Colonizing the atmosphere: a common concern without climate justice law?

Susana Borràs[1]

Universitat Rovira i Virgili, Catalonia, Spain

Abstract

In the new 'Age of the Anthropocene', the Earth's atmosphere, like other elements of Nature, is rapidly being colonized by a minority of the world's population, at no cost, threatening the security of all humanity and the stability of the planet. The development processes of the great emitters of greenhouse gases have transferred social and environmental costs to all the world population, especially the most impoverished ones. This article is a critical analysis of how the legal climate change regime continues to legitimize the onslaught on the atmosphere. It reflects on the need to move to a new "climate justice law", characterized by responsibilities and obligations centered on the prevention, repair, restoration and treatment of damage and related risks linked to climate change, while protecting human rights and the atmosphere, as a common interest of humanity and the Earth.

Keywords: Atmosphere, climate change, common concern of humankind, climate justice law

Resumé

Dans le nouvel âge de l'Anthropocène, l'atmosphère terrestre, à l'instar d'autres éléments de la Nature, est rapidement colonisée par une minorité de la population mondiale, sans aucun frais, menaçant la sécurité de l'humanité et la stabilité de la planète. Bien qu'ils soient considérés d'intérêt commun de l'humanité, les coûts sociaux et environnementaux des processus de développement des grands émetteurs de gaz à effet de serre sont arbitrairement transférés à toutes les villes du monde, touchant en particulier les plus pauvres. Cet article est une analyse critique de la manière dont le régime juridique du changement climatique continue à légitimer l'attaque sur l'atmosphère. Pour cette raison, l'article réfléchit sur la nécessité de passer à un "droit climatique juste", caractérisée par des responsabilités et des obligations centrées sur la prévention, la restauration et la réparation des dommages et des risques liés au climat, tout en protégeant les droits de l'homme et les droits de l'atmosphère, en tant qu'intérêt commun de l'humanité et de la planète Terre.

Mots-clés: Atmosphère, changement climatique, préoccupation commune de l'humanité, droit de la justice climatique

Resumen

En la nueva Era del Antropoceno, la atmósfera de la Tierra, como otros elementos de la Naturaleza, está siendo colonizada rápidamente por una minoría de la población mundial, sin costo alguno, amenazando la seguridad de toda la humanidad y la estabilidad del planeta. A pesar de ser considerada de interés común de la humanidad, los costos sociales y ambientales de los procesos de desarrollo de los grandes emisores de gases de efecto invernadero son arbitrariamente transferidos a todos los pueblos del mundo, afectando especialmente a las más empobrecidas. El presente artículo es un análisis crítico de cómo el régimen jurídico del cambio climático sigue legitimando el acaparamiento de la atmosfera. Por este motivo, se reflexiona sobre

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[1] Dr. Susana Borràs, Associate Professor of Public International Law and International Relations and Researcher at the Tarragona Center for Environmental Law Studies (CEDAT), Rovira i Virgili University (URV), Tarragona, Catalonia, Spain. Email: susana.borras "at" urv.cat. Funding: *The global climate constitution: governance and law in a complex context* (CONCLIMA-DER2016-80011-P, MINECO / ERDF, EU), State Program for the Promotion of Scientific and Technical Research of Excellence, State Secretariat of Research, Development and Innovation (SEIDI), Ministry of Economy and Competitiveness, Spain. Thank you to *JPE*, in particular to Professor Batterbury, and a referee for their helpful comments.

la necesidad de una transformación hacia un "Derecho climático justo", caracterizado por responsabilidades y obligaciones centradas en la prevención, la reparación, la restauración y la remediación del daño y del riesgo climático, a la vez que proteja los derechos humanos y los derechos de la atmosfera, como interés común de la humanidad y el planeta Tierra.

Palabras clave: Atmósfera, cambio climático, interés común de la humanidad, Derecho de la justicia climática

1. Introduction

Anthropogenic climate change is environmental degradation of a space of the atmospheric commons – fostered by the unsustainable economic development model begun by the most industrialized countries. Their high dependence on fossil fuels has contributed significantly to atmospheric greenhouse gases (GHG).

Climate change is already a reality, as its consequences currently affect millions of people around the world, reducing the most fundamental of human rights such as, most importantly, the right to drinking water, the right to food, the right to health, the right to adequate housing, and the right to a healthy environment. Since the Industrial Revolution, the combustion of fossil fuels (coal, oil, natural gas) has led to an increase of 35% in the concentration of atmospheric carbon dioxide (CO_2), the most important anthropogenic greenhouse gas, between 1750 and 2005. The global concentration of carbon dioxide hit a new record high in 2017: 405 parts per million, and is still rising. The annual rate of increase in atmospheric carbon dioxide over the past 60 years is about 100 times faster than previous natural increases, such as those that occurred at the end of the last ice age 11,000-17,000 years ago. Human activities have increased the natural concentration of carbon dioxide in our Atmosphere, amplifying Earth's natural greenhouse effect (Lindsey 2018). However, uneven development means about three-quarters of the excess of accumulated CO_2 in the atmosphere comes from the more industrialized countries.

In this sense, challenges posed by climate change show clear inequality rather than common concern: while climate change is produced by the richest and most powerful nations, the most serious risks and consequences are suffered by the poorest and most vulnerable ones, who have contributed the least to the global problem. This inequality constitutes the basis on which international action on climate change has emerged, in order to establish mechanisms to respond to the possible impacts arising from the disruption in the climate system, without considering human rights.

This article addresses one of the most difficult and important aspects raised by the politics of climate change: the gap separating its 'global commons' dimension, and the social, economic and political inequalities and differentiation that characterize its causes, impacts, and the responses that the international institutional system has not been able to produce. The consideration of climate change as a common concern diverges from its unequal social implications for human rights, gender equality and development, especially for the least developed countries. The contribution of this article is to combine a critical perspective on climate justice, a concern of political ecologists, with a close examination of how the 'commons' is included in legal documents emanating, in particular, from the UN sphere. The aim is to draw attention to how the ideal of climate justice emerges from the concept of common concern for humankind, transforming the conceptualization of ethical justice into a new concept of climate justice in Law. I argue that the concept of the commons implies intergenerational equity and fair burden sharing: **first**, attempting to redress the different legal, political and economic implications of climate harm, and identifying certain climate, environmental and human responsibilities based on the duty to protect and guarantee human rights and the environment. **Secondly**, showing how the incapacity or the unwillingness of States to agree on solutions and to reverse the climate situation or at least contain it, has further increased the lack of equity and fair treatment for present and future generations. **Finally**, I argue that the combination of common concern and climate justice justifies a new legal perspective ("Climate Justice Law") based on three pillars: the visibility of climate liabilities, the recognition of the duty of diligence and the compensation for climate damages and losses. Climate Justice Law recognizes the existence of atmospheric human rights to balance fairly the globalization of climate change responsibilities (from an anthropogenic approach) together with the hypothetical

recognition of the Earth's Atmosphere as having rights (from a biocentric approach). Protecting the common concern is necessary to realize human rights.

2. The Atmosphere as a "common concern" of humankind

Common concern of humankind

The Earth's atmosphere has no binding international treaty that recognizes it as a global trust, or as part of the 'Common Heritage of Humanity' for present and future generations (Boudreau 2017). Without establishing the legal status of the global atmosphere in its own right as an entity or trust in international law, the 1992 United Nations Framework Convention on Climate Change (UNFCCC 1992) formally recognized the "change in the Earth's climate and its adverse effects" as common concerns of humankind. Most recently, the Paris Agreement (UNFCCC 2015) again acknowledged climate change as a common concern. The concept of "common concern of humankind" provides a framework for approaching global problems. It stresses the need to protect the common good under consideration (Horn 2004). Undoubtedly, problems of common interest are almost by definition those that will have adverse long-lasting effects, which may be potentially devastating for future generations. Hence, this concept includes a strong equity approach between generations.

