). Solidarity and Just Transition Silesia Declaration. https://cop24.gov.pl/fileadmin/user_upload/Solidarity_and_Just_Transition_Silesia_Declaration_2_.pdf
- [25] Kilpatrick, M. and Randolph, S. (2012). Drivers, dynamics and control of emerging vector borne zoonotic diseases. *Lancet*. 380(9857): 1946-1955. 10.1016/S0140-6736(12)61151-9
- [26] Klinsky, S., Roberts, T., Huq, S., Okereke, C., Newell, P., Dauvergne, P., O'Brien, K., Schroder, H., Tschakert, P., Clapp, J., Keck, M., Biermann, F., Liverman, D., Gupta, J., Rahman, A., Messner, D., Pellow, D. & Bauer, S. (2017). Why equity is fundamental in climate change policy research. *Glob. Environ. Chang.*, 44, 170–173, <https://doi.org/10.1016/j.gloenvcha.2016.08.002>.
- [27] Lafakis, C., L. Ratz, F. Emily, and M. Cosma, (2019). The Economic Implications of Climate Change. 15 pp. <https://www.moodysanalytics.com/-/media/article/2019/economic-implications-of-climate-change.pdf>.
- [28] Nayeen, S.Z. & Islam, A. (2021). Environmental Justice: Emergence to Implementation and Its Relation with SDGs, *Peace, Justice and Strong Institutions*, 10.1007/978-3-319-95960-3_48, (242-252).
- [29] Newell, P. (2022). Climate justice, *The Journal of Peasant Studies*, 10.1080/03066150.2022.2080062, 49, 5, (915-923).
- [30] Newell, P., Srivastava, S., Naess, L.O., Torres Contreras, G.E., & Price, R. (2021). Toward transformative climate justice: An emerging research agenda, *WIREs Climate Change*, 10.1002/wcc.733, 12, 6.
- [31] Oslo Principles on Global Climate Change Obligations (2015), <https://globaljustice.yale.edu/sites/default/files/files/OsloPrinciples.pdf>
- [32] Peel, J. & Osofsky, H. M. (2018). A Rights Turn in Climate Change Litigation?
- [33] Transnational Environmental Law, Volume 7, Issue 1, March 2018, pp. 37 – 67, *PRISMA* (2020). Preferred Reporting Items for Systematic Reviews and Meta Analyses guidelines, DOI: <https://doi.org/10.1017/S2047102517000292> https://www.covidence.org/blog/what-is-prisma-whats-new-in-the-2020-guideline-2/?campaignid=13271466385&adgroupid=123024099299&adid=524233276765&gclid=Cj0KCQjwjvaYBhDIARIsA08PkE1lxfKRVV7_bemISQKBmJU9F6vv8gsAdt_TYhgtMUleTIIEWCSyA0MaAipFEALw_wcB
- [34] Pottier, A. (2018). Social value of mitigation activities and forms of carbon pricing. *Int. Econ.*, 155, 8–18, <https://doi.org/10.1016/J.INTECO.2018.06.001>
- [35] Rangel Delgado, J.E. y A. Ivanova Boncheva (ed.) (2021). *Knowledge Society and Education in the Asia-Pacific - Recent Trends and Future Challenges*, SPRINGER, Sprinder Briefs en Education & Pacific Circle Consortium, ISBN 978-981-16-2332-5, <https://doi.org/10.1007/978-981-16-2333-2>
- [36] Ryan, S., Carlson, C., Mordecai, E. & Johnson, L. (2019). Global expansion and redistribution of Aedes-borne virus transmission risk with climate change. *PLoS Neglected Tropical Diseases*, 13(3), pp. 1–20. <https://doi.org/10.1371/journal.pntd.0007213>
- [37] Schmid, B., Büntgen, U., Easterday, R., Ginzler, C., Walløe, L., Bramanti, B., y Stenseth, N. (2015). “Climate-driven introduction of the Black Death and successive plague reintroductions into Europe”. *Proceedings of the National Academy of Sciences of the United States of America*, 112(10), pp. 3020–3025. Recuperado de <https://doi.org/10.1073/pnas.1412887112>
- [38] Scott, P. (2003). *Political Theology of Nature*. West Nyack: Cambridge University Press.

- [39] See, J. & Wilmsen, B. (2022). A multidimensional framework for assessing adaptive justice: a case study of a small island community in the Philippines, *Climatic Change*, 10.1007/s10584-021-03266-y, 170, 1-2.
- [40] Shelton, R.E. & Eakin, H. (2022) Who's fighting for justice?: advocacy in energy justice and just transition scholarship, *Environmental Research Letters*, 10.1088/1748-9326/ac7341, 17, 6, (063006).
