Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

QRP

Addressing Climate-induced Migration through Adaptation Measures: An Emerging Human Rights-based Approach?[1]

Gianfranco Gabriele Nucera [2]

Abstract

The issue of adaptation has always been present in the international legal system to combat climate change, but the 2015 Paris Agreement represented a turning point in terms of its explicit recognition as a complementary measure to mitigation. Over the last few years, these measures are gaining importance also outside the context of climate conventions, due to the need to implement climate obligations in connection to human rights standards, as recognized by consistent judicial practice. This approach based on human rights appears to be functional to the judicial enforcement of international climate obligations, but it could have a more meaningful role, particularly in the context of climate-induced migration. Climate hazards in the country of origin, which lead to the perception of uninhabitability, could constitute the ground for the application of the non-refoulement principle. Existing literature on legal issues of climate migration mainly focuses on the use of pre-existing legal categories and the lack of suitable protection rules. However, focusing on States and other actors' practices and taking into consideration the emerging vulnerabilities of individuals affected by climate change would entail a more comprehensive approach. In the emerging jurisprudential practice, reference is made to the positive obligation of States to adopt all the necessary measures to ensure the exercise of fundamental rights, mainly with reference to the right to life. Such rulings underline how adaptation measures are relevant for defining States' standards of conduct based on due diligence. This standard varies according to the fundamental right concerned and reflects a balance between adaptation and mitigation measures, to be found on a case-by-case basis and considering the particular situation of each State, its vulnerability to the effects of climate change, its economic and technological capabilities.

Key Words:

Climate; migration; human rights; adaptation measures; non-refoulement

1. Introduction

In recent decades, there have been an increasing frequency of extreme climatic events and a progressive deterioration of certain natural resources linked to climate change. Such events have highlighted the risks arising from the worsening of the global warming situation and have produced a greater demand for adaptation actions to mitigate the

[2] Dr. Gianfranco Gabriele Nucera is a researcher in international law and adjunct professor of environmental justice and climate change of the Department of Political Science at the Sapienza University of Rome, Italy.

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

negative effects of climate change.

With the term "adaptation", we refer to all actions aimed at and limiting the abovementioned effects on the population and the environment. There does not exist yet a unanimous legal definition of the term adaptation; however, there are several references to concrete measures that fall under the concept of adaptation. The 5th Assessment Report of Intergovernmental Panel on Climate Change (IPCC) has defined adaptation as

> "[t]he process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate harm or exploit beneficial opportunities. In natural systems, human intervention may facilitate adjustment to expected climate and its effects".

The same Report has identified different adaptation measures and has stressed the need for developing a universal consensus in outlining the contours of this concept (Noble, I. R. et al., 2014: 853). The subsequent 6th Assessment Report confirmed the mentioned broad definition of adaptation measures and focuses its attention mainly on the concept of maladaptation, as to say all

> "actions that may lead to increased risk of adverse climate-related outcomes, including via increased greenhouse gas emissions, increased or shifted vulnerability to climate change, more inequitable outcomes, or diminished welfare, now or in the future" (Ara Begum et al., 2022: 165).

The concept of adaptation surely includes all strategies and measures aimed at improving the resilience of society. Reference could be made, inter alia, to means of strengthening existing infrastructures, raising the banks of watercourses, changing the type of crops and agriculture, improving the efficiency of irrigation systems, introducing plant varieties resistant to rising temperatures, planning urban areas more efficiently, greening areas suitable for certain crops or livestock. Technically there could be different types of categorizations concerning adaptation options. The European Climate Adaptation Platform (Climate-ADAPT) identifies three categories: grey, green and soft measures. According to Climate-ADAPT,

> "[g]rey measures refer to technological and engineering solutions to improve adaptation of territory, infrastructures and people[; g]reen measures are based on the ecosystem-based (or nature-based) approach and make use of the multiple services provided by natural ecosystems to improve resilience and adaptation capacity[; s]oft options include policy, legal, social, management and financial measures that can alter human behaviour and styles of governance, contributing to improve adaptation capacity and to increase awareness on climate change issues" (European Commission & European Environment Agency, 2012).