As Shelton (2009: 83) explains: "issues of common concern are those that inevitably transcend the boundaries of a single state and require collective action in response." The term was introduced as an environmental concept in response to the international negotiations on the need to counteract the greenhouse effect, replacing "common heritage of mankind" (UNGA 1988). To date, the common concern of humankind has appeared in resolutions of the General Assembly of the United Nations, in the preambles of the different conventions and in a growing number of international conferences, declarations and reports. The history is traced below.

The development of the concept in the most recent environmental agreements traces back some time to the first of these, the 1988 Malta proposals at the United Nations General Assembly for establishing climate conservation as common heritage of humanity (UNGA 1988). With this proposal, the UN General Assembly explicitly recognized climate change as a common concern of humanity, through the United Nations General Assembly Resolution 43/53 entitled "Protection of global climate for present and future generations of mankind" (6 December 1988, UNGA 1988). This established that "[C]limate change is a common concern of mankind, since climate is an essential condition which sustains life on Earth" (Boyle 1991).

The Beijing Ministerial Declaration adopted at the Ministerial Conference 18-19 June 1991, stated in the preamble, paragraph 2, "We affirm that environmental protection and sustainable development is a matter of common concern to humankind, which requires effective actions by the international community and provides an opportunity for global co-operation. Against this background and out of a strong concern for the present and future generations ..." Common concern is also present in:

- the Resolution on Protection of Global Climate for Present and Future Generations of Mankind (UNGA 1988) para 1, 2;
- the 1989 Declaration of the Hague on the Environment;
- the 1989 Noordwijk Declaration by the Ministerial Conference on Atmospheric Pollution and Climate
- the 1989 Declaration of Brasilia on the Environment
- the preamble of the 1980 North-East Atlantic Fisheries Convention
- the 1989 Langkawi Declaration on the Environment;
- the 1990 Declaration of the UNGA Special Session on Development Co-operation
- the 1995 IUCN Draft International Covenant on Environment and Development, which establishes in its article 3 "The global environment is a common concern of humanity."

There was also an appearance in the preambles of the UNFCCC and the Convention on Biological Diversity (CBD 1992). The CBD preamble paragraph 3 also states that the conservation of biological diversity is a common concern of humankind. The continued repetition of this concept indicates that States are willing to accept it and its application within international environmental law. In the case of the UNFCCC, the concept of humanity's common concern applies, according to Park, to the conservation of the Atmosphere (Park 2006).

The repetition in international texts, despite not being legally binding, indicates the development of soft law (Bodansky 1993; MacDonald 1995). Dupuy said in 1991 that "If this phenomenon continues, it will likely have some legal consequence, particularly with regard to the environmental responsibility that the present generation has vis-à-vis future generations" (Dupuy 1991: 427).

However, it is interesting to note that the concept of common concern of humanity was not included in the preamble to the Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests (UNGA 1992 b). In this instrument, the responsibility of individual governments and local communities is prioritized, rather than the global responsibility of humanity for forests. According to the preamble, paragraph (f) states (in relation to forests): "their sound management and conservation are of concern to the governments of the countries to which they belong and of value to local communities and to the environment as a whole" (UNGA 1992 b).

Protection of the atmosphere

Discussions on 'protection of the atmosphere' in the United Nations (UN) International Law Commission (ILC) started in 2009, when Professor Shinya Murase first proposed including the topic in the long-term ILC work programme, in line with the mandate of the Commission for promotion of the 'progressive development of international law and its codification' (Article 1 of the ILC Statute annexed to UNGA Res 174(II) (21 November 1947) (as amended).

At its sixty-third session (2011), the ILC included in its long-term work program the "Protection of the Atmosphere", on the basis of the proposal contained in annex B to the report of the Commission (ILC 2011). In paragraph 7 of its Resolution 66/98 of December 9th, 2011, the General Assembly took note of this in the Commission's long-term work program. Subsequently, on the 9th of August 2013, at its 3,197th meeting, the Commission decided to include the theme of "Protection of the Atmosphere" in its work program, together with an understanding (ILC 2013), and the appointment Mr. Shinya Murase as Special Rapporteur.

According to the Special Rapporteur, "The Atmosphere is a natural resource essential for sustaining life on Earth, human health and welfare, and aquatic and terrestrial ecosystems, and hence the degradation of atmospheric conditions is a common concern of humankind" (ILC 2013). Despite the importance of the work of the Special Rapporteur, and the potential contribution to the protection of the Atmosphere as a common good (Murase 2012, 2011), there are self-imposed limitations on its powers by States and the ILC itself. The ILC cannot interfere with substantial and relevant issues for the protection of the Atmosphere and the achievement of climate justice, such as:

- relevant political negotiations such as the ones related to climate change;
- the depletion of the ozone layer;
- long-distance or transboundary air pollution.

Another very important limitation is that the Commission cannot address the liability of States and their nationals for climate justice, the "polluter pays" principle, and the precautionary principle. It cannot address responsibilities and technology transfer to developing countries, including intellectual property rights, nor can it address specific issues such as black carbon, tropospheric ozone and other dual-impact negotiations between States. It cannot fill gaps in conventional regimes, especially those related to the status of airspace under international law, nor questions related to outer space, including its delimitation.

These limitations have three very important consequences. **First**, they are a missed opportunity to achieve a greater protection of the Atmosphere from the perspective of international law. **Second**, they raise the issue of to what extent spaces of common interest to humankind may be subject of misappropriation, having a major harmful impact on the physical and human environment; and, **third** is the tacit approval of the injustice caused, in terms of the existing constraints on attribution of climate liability.

In any event, the most important contribution of the Commission's work is the consideration of the Atmosphere as of "common interest of humanity." This consideration is in line with a specific doctrinal approach that considers this space as global and common (Brown Weiss *et al*. 1991; Leigh 1992). In this respect, the notion of "common concerns" goes even further than the terms common spaces or common heritage, since it is not restricted to national borders, but encompasses problems indistinctly located outside or under the sovereignty of *any* State (Mönckeberg 2012).

On the basis that the Atmosphere and, therefore, the climate are of common interest to humanity, the main consequence should be the equal access to and enjoyment by the international community, without any restrictions other than those imposed by international law itself. However, as discussed below, shared responsibility in the management of what is considered as 'common' has been altered by colonization and /or excessive misappropriation of the common good by a minority of the world's population. They are threatening the security of all humanity and the stability of the planet, without cost. The social and environmental costs of development for a few are arbitrarily transferred to the entire world's population.

In short, according to Bowman (2010: 503), the "reasonably specific legal consequences" of humanity's common concern, are the following: **first**, that States should take into account the interests of the community on the issue of concern. **Second**, that the object of concern is not only a matter of internal interest, but also of the international agenda. **Third**, that States should establish an appropriate international forum and a set of principles to provide a normative framework. **Fourth** that these obligations are *erga omnes* so all States can demand compliance with these rules and principles (Brunnée 2007). **Fifth**, that "common concern" implies that States will have responsibilities and there will be international community rights; and, **sixth**, that since the international community now encompasses States, intergovernmental organizations and civil society, the views of all of them should be taken into account when discussing issues of common concern.