- [41] Siders, A.R. & Ajibade, I. (2021). Introduction: Managed retreat and environmental justice in a changing climate, *Journal of Environmental Studies and Sciences*, 10.1007/s13412-021-00700-6, 11, 3, (287-293), (2021).
- [42] Soriano Castro, B. (2015). Rights of Nature. The notions of anthropocentrism and biocentrism in the constitutions of Mexico and Ecuador. Thesis. UABCS, Mexico.
- [43] Taştan, R. y Ak Can, A. (2019). "One health approach to decreasing biodiversity and the problem of emerging zoonotic diseases". *Biological Diversity and Conservation*, 12(3), pp. 95–102. Recuperado de <https://doi.org/10.5505/biodicon.2019.52824>
- [44] The World Bank (2010) World Development Report 2010: Development and Climate Change
- [45] The World Bank (2012). Turn down the heat: why a 4°C warmer world must be avoided.
- [46] UN Women Watch, UNWW (2009). Fact Sheet: Women Gender Equality and Climate Change (2009).
- [47] UNESCO (1991). United Nations Committee on Economic, Social and Cultural Rights. General Comment No. 4, New York: United Nations, Art. 1.
- [48] UNFCCC. United Nations Framework Convention on Climate Change (2010). Report of the Conference of the Parties on its sixteenth session. Cancun: United Nations, FCCC/CP/2010/7/Add.1
- [49] UNFCCC (2015). Paris Agreement, https://unfccc.int/sites/default/files/english_paris_agreement.pdf
- [50] United Nations UN (2002). New Delhi Declaration of Principles of
- [51] International Law Relating to Sustainable Development. World Summit
- [52] on Sustainable Development. <http://www2.ecolex.org/server2neu.php/libcat/docs/LI/MON-070850.pdf>
- [53] United Nations General Assembly, UNGA (2010). The human right to water and sanitation (2010), Art. 1, 64/292.
- [54] United Nations General Assembly, UNGA (2013). A/HRC/23/36: Report of the Special Rapporteur on extreme poverty and human rights, Magdalena Sepúlveda Carmona (New York: United Nations, Summary.
- [55] United Nations Environment Programme, UNEP (2015) *Climate Change and Human Rights*, Nairobi. <https://www.unep.org/resources/report/climate-change-and-human-rights>
- [56] UN Office of the High Commissioner for Human Rights, OHCHR (2015). Understanding Human Rights and Climate Change. <https://www.ohchr.org/sites/default/files/Documents/Issues/ClimateChange/COP21.pdf>
- [57] UN Office of the High Commissioner for Human Rights, OHCHR (2019). Gender-responsive Climate Action. <https://www.ohchr.org/en/climate-change/gender-responsive-climate-action>
- [58] UN Office of the High Commissioner for Human Rights, OHCHR (2021). Malé Declaration Towards 2022, <https://www.ohchr.org/sites/default/files/2021-12/Male-Declaration-Towards-2022.pdf>.
- [59] UN Office of the High Commissioner for Human Rights, OHCHR (2022). Climate Change and People in Vulnerable Situation. <https://www.ohchr.org/en/climate-change/impact-climate-change-rights-people-vulnerable-situations>
- [60] Yates, O.E.T., Manuela, S., Neef, A., Groot, S. (2022). Attitudes towards climate migrants in Aotearoa New Zealand: the roles of climate change beliefs and immigration attitudes, *Regional Environmental Change*, 10.1007/s10113-022-01942-y, 22, 3.

- [61] Yazar, M. & York, A. (2022). Disentangling justice as recognition through public support for local climate adaptation policies: Insights from the Southwest US, *Urban Climate*, 10.1016/j.uclim.2021.101079, 41, (101079).
- [62] Van Bommel, N., & Höffken, J.I. (2021). Energy justice within, between and beyond European community energy initiatives: A review, *Energy Research & Social Science*, 10.1016/j.erss.2021.102157, 79, (102157).
- [63] Weber, G., Cabras, I. (2021). Environmental Justice and Just Transition in the EU's Sustainability Policies in Third Countries: The Case of Colombia, *The International Spectator*, 10.1080/03932729.2021.1946262, 56, 3, (119-137).
- [64] Wieding, J., Stubenrauch, J. and Ekardt, F. (2020). Human Rights and Precautionary Principle: Limits to Geoengineering, SRM, and IPCC Scenarios, *Sustainability*, 12 (21), <https://doi.org/10.3390/su12218858>.
- [65] World Business Council on Sustainable Development, WBCSD. (2019) Reporting Matters 2019. <https://www.wbcsd.org/Programs/Redefining-Value/Reporting-matters/Resources/Reporting-matters-2019>
- [66] World Economic Forum. (2021). Global Risk Report 2021, <http://wef.ch/risks2021>