A different classification of adaptation options is the one proposed by the 5th Assessment Report of the IPCC, which includes three main categories: structural and physical options, social options and institutional options. Such categories are further divided in sub-categories.

The issue of adaptation has always been present, albeit to a marginal extent, in the international legal system of combating climate change because it has been an element of primary importance for most developing countries but, at the same time, a politically sensitive issue because it is connected, on the one hand, to the predominant role played by the industrialised countries in the cause of alteration of the climate and, from the other side, the lower technical and economic capacity of some States to adapt to the negative effects of such alterations (see Mayer, B., 2021). It is worth noting, however, that the 2015

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

Paris Agreement represented a turning point both in terms of institutionalization of adaptation actions and in their explicit recognition as a complementary measure to mitigation, to achieve the main objective of containing the rise in the Earth's temperature to within 2 °C, possibly within 1.5 °C (Lesnikowski et al., 2017; on the Paris Agreement see, inter alia, Klein et al., 2017; Montini., 2017; Bodansky, 2016; Rajamani, 2016; Van Asselt, 2016; Gervasi, 2016, Viñuales, 2016). Along this line, the Decision 1/CMA.3, Glasgow Climate Pact, adopted during the Third Conference of the Parties (COP) 26 in November 2021, has resolved to pursue efforts to limit the temperature increase to 1.5 °C, a target which requires rapid and sustained reductions in global greenhouse gas emissions,

> "including reducing global carbon dioxide emissions by 45 per cent by 2030 relative to the 2010 level and to net zero around midcentury as well as deep reductions in other greenhouse gases".

Over the last few years, international action has been increasingly geared to adaptation, as a priority and demand for developing countries, while at the same time seeking to promote greater transparency between States (on the evolution of the international system see Cordini et al. 2017; Bodansky et al., 2017; Bueno Rubial & Siegele, 2020). In this sense, the rules on transparency, as defined in the framework of the Paris Agreement, also apply to adaptation actions, covering aspects relating to the monitoring of the progress made by the Parties for the purposes of the overall assessment referred to in Article 14 of the Agreement. In this sense, a substantial step ahead has been realized through the adoption of the Glasgow-Sharm el-Sheik Work Programme on the Global Goal on Adaptation, which aims at: enabling the full and sustained implementation of the Paris Agreement, towards achieving the global goal on adaptation, with a view to enhancing adaptation action and support; enhancing understanding of the global goal on adaptation; contributing to review progresses made in achieving the global goal on adaptation; enhance national planning and implementation of adaptation actions through the process to formulate and implement national adaptation plans and through nationally determined contributions and adaptation communications; enabling Parties to better communicate their adaptation priorities, implementation and support needs, plans and actions; facilitating the establishment of robust, nationally appropriate systems for monitoring and evaluating adaptation actions; strengthening implementation of adaptation actions in vulnerable developing countries; enhancing understanding of how communication and reporting instruments related to adaptation can complement each other in order to avoid duplication of efforts.

These measures are becoming important both within the framework of climate conventions and outside the United Nations Framework Convention on Climate Change (UNFCCC) system (on the origins of the UNFCCC see Marchisio, 1992; Bodansky, 1993; on the global environmental conventions see Marchisio, 2007), due to the need to interpret and implement obligations relating to tackling climate change in relation to human rights standards. It is well known, in fact, the judicial practice that has been developed, especially at the municipal level, since the case Urgenda Foundation v. the Netherlands, whose ruling of the District Court of The Hague dates back to 2015, and was followed by the decisions adopted by the Court of Appeal, in 2018, and by the Supreme Court, in 2019 (on these decisions see Nollkaemper & Burgers, 2020; De Schutter, 2020; Scovazzi, 2018). This case has been followed by several rulings which, on the one hand, have relied on human rights standards and, on the other hand, focused their attention on

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

the obligation of reducing greenhouse gases emissions, neglecting, in some cases, the relevance of adaptation in the definition of the standard of conduct.

The objective of this research is, primarily, to introduce a different perspective on the current debate on the issue of climate migration. The current academic debate is characterized by some assumptions. First, international law does not adequately address the situation of persons who leave their country due to sudden-onset or slow-onset climate events. Second, in large part, the academic legal debate is not about the law as it is, giving necessary weight to national and international legal practice, but, in a de lege ferenda perspective, it is about what the international law should be.