Common concern, applied to the atmosphere and climate change, ensures that States are aware of their responsibility to "humankind" and it provides for global involvement and interest, particularly through reporting and other requirements (Shelton 2010). But, as I now explore, the appropriation of common concern has generated a genealogy of injustices, which have permeated in a fundamentally unjust legal system.

3. From the degradation of the commons to the genealogy of injustices: the colonization of the Atmosphere

Human contribution to climate change through GHG, emissions produced mostly by the burning of fossil fuels, has been confirmed. The accumulation of these GHG emissions leads to an increase in the temperature of the terrestrial atmosphere, with consequent alteration of the planetary climate system (IPCC 2014). Future predictions are not encouraging. For several decades, global warming has been associated with large-scale changes in the hydrological cycle such as: increase of water vapor in the Atmosphere; changes in rainfall patterns, like alteration of the intensity and extreme events; lesser snow cover and widespread melting of ice; and changes in soil moisture and water runoff (IPCC 2008).

Climate change encompasses not only rising average temperatures but also extreme weather events, heatwaves, melting ice, bleached coral reefs, and a range of other impacts. Sea-level rise is one of the most significant effects of climate change. Some associated impacts include greater severity of marine storms, loss of coastal wetlands and similar ecosystems, and saltwater intrusion in aquifers. The Stern Review on the Economics of Climate Change concluded that the alteration of the water regime, the distribution of water around the world and its seasonal and annual variability, is the prime impact of climate change (Stern 2007). These impacts are compounded by melting and retreating glaciers, which increase the risk of flooding during

the wet season and strongly reduce water supply for one-sixth of the world's population, especially in the Indian subcontinent, certain regions of China, in the Andes and in southern Africa (IPCC 2008).

According to the Intergovernmental Panel on Climate Change (IPCC), there are marked differences forecast between different regions (IPCC 2007 and 2014). The ones most likely to be adversely affected are developing States, which already face multiple stress factors, particularly in Africa, Asia and Oceania: mega deltas, Small Island Developing States, low-lying coastal areas and drylands (UNDP 2007).

All of the predicted impacts have adverse consequences on human health. According to the World Health Organization (WHO) estimates, between 2030 and 2050, climate change is expected to cause an additional 250,000 deaths each year due to malnutrition, malaria, diarrhea and caloric stress (WHO 2015). The structure and biodiversity of natural ecosystems will also be modified.

Oxfam International warned of consequences for agriculture and livestock breeding, aggravating major food crises in many parts of the world. Millions of people in countries already suffering from food security problems will have to abandon their traditional crops as they experience changes in climate (OXFAM 2009). In some parts of Africa, climate change is expected to reduce crop yields by up to 50% by 2020, leading to an increase in crop prices (Global Humanitarian Forum 2009). Warming of 2°C could lead to a permanent reduction of 4% to 5% of annual per capita income in Africa and South Asia, compared with minimal losses in developed countries (Stern 2007).

The Fifth Assessment Report of the IPCC, in turn, states that in recent decades, changes in climate have caused impacts on human systems on all continents and oceans but risks are unevenly distributed and, generally, they are greater for the most disadvantaged people and communities (IPCC 2014). Vulnerable communities, including the poor, women, children, structurally discriminated ethnic groups and the elderly, are often the most severely impacted by natural and climatic disasters. Likewise, indigenous peoples, and traditional and peasant communities are especially vulnerable, since they generally depend on natural systems affected by climate change for their survival (UNDP 2007).

In a globalized, capitalist world, it is important to note that not all societies bear the same responsibilities. The concept of climate justice addresses the argument that vulnerable populations, who have contributed least to the emission of GHGs that cause global warming, should not have to bear the burden of facing global climate change. It is important to remember that the historical big emitters (the United States, the European Union, Canada, Australia, etc.), which account for approximately 25% of the world's population, still have much higher per capita emissions than any of the emerging countries such as China, India or Brazil. Thus, it can be said that global warming is a threat traceable to developed countries, mainly those that make up the Organization for Economic Co-operation and Development (OECD), responsible for 40% of the generated CO_2. Paying attention to per capita emissions, an OECD citizen generates 10 tons of CO_2, compared to the 5.8 tons generated by a Chinese citizen and 1.5 by an Indian citizen. Some 25% of the oil produced by the United States is consumed by 5% of the world population and, meanwhile they emit 19 tons of CO_2 per person compared to China's 4.4 tons. Even within a single country, responsibilities between social classes are also uneven: in the United States, 1% of the population considered to be in the higher earning bracket emit above 100 tons of CO_2 per year.

As explained by the United Nations Development Program (UNDP):

> Rich nations and their citizens account for the overwhelming bulk of the greenhouse gases locked in the Earth's Atmosphere. But, poor countries and their citizens will pay the highest price for climate change.
>
> The inverse relationship between responsibility for climate change and vulnerability to its impacts is sometimes forgotten (UNDP 2007).

Even though the international climate change regime has been determined by an international negotiation process within the United Nations, inequality has marked the intergovernmental negotiations and legal commitments, as well as the different mechanisms through which action on climate has been developed. In

this sense, the climate change regime has emerged without the recognition of a crucial concept: the concept of "equitable sharing." The main consequence has been the legal postponement of injustice, without addressing fairness across all areas of climate change regime: mitigation, adaptation, finance, technology, and transparency, as the next section analyzes.

4. The perception of injustice: the cumulative climate debt

The concept of "equitable sharing", as a subsidiary concept to the common concern of humankind, imposes a proportional burden on developed countries in relation to their past or present responsibility for the deterioration of the Atmosphere (Vanderheiden 2008). Since "Common concern means common actions to achieve common goals" (Timoshenko 1991: 39), the "concern" element leads to the obligation to act and thus constitutes the basis for establishing legal obligations. These concerns are the result of the various contributions to environmental deterioration by different countries. Countries, therefore, have common but differentiated responsibilities with respect to their actions to remedy environmental degradation (Commission on Sustainable Development 1995).

In this sense, developing countries, on behalf of most of the world's population, insist on the recognition of the so-called "climate debt", which has been historically accrued by industrialized countries given their excess emissions in relation to their population. By 2015, this debt exceeded US$50 trillion, which equals an annual quota of US$1.4 trillion for the period 2015-2050 estimated at US$50/t CO_2, excluding the excess emissions that could occur over the same period (Matthews 2016).

The magnitude of this debt contrasts with the non-binding offer of industrialized countries to make contributions of just US$0.1 trillion a year and only from 2020, furthermore insisting that such contributions would mostly be reimbursable flows through the private sector. The outcome of climate action should depend not only on the understanding of the science of climate change but also on the design of effective economic instruments to finance the necessary transformations, mainly in energy generation and consumption, transport and industrial activity. It is also necessary to quantify the cost of current and past GHG emissions - a cost that to date has been transferred free of charge to global society. In July 2015, thanks to the effort of 11 government agencies, Executive Order 12866 (2015) provided an assessment of the social cost of carbon emissions in the United States. The conclusion was that by 2015 the average social cost of carbon emissions was US$50 per metric ton of CO_2 with a discount rate of 3% (Interagency Working Group on Social Cost of Greenhouse Gases, United States Government 2016).

Without doubt, inequality arises from the asymmetric economic, social and environmental conditions existing in different countries, which determine their greater or lesser vulnerability, exposure and resilience to the impacts of climate change. Other circumstances have determined the negotiating process and increased the vulnerability of the poorest countries, such as: an asymmetry between negotiating positions; weak involvement of civil society; insufficient commitments, and commitments that do not address vulnerability and the different historic contribution to overall emissions. The mitigation of and adaptation to climate change has so far failed to alleviate the serious situation that the most impoverished states are experiencing (Rajamani 2011).

The UNFCCC's Preamble recognizes the principle of common but differentiated responsibilities, as established by Principle 7 of the 1992 Rio Declaration, and states that: "Acknowledging that the global nature of climate change calls for the widest possible 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." (UNFCCC 1992) And in its article 3.5:

> The Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof. (UNFCCC 1992)

The UNFCCC is also funded on the principle of equity established in Article 3. It states "Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. (...)." For agreements to be effective and encourage for cooperation, they must be considered legitimate. However, as the IPCC recalls, equity is a crucial factor in ensuring legitimacy. Theoretically, as developed countries have caused most of the problem, given that their per capita CO_2 output is much higher than the rest of the world, they have a moral debt to the rest of the world and future generations. Therefore in terms of equity and justice it is only developing countries that could increase their emissions. But this solution would not benefit the environment at all, and even less, people.

Both of these principles contribute to recognizing historical differences in the contribution of developed and developing States to global environmental problems and differences in their economic and technical capacity to deal with such problems. Although all nations have responsibilities, there are important differences between those of developed States and those of developing States (Rajamani 2011).

There are two fundamental elements to the principle of common but differentiated responsibilities. The **first** one refers to the shared responsibility of States for protecting the environment, or parts of it, in a national, regional or global context. The **second** one relates to a need that arises from different circumstances, particularly the contribution of each State to the evolution of a given problem and its ability to prevent, reduce and control its impacts on the environment.

Common responsibility also refers to the obligations shared between two or more States in order to protect a given environmental field of common interest. It can refer to shared resources, which are not under the control or the sovereign jurisdiction of any State, but are objects of special interest for most of them in terms of common interest of humankind, such as biodiversity. The concept of common responsibility exists in different international legal instruments that regulate the protection and conservation of resources considered as part of the common heritage of humanity. The recognition of common responsibility is the source of a series of obligations that involve the participation of States through the adoption of response measures for environmental problems.

Differentiated responsibility shared between States in protecting the environment has been widely accepted in international treaties and by State practices. Its transposition is implemented by the adoption of different environmental standards established on the basis of factors which include special needs and circumstances, future economic development of the countries, and their historic contribution to a specific environmental problem. The recognition of differentiated responsibilities reduces the scope for the imposition of duties on States because of the recognition of common responsibilities. On the other hand, differentiated responsibility is a source of *rights* for developing States. That means that, recognizing a differentiated responsibility allows the right of States to determine their own environmental policies based on their specific environmental and development contexts.

Differentiated responsibility is directed more towards promoting substantial equality between developed and developing States in a certain environmental area, than to achieving formal equality. The aim is to ensure that in the long term, developing States can comply with their international legal environmental protection commitments. However, differentiated responsibility is materialized in different legal obligations. Among the different available techniques applied in differentiated responsibility, there is the possibility of establishing longer periods for fulfilling objectives, the option of a late fulfillment, or the establishment of less demanding objectives compared to the other States.

A decade ago, the NGO ActionAid estimated that in order to pay off their climate debt and to fight climate change, rich countries must transfer US$275 billion a year for mitigation and adaptation to the countries of the South (ActionAid 2009). Citi Global Perspectives and Solutions (GPS) published a meticulous report on the investments needed to meet energy demand for the 2016-2040 period (Citi 2015). According to their estimates, an investment of approximately US$200 trillion over the next 25 years is required (including fuel costs), and that excluding the damages caused by an increase of 4.5°C in the average surface temperature by the end of the century (p.106). Approximately 70% of this investment would need to be made in developing countries. The Grantham Institute for Climate Change Research and the Center for the

Economics and Policy of Climate Change have come to a similar conclusion: an investment of at least US$90 trillion over the next 15 years is required for an average of US$6 trillion per year, "mostly in developing countries" (Stern 2015).

However, the best current offer of North-South cooperation in global warming negotiations is only US$100 billion annually and only starting from 2020. In 2015 parallel to the conclusion of the Paris Agreement (2015), this goal was extended until 2025. Besides, it has not been established that these contributions are additional to the existing international cooperation funds and that they will not increase the crippling external debt of developing countries. How these limited resources would be mobilized has not been defined. Only contributions from 33 countries that barely amount to US$0.01 billion ($10 million) have been committed through the Green Climate Fund managed by the World Bank so far. The cumulative climate debt is not being paid.

5. The duty to protect rights and the Atmosphere for the common concern

Understanding the Atmosphere as a resource of common interest of humankind, "implies a common responsibility to the question based on its paramount importance for the international community as a whole" (Glowka *et al*. 1994: 3). A basic element of "common concern of humankind" is that States have the duty to cooperate to guarantee that the climate and biological diversity are protected for the benefit of present and future generations (Commission on Sustainable Development 1995; Trindade and Attard 1990). From this perspective, the common *interest* of humankind becomes the common *heritage* of humankind. This implies that States protect the commons as managers or custodians with specific duties regarding present and future generations (Brown Weiss 1989; World Commission on Environment and Development 1986).

This consideration, together with a human rights perspective on the impacts of climate change, make it possible to argue the existence of a series of climate, environmental and human obligations, which require a duty of care from the States regarding the global commons. It is clear that the effects of climate change threaten the effective enjoyment of a range of rights, such as the right to water and safe and adequate food, the right to health, the right to adequate housing and to a healthy environment, the right of self-determination and even the right to life. Therefore, climate change is not only a priority environmental issue, but also concerns the full enjoyment of human rights. The legal articulation of climate obligations is fundamental to this. On one hand, these climate obligations are based on the affirmation of the general duty of States to protect their population and their common concerns from environmental risks and/or damages and, on the other, on the recognition of the different contributions to the climate change phenomenon, including the deterioration of the Atmosphere.

Consequently, it is legally defensible to require States to fulfill their legal obligation to use available means to prevent environmentally harmful activities from causing significant damage to the environment of other States, through climate change and other processes. The legal basis for this obligation derives from environmental international law, from the fundamental principle *sic utere tuo ut alienum non laedas*, established in Principle 21 of the Stockholm Declaration of 1972 (UNGA 1973) and Principle 2 of the 1992 Rio Declaration (UNGA 1992). According to this principle, States have the sovereign right to exploit their own resources in pursuance of their own environmental policies, and with the obligation to ensure that activities carried out within their jurisdiction or under their control do not harm the environment of other States. They must also not harm areas outside their national jurisdiction, including 'areas of common concern.' Both provisions promote the application of the notion of 'common concern of humanity', keeping balance between sovereignty and the protection of the environment. Principle 22 of the Stockholm Declaration further enshrines the invitation to States "... to cooperate to develop further the international law regarding liability and compensation for the victims of pollution and other environmental damage..." (UNGA 1973). According to this principle, States have the obligation to ensure that activities within their jurisdiction and control respect the environment of other States, and areas beyond national control. This obligation, found in many current international environmental treaties, is particularly relevant for developed countries when it comes to climate change, since they are historically responsible for contributing most to human-generated climate change.

The message from these agreements and principles is that it is necessary to recognize the duty of States to prevent climate damage, but also their different contributions to damage, and to assume the resulting legal and moral responsibility to "colonize the Atmosphere." It is necessary to redirect climate policy towards a human rights perspective, in order to create moral and legal force within the climate change global regime.

International law does stipulate a positive obligation upon States to protect and guarantee the human rights of all persons within their jurisdiction. Under the human rights framework, the State traditionally bears this burden, and advocates of the human rights approach to climate change urge governments to integrate climate change issues into existing development policies and to set minimum human rights thresholds around which new mitigation and adaptation policies can be developed. International human rights standards provide a guide for the measures to be taken to tackle climate change, highlighting fundamental moral and legal obligations to protect and promote the full enjoyment of the rights enshrined in the 1948 Universal Declaration of Human Rights and in universal human rights treaties. This is justified precisely because of the most vulnerable populations' low level of contribution to the carbon stocks that cause global warming. For example, the United States has contributed 28.75% of the historic and accumulated GHG emissions, while nations from Central and South America have only contributed 1.38% and 2.3%, respectively. Thus, countries like the United States and Canada have a greater obligation to prevent, mitigate and facilitate adaptation to climate change in the hemisphere (AIDA 2011).

In March 2008, important attempts to redirect climate policy took place, when the United Nations Human Rights Council adopted Resolution 7/23 (March 2008), requested the Office of the United Nations High Commissioner for Human Rights (OHCHR) to prepare "a detailed analytical study on the relationship between climate change and human rights." (UNHRC 2008). The OHCHR report incorporates a human rights framework in climate change mitigation and adaptation policy (OHCHR 2009). The report acknowledged that the direct effects of climate change not only affect the environment and world economies, but they also have or could have consequences for specific human rights, including the right to life, the right to adequate food, the right to clean water, the right to health, the right to adequate housing and the right of peoples to free self-determination. The report found that segments of the population that are already considered vulnerable because of their geographic location, poverty, gender, age, indigenous or minority status or disability, will continue to face the greatest risks. Developing countries and small island states could suffer the greatest impacts of climate change, despite having contributed the least to GHG emissions.

Later, in March 2009, the Council took immediate action by adopting its second Resolution on the issue, Resolution 10/4 on "Human rights and climate change (UNHRC 2009). Among other things, this resolution states "climate change-related impacts have a range of implications, both direct and indirect, for the effective enjoyment of human rights ..." and recognizes that "the effects of climate change will be felt most acutely by those segments of the population who are already in vulnerable situations... ." (UNHRC 2009) It also notes that it requires "effective international cooperation to enable the full, effective and sustained implementation of the United Nations Framework Convention on Climate Change..." and states, "obligations and commitments have the potential to inform and strengthen international and national policymaking in the area of climate change, promoting policy coherence, legitimacy and sustainable outcomes." At its eleventh session the Council held a round table on the relationship between climate change and human rights to contribute to achieving the goals established in the Bali Action Plan. This meeting, which took place in June 2009, emphasized that adverse effects of climate change on human rights were already being felt around the world, and it became clear that a human rights approach would strengthen the human dimension of the problem within the debate and that it should be addressed in international climate change negotiations. Following this Resolution, in 2010 State Parties to the UNFCCC agreed in the final document adopted by COP-16 in Cancun, Mexico, "…that Parties should, in all climate change related actions, fully respect human rights" (UNFCCC 2010).

In October 2010, the Social Forum of the Human Rights Council decided to focus its work on the adverse effects of climate change on the full enjoyment of human rights, foreseeing vulnerabilities both at the country level and in relation to groups and individuals. It identified the need to address all forms of basic discrimination in society including gender discrimination, as well as working towards the eradication of

poverty and social exclusion –all factors that increase vulnerability. The Forum supported sustainable development and noted a growing interest in the creation of a new special procedure on climate change and human rights within the Human Rights Council as a means of giving greater visibility to the impacts of climate change.

Following these developments, in March 2011, the Council adopted a resolution on the environment and human rights, which was especially promoted by the Maldives, Costa Rica and Switzerland ((UNHRC 2011a). The resolution noted, among other things, the importance of advancing the Millennium Development Goals (MDGs). It also asked the OHCHR to prepare an analytical study of the relationship between human rights and the environment, which would be submitted to the Council at its 19th meeting. One of the recommendations of this report was for the OHCHR to consider establishing a Special Rapporteur on human rights and the environment (UNHRC 2012). Among other tasks, the Rapporteur studies the human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, and promote best practices relating to the use of human rights in environmental policymaking (UNHRC 2011b).

The third resolution on "human rights and climate change" was adopted at the last regular session of the Council. Resolution 18/22 (UNHRC 2011c), which was promoted by Bangladesh and the Philippines, states that human rights obligations, norms and principles have the potential to inform and strengthen international and national policy-making in the area of climate change, promoting policy coherence, legitimacy and sustainable outcomes. A seminar was held as result of this Resolution. Its object was to enhance respect for human rights in all climate change related actions and policies and to forge a stronger interface and more cooperation between human rights and climate change experts. This meant, following commitments made at Cancun 2010 and Durban 2011, a consolidation of solutions for climate adaptation and mitigation.

In the Resolutions 26/27 (UNHRC 2014) and 29/15 (UNHRC 2015), the Council emphasized the need for all States to enhance international dialogue and cooperation to address the adverse impacts of climate change on the enjoyment of human rights including the right to development. It called for dialogue, capacity-building, mobilization of financial resources, technology transfer, and other forms of cooperation to facilitate climate change adaptation and mitigation, in order to meet the special needs and circumstances of developing countries. Therefore, the Council considered the urgent importance of continuing to address the adverse consequences of climate change for all and called for a panel discussion and analytical study on the impacts of climate change on the enjoyment of the right to health.

The completion of this process took place recently, during the previous negotiations of COP21 in Paris (2015), when the so-called "Open Letter from Special Procedures mandate holders of the Human Rights Council to the States Parties to the UN Framework Convention on Climate Change on the occasion of the meeting of the Ad Hoc Working Group on the Durban Platform for Enhanced Action in Bonn", known as "Geneva Pledge on Human Rights in Climate Action", was adopted on 20-25 October 2014, with the aim of influencing a future climate agreement which provides a human rights perspective. According to this document "(...) States must ensure that all of the actions they take to address climate change are fully in accordance with all of their human rights obligations" (UNHRC 2014).

In a most recent Resolution, the n. 32/33, adopted by the UNHRC in July 2016 (UNHRC 2016), the Council urged Parties to integrate human rights in climate change mitigation and adaptation, and called for a panel discussion on the adverse impact of climate change on the rights of the child to be held in the 34th session.

Ultimately, the need to mainstream a human rights perspective into climate negotiations and agreements is **primarily** due to the need to recognize the realities of climate change and its impacts on the enjoyment of all human rights, especially for vulnerable persons and groups. **Secondly**, to recall the duty of States to protect and respect human rights, which extends to international companies and entities. **Thirdly**, to promote international security, linked to climate change because of impacts such as: competition for local natural resources, insecurity of livelihoods, migration, extreme weather events and disasters, food price volatility, transboundary water management, rising sea-levels, coastal degradation and the unintended effects of climate policies. And, **fourthly**, for promoting effective solutions such as the revision of energy policies.

The Open Letter has two aims: **first**, to ensure that human rights are at the core of climate governance. This means that rights are central to climate negotiations. Any response to climate change must respect, protect and fulfill human rights. In that sense, it was necessary to include language based on human rights in the 2015 climate agreement, by stating that all parties should, in all measures related to climate change, promote, respect, protect and fulfill human rights. And, **second**, to urge States to launch a working plan that ensures that human rights are integrated into all aspects of climate measures, taking into account the effect of climate change on the lives of all people without any discrimination.

As the parties already agreed at COP16 in Cancun in 2010, for the human rights approach to climate change in international negotiations and agreements to have an effective implementation impact, it is necessary that any reference to human rights, gender equity, indigenous peoples, intergenerational equity, food security, and ecosystem integrity is built into their preambles and operational components.

The incorporation of human rights in climate agreements does not create new obligations for States beyond those undertaken by the different international human rights treaties, but it does allow for consistency and fulfillment of the existing commitments. Not including this human rights perspective in a climate change agreement would only benefit the developed countries and would not address the vulnerability of the least developed countries.

A new climate change agreement was adopted on 12 December 2015 as a result of the negotiations of COP21, the so-called "Paris Agreement." Even though it is positive because it represents the commitment of almost 200 countries to limit the rise in temperature to 1.5ºC, it does not determine the means to achieve it. It establishes a goal that will only be possible to meet with a total shift away from fossil fuels by 2050 at the latest. A legally binding international agreement is not enough to achieve these objectives. States should also revise their short-term objectives to align them with the new climate targets, review their energy policies to accelerate the introduction of renewable energy, stop financing fossil fuels, and end deforestation by 2020. As to the inclusion of human rights, while the 2015 Paris Agreement recognizes that countries facing climate change must respect and promote human rights, there is only one specific reference to the rights of indigenous peoples in its preamble and in the section on adaptation. This does not provide the protection they deserve, especially considering that forest protection will be crucial in meeting the 1.5ºC target.

Moreover, for the first time in the negotiations, the concept of "climate justice" was introduced in the text. However, to ensure "climate justice" a sufficiently ambitious agreement to combat climate change must be achieved, one that is legally binding and also fair in the distribution of responsibilities. It is precisely in these three aspects that the Paris Agreement falls short, or is vague and imprecise; full of intentions but without real commitments and transformative potential. In fact, in all its elements the Paris Agreement is 'inhuman' because it condones the destruction of the livelihoods of millions of people and this marks a very dangerous trend, incompatible with the OHCHR efforts to reconcile climate change and the protection of human rights.

The next section, therefore, analyzes the need to create and enhance a better and fair legal framework, a new Climate Justice Law, based not only on equity for least developing countries but also justice, insuring sustainable development by progressively reducing danger and risks, and restoring climate damage.

6. A new Climate Justice Law

The most important response to the climate crisis refers to the recognition of climate debt, meaning that developing countries should not be forced to cope with climate change on an equal footing (meaning, the same economic and technological level) with those who contributed the most to the environmental crisis. This is simply because they do not have the resources to do so and because they are not responsible for most of the global warming caused by GHG emissions.

However, the demand for addressing the climate debt includes responses to other aspects of the achievement of justice. The first known reference to the concept of climate justice appeared in a 1999 report entitled *Greenhouse gangsters vs. climate justice*, published by the San Francisco-based Corporate Watch Group (Bruno *et al.* 1999). This is mainly an evaluation of the oil industry and its disproportionate political

influence, but it also includes a first attempt to define a multifaceted approach of climate justice. There is an analysis of the causes of global warming and accountability for corporations and enterprises; an expression of opposition to the destructive impacts of oil exploitation, and support to affected communities, including those most affected by the increasing incidence of climate-related disasters. There is also an identification of environmental justice communities and organized work to develop strategies that promote a fair transition of fossil fuels; and an analysis of corporate globalization and the disproportionate influence of international financial institutions such as the World Bank and the World Trade Organization.

The concept of climate justice has been developed further by the Mary Robinson Foundation with its "Principles of Climate Justice." These are:

- respect and protect human rights;
- support the right to development;
- share benefits and burdens equitably;
- ensure that decisions on climate change are participatory, transparent and accountable;
- highlight gender equality and equity;
- harness the transformative power of education for climate stewardship;
- and use effective partnerships to secure climate justice. (Kanbur and Shue 2018)

In this sense, the transformation of climate change law and policy to a new common Climate Justice Law evokes equality, equity and responsibility (all three summed as prevention, response, recovery and rebuilding; and compensation and risk transfer) (Lyster 2016). These three concepts can be translated into three pillars: visibility of the historical, delocalized and unequal responsibilities of the most industrialized countries, together with the States' duty of due diligence; the establishment of the legal basis of the duty of due diligence of States; and lastly, compensation for losses and damages. The next subsections develop these main pillars of the "Climate Justice Law."

The visibility of climate liabilities

The first pillar of a new Climate Justice Law is to make the historical, delocalized and unequal responsibilities of the most industrialized countries visible. Developing countries have advocated for two different approaches to these climate liabilities.

The first one refers to the "historical responsibility" for the carbon emitted so far by developed economies. Developed countries have exhausted a large part of the Atmosphere's ability to absorb carbon and should compensate developing countries for this "expropriation." This argument raises certain difficulties. The most industrialized countries have experienced development believing until recently that the Atmosphere was an infinite resource. In addition, neither those who fostered this production model based on the irrational exploitation of natural resources, nor their descendants, even if they could be identified, should be considered responsible for acts they have not committed. Nevertheless, these objections do not eliminate the argument of "historical responsibility" since developed economies continue to benefit greatly from their past industrialization.

The second argument concerns the fair distribution of future carbon emissions. If global emissions become controled through emissions permits, developing countries consider that permits should be distributed based on their population or *per capita* income. There is a legal reasoning behind a demographic approach: every human being has the same right to use global carbon. Based on *per capita* income, the argument is egalitarian: permits could be given to the poorest. These two principles imply that permits could be granted to developing economies, either because they represent the majority of the world's population or because they represent the majority of the world's poor. However, these principles are not recognized in international relations.

Regarding the first argument, the inexistence of the comprehensive environmental liability legislation in the countries potentially affected by climate change makes it difficult to claim for responsibilities. However, some potentially applicable environmental liability provisions exist at the international level. In this regard, it is important to look at the codification work of the International Law Commission (ILC), which began in 1983 (Barrionuevo Arévalo 2005), in accordance with its function of codification and progressive development of international law, provided for in Articles 1.1 and 15 of its Statute (UN-Doc. A/CN.4/4/Rev.2). Since 1992, the Commission has separated responsibility itself from the prevention of transboundary harm, which is known as liability. The General Assembly of the United Nations, in its resolution 56/82 of 12 December 2001, called on the Commission to resume consideration of liability for non-prohibited acts. On 2nd August 2001, at its fifty-third session the Commission adopted "Draft articles on Prevention of transboundary damage from hazardous activities" (ILC 2001), drafted by the Special Rapporteur Mr. Pemmaraju Sreenivasa Rao, which codifies principles and procedural rules for the prevention of transboundary harm. All these codifications only include responsibility for physical consequences of actions that lead to sensitive transboundary harm, but those not prohibited by international law (Pigrau Solé 2011). International bodies have been reluctant to accept a strict liability system (IDI 1997), also called "liability for risk" or "for damages" because it directly links the international responsibility of the State to environmental damage. According the IDI Resolution on Responsibility and Liability under International Law for Environmental Damage, adopted in December 1997:

> The rules of international law may also provide for the engagement of strict responsibility of the State on the basis of harm or injury alone. (…). Failure of the State to enact appropriate rules and controls in accordance with environmental regimes, even if not amounting as such to a breach of an obligation, may result in its responsibility if harm ensues as a consequence, including damage caused by operators within its jurisdiction or control (…)" (art. 4) (IDI 1997).

This involves reparation of the damages, including those produced at the atmosphere, resulting from harmful activities. However, this liability regime penalizes the development of activities (not prohibited by international law), that risk causing, because of their physical consequences, transboundary harm to persons, property or the environment. In the case of losses arising from transboundary harm resulting from hazardous activities, the international liability may occur with material damage, but it does not imply necessarily a legal breach of norms (ILC 2001, 2004). Thus, a causal link is required to apply this principle, even if there is no fault or negligence from the State responsible for the damage. Because of the absolute nature of this responsibility, it excludes the consideration of possible causes of exoneration, so if the ecological damage is produced, the State has an obligation to respond, to ensure full remediation. As Pisillo Mazzeschi (1991) has pointed out, the obligations of States appear as typical obligations of environmental protection, so to prove harm, an active behavior of the State to ensure prevention or repression of protection must be identified. Therefore, the climate damage would include also the risks of potential harm, due to an action or in case of an absence of protection (responsibility for omission). Contrary to some opinions (i.e. Grossman 2003), climate liability is arguable, according with two of the most important principles of international environmental law: the precautionary principle and polluters-pay-principle. Both principles imply the principle of sustainable development, no-significant-harm principle and cost-effective principle in order to determine any climate liability.

The concept of climate change liability is possible due to the application of the precautionary principle (art. 3.3 UNFCCC 1992). This principle requires the existence of the (i) obligation for undertaking preventive measures even in cases when an environmental damage is not established and (ii) the shifting of the burden of proof from the ones opposing the measures to those wishing to undertake the measures that could cause negative effects towards the environment.

Only after they prove the non-existence of such effects shall they be authorized to undertake these activities. This means that States are due to prove that particular climate change impact was not caused by

emissions existing before 1990 (according to UNFCCC) and/or (ii) to prove a distinction between climate change impacts caused by anthropogenic emissions from those caused by non anthropogenic emissions.

Besides these arguments, other based on considerations of justice and equity are relevant to consider, in the sense that no State should pay for climate damages and risks resulting from extraordinary risks created by other States. With the aim to support the idea of Climate Justice Law and claim for climate liability of States, it is also necessary to establish the legal determination of the States' duty to protect human rights through the due diligence, together with a compensatory regime for losses and damages related to climate change.

The legal determination of the States' duty of due diligence

The second pillar of the Climate Justice Law is the legal determination of the due diligence of States. This idea had previously been argued by the Human Rights Council in 2008. In a published report on climate change and human rights, the Council stated the following: "As a matter of law, the human rights of individuals must be viewed in terms of state obligations" (ICHRP 2008).

The basis for climate change legal obligations can be also found in a document entitled *Oslo principles on global climate change obligations* (hereinafter, the Oslo Principles 2015). These were adopted on March 30th 2015, by a group of internationally renowned jurists and experts from universities, national and international courts and other organizations from countries such as Brazil, China, India, the United States and the Netherlands. The purpose was to claim that whether international agreements exist or not, governments currently have the legal obligation to prevent the harmful effects of climate change, based on international human rights, environmental protection and civil damage laws.

Beyond the international legal regime of climate change, the aim of the Oslo Principles is to provide sufficient legal grounds to support the legal obligation to achieve climate justice, addressing the harmful effects of climate change, based on human rights law, environmental law and tort law.

The Principles offer a clearly stated argument, leaving limited scope for inaction, both for countries and companies. This document defines specific obligations, taking into account the basic principle of "common but differentiated responsibilities" from the 1992 UNFCCC. The authors propose *per capita* allowed emissions, without jeopardizing the target of limiting global emissions to under 2°C (the politically agreed limit within the United Nations climate negotiations).

The Principles coin the same arguments from the Urgenda case (Van Zeben 2015), in which a Dutch court made an unprecedented mandatory order against the Dutch government relating to greenhouse gas emissions. Like in Urgenda, the Principles support initiatives to involve the courts in efforts to protect people, not only from the effects of climate change, but especially from the inaction of government representatives. In fact, the guiding principle behind the Oslo document is the precautionary principle, in the sense that:

> There is clear and convincing evidence that the greenhouse gas (GHG) emissions produced by human activity are causing significant changes to the climate and that these changes pose grave risks of irreversible harm to humanity, including present and future generations, to the environment, including other living species and the entire natural habitat, and to the global economy. (Oslo Principles 2015)

> The precautionary principle requires that:

> (1) GHG emissions be reduced to the extent, and at a pace, necessary to protect against the threats of climate change that can still be avoided; and
> (2) the level of reductions of GHG emissions required to achieve this, should be based on any credible and realistic worst-case scenario.

It is obvious that the application of the precautionary principle in the field of climate change requires scientific and technical assessment as well as evidence accepted by a substantial number of climate change experts. In addition, all the measures taken in compliance with the precautionary principle should be adopted without regard to costs, except when these costs are completely disproportionate to the reductions in emissions achieved.

The Principles articulate a very clear argument that leaves little room to justify inaction by countries and companies. With this underlying reasoning, judicial cases such as Urgenda may proliferate if the duty of care based on the precautionary principle and obligations related to protection and respect for human rights are not met. This can operate geographically, e.g. causing transboundary harm, and over time – not protecting present and future generations. In this sense, Roger Cox (2012), a lawyer for the Urgenda case, published *Revolution justified* in which he affirms that judicial power can assume a very important role in the fulfillment of climatic obligations, because these obligations exist as a guarantee of the fulfillment of other rights recognized internationally, despite governmental inactivity.

According to the concept of Climate Justice Law, the legal determination of major-emitting countries liabilities and obligations are not enough. As seen above, a legal duty to pay compensation is needed for the serious and irreversible damages that have already been done and will be done to many developing countries through the GHG emissions of other countries.

Compensation for risks, losses and damages: is paying the climate debt enough?

Unfortunately, climate change has victims, and results in losses and damages (L&D) as vulnerabilities increase. Therefore, the risks, losses and costs generated by the injustices arising from the different contributions to climate change have been a historical claim of the countries that are most vulnerable to climate change, in order to overcome the so-called "emissions gap" (Simlinger and Mayer 2018).

According to Article 4 of the UNFCCC rich nations will cooperate with developing countries with technology, transfer and conservation of carbon sinks, and adaptation. The Bali Action Plan agreed in 2007 further reiterated the importance of transferring new, transparent, quantifiable and verifiable additional funds. They are considered "new funds" since they are additional to the official international development aid targets of 0.7% of the Gross Domestic Product (GDP), which are met only by a few nations. However, according to the parties to the UNFCCC, acknowledged in Decision 2/CP.19, loss and damage "involves more than, that which can be reduced by adaptation" (UNFCCC 2014). According to Wallimann-Helmer *et al*. in order to differentiate responsibilities in the light of compensatory considerations and liability, L&D could also be understood as undeserved damages that require redistribution to equalize injustice (Wallimann-Helmer *et al*. 2018).

However, in the climate change context, restoration may be possible for some impacts, and complementary measures off-site may be possible for others. Nevertheless, much loss will be irreversible and warrant compensation. The calculation of monetary compensation is further complicated where losses are irreversible and the risks are increasing.

Therefore, the third pillar of Climate Justice Law should provide a legal response to *risks, losses and damages* (R&L&D) for paying the climate debt. This consists of the full amount of the emission debt (historical, present and also future); the adaptation debt, which represents the cost of the efforts of developing countries to adapt to the impacts of climate change; and the cost of facing intolerable levels of risks due to the largest GHG emitters.

One of the most challenging issues for the Climate Justice Law in terms of climate liabilities and compensation is the appropriate treatment of historical, present and future emissions. Most of the increase in concentrations of GHGs in the atmosphere since the 1700s has resulted from UNFCCC Annex I Party emissions, and it is these past emissions, that are now causing present and future injury. However, it is relevant to consider, first, that developing country emissions are now on the increase and second, that among major carbon emitters is necessary to define whether States will be responsible for paying for climate change impacts, or whether public and private actors within States will also share this burden. In order to determine

these questions, a combination of State and civil liability along with the use of principles of international environmental law can be again important, such as the polluter pays; common but differentiated responsibilities and respective capabilities; equity and inter-generational equity; the precautionary principle and the need for an adequate flow of funds (Verheyen and Roderick 2008). In this regard, the groundbreaking publication of the *Carbon majors* research results can provide a useful tool towards to guarantee the proper attribution of responsibilities (Heede 2013).

According to these principles, major-emitters countries must recognize the historical and climatic ecological debt and create a financial mechanism to support developing countries in the implementation of their adaptation and mitigation plans and programs. They must also be supported to conserve ecosystems and innovate, through development and transfer of technology. The recipients for such compensations, in terms of Climate Justice Law, are developing countries particularly vulnerable of suffering the greatest relative impacts that have contributed the least to GHG emissions (in absolute or relative terms) and even those who begin to suffer the effects of developing country increasing emissions.

The compensations for the risks, losses and damages caused by large GHG emitters include loss of life or personal injury; loss of or damage to property; economic loss (including some losses arising from impairment of the environment); environmental damage and moral damage (Verheyen and Roderick 2008). The International Law Commission has also identified moral damage as recoverable under principles of international law (ILC 2001).

Other traditional options support the application of the polluter-pays principle and exploration of new funding sources based on GHG emissions. The financial mechanism for the payment of this debt could incorporate the contribution of at least 1% of the GDP of developed countries, in addition to other resources from taxes on fossil fuels, financial transactions, maritime and air transport and on the property of transnational corporations. In terms of climate justice, funding must be targeted at States' national plans and programs and not at projects that follow the expansionist logic of the capitalist system, and that have created the climate crisis.

A major issue is migration driven by climate change. It is not treated in this article, but there is again a possibility to target the responsibilities of the most polluting nations. These countries must cooperate and facilitate outmigration for those living in the worst affected regions. When internal migration is not possible, the proposal is that more industrialized states could receive a number of climate migrants in relation to their accumulated GHG emissions (Byravan and Chella 2006).

At the 2015 COP21 on climate change in Paris, developing countries ensured that industrialized countries confirm their aid to finance adaptation plans. In Article 4.4, the new agreement establishes a differentiation of responsibilities and commitments between industrialized and developing countries. This implies that all countries should establish control plans, but developed countries should lead the way by supporting developing countries in the fight against climate change through financial aid, by setting more ambitious targets or by increasing adaptation and mitigation capacity in these countries through technology transfer (Article 10). In this regard, mobilization of US$100 billion annually by 2025 has been agreed for developing countries to combat climate change. In addition, the most impoverished countries have achieved new, predictable funding over time, so that the figure already agreed by that date will increase from 2025.

In addition to funding for adaptation, Nicaragua, Bolivia and Tuvalu have already succeeded by setting up an international body and maintaining the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts. The COP19 in Poland established this mechanism in order to improve knowledge of the losses and damages generated by climate change, and to improve dialogue between the parties and increase necessary actions (UNFCCC 2013). The aim is to compensate for the losses and damages suffered by the most vulnerable territories because of climatic disasters (hurricanes, big storms, floods ...). Its main argument is the historic climate debt contracted by the most industrialized countries. Even though losses and damages imply liability and compensation, the Paris Agreement itself, in its decision number 52, refers to the fact that Article 8 of the Agreement does not imply or give rise to any form of legal liability or compensation. In other words, the US Government, with the complicity of the European Union,

has made the most vulnerable countries to climate change forgo their right to sue other countries for climate loss, in response to claims of historical responsibility for GHG emissions.

Notwithstanding, the Paris Agreement (2015) also declares, "This Agreement will be implemented to reflect equity and the principle of common but differentiated responsibilities." Thus, according to Voigt (2014) courts could recognize the question of equity through the "proportionate responsibility" of states to monitor, maintain and restore the Earth's Atmosphere as global trust.

What is clear is that without the recognition of legal liability or compensation, it is not possible to achieve the necessary path transformation to a new "Climate Justice Law".

7. Conclusions

Today, the "common concern of humankind" regarding the Atmosphere is not a rule of general international law, but it could become a principle of international customary law. Even though it is difficult to define the common concern of humankind in relation to climate change and the Atmosphere, because the term "concern" could be applied to both "causes" and "responses" to the problem, the reality is that it is an issue that has very important implications in terms of intergenerational rights, sustainable development and equity. In the new Anthropocene era, in which we humans are a major force of change, all of these are fundamental elements for the protection of the environment and human rights.

Although being recognized as of common interest to humanity, the Atmosphere is rapidly being colonized by a minority of the world's population at no cost, threatening the security of all humanity and the stability of the planet. The social and environmental costs of their development processes are arbitrarily transferred to the entire world's population, affecting in particular the poorest people. The law built under the UNFCCC remains unfair at its origin: the colonization of the atmosphere has occurred without climate justice. Some solutions proposed under this law have increased climate injustice, such as the transfer of financial and technological resources, with mandatory changes to be implemented in the energy infrastructure of developing countries towards clean and renewable energy. The result has deepen their economic and technological dependence and strengthen the unfair international economic order imposed since the Second World War. Overcoming this situation depends mainly on the recognition of the climate debt, and liabilities accumulated to date.

Although the ambiguous legal status of out planet's Atmosphere in the UNFCCC, the recognition by developing states concerning the Atmosphere as an explicit trust (based on the concept of common concern of humankind) will provide well-established legal remedies concerning the violation of fiduciary duties. Applying the common concern of humankind to the climate change regime will imply the transformation to a new Climate Justice Law, as a fiduciary law, based on the main duty to protect intergenerational rights and the Atmosphere for a common concern. This means shared decision-making, based not only on *equality* but also on *accountability*, sharing both benefits and burdens, and common but differentiated responsibilities. After the colonization of the Atmosphere, the transnational character of climate impacts – together with the concept of climate justice – appear to build a principle of "international environmental solidarity" based on the benefits of the common concern (climate rights) and the global trust to protect and restore the Earth's Atmosphere (climate obligations). The irreversibility of climate damage does not exempt compliance with distributive and restorative justice.

The concept of debt recognition is no longer enough to describe the situation arising from climate change: the concept of climate justice is better for understanding how inequality has fostered discriminatory treatment in the access, use and benefit of natural resources, in this case, of the Atmosphere. Therefore, the "decolonization" of the Atmosphere requires a shift in the legal framework. The proposal of a new Climate Justice Law is built with concern for ethics and justice, that implies the recognition of the large carbon emitters States' responsibilities, their duties of protection and due diligence, and the obligation to pay reparation for damages caused, directly or indirectly, by the largest emitters of greenhouse gases, either from production or from consumption. A rights-based approach (from an anthropogenic perspective) and admission of responsibilities (from a biocentric approach) are fundamental to strengthen climate action to achieve

Climate Justice Law. Without these transformative elements within the climate change regime, recompense for climate risks, losses and damages will be postponed.

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