According to main studies, persons displaced across international borders by climate factors do not benefit from international legal guarantees relating to refugees (see European Parliament, 2020, and the references therein). Treaties dealing with refugees, statelessness, human rights, climate change or the environment do not specifically address this particular situation (see, ex multis, Negozio & Rondine; Weerasinghe, 2020; Scott, 2020; Sciaccaluga, 2020; McAdam, 2020; Borges, 2019; Kälin, Schrepfer, 2012). This is of course an understandable situation, considering the historical period and date on which the Geneva Convention on the status of refugee has been negotiated and adopted, as well as some of the regional and national complementary forms of protection. From this issue, there derives a legal gap in relation to the "protection" of such persons (PDD, 2018: 145; Kälin, 2010: 85-89). Some scholars explicitly try to analyse the legal problem in terms of absence of international protection for forced movements caused by climate change, with voluntary migration left to the discretional regulation of States in their national legal order (Kälin & Schrepfer, 2012: 62). On the opposite, other authors criticize this approach, because it "underestimates the difficulty of distinguishing forced and voluntary movement" in the context of climate change and it is a

> "misrepresentation of the logic of international protection, which turns on prospective risk in the country of origin and a lack of national protection rather than the supposedly forced quality of movement" (Cantor, 2021: 280).

Main legal research focuses on possible solutions deriving from: an extensive interpretation of existing norms of international law (Scott, 2020; Weerasinghe, 2018: 109-110; Garlick et al., 2018: 121; Fraser, 2016: 110; Kozoll, 2004: 297); the applicability and use of some regional or national forms of temporary or other protection to persons moving for climate or environmental factors (Wood, 2015; McAdam, 2012: 256-266); possible future developments of soft law instruments or policy framework for cooperation (Schloss, 2018: 247-248; Ferris & Bergmann, 2017: 12; Mayer, 2011); proposal of a new binding conventional framework to fill the legal gap or amending the terms of existing treaties in the refugee or human rights field (Biermann & Boas, 2008; Felipe Pérez, 2018: 223-224).

In light of the above, a new perspective can be found in appreciating and analysing the set of adaptation norms and measures adopted by States. Within the framework of migration induced by negative effects of global warming, in fact, the adaptation measures have a twofold implication. On the one side, adaptation measures can help people that want to stay, to avoid movements, or at least postponing the decision to move, while on the other side, in specific situation of uninhabitability, migration can be an adaptation measure in itself. According to some authors, in fact,

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

> "policymakers often view climate change adaptation measures and sustainable development in the larger sense as a means to reduce migration pressures, particularly for rural and hazard-exposed populations. […] There is growing consensus among scholars that migration itself serves as part of the positive adaptation strategies adopted in the context of environmental and climatic change. It can be a way to reduce population pressures in places prone to climate risks, while diasporas provide important resources to help communities adapt and respond to climate change, through economic and social remittances and more" (Gemenne & Blocher, 2017: 2).

The present paper will focus on the first issue, as to say on the adaptation measures, which need to be implemented in order to allow people to stay in their countries. The arguments will highlight the relevance that adaptation measures have acquired in the definition of international obligations in the field of combating climate change, to emphasize that the standard of conduct must take due account not only of international commitments on mitigation, but also of obligations related to the planning and implementation of adaptation measures. The adoption of such measures in the country of origin can indeed represent a legal criterion to be considered to trigger the non-refoulement principle for persons that decided to move for reasons linked to the negative effects of climate change and related situation of uninhabitability. In this sense, the work aims at identifying existing links among the mentioned areas and, from a methodological point of view, the analysis focuses on the adoption of a human rights-based approach and on the fundamental role of legal and judicial practice in this regard.

2 Adaptation within the Framework of International Climate Conventions

Despite the explicit acknowledgments of the negative effects of climate change and, consequently, of the necessary response measures, adaptation did not play a major role during the first two decades of the UNFCCC's life. From the outset, the attention of the Parties to the Convention, as well as the eyes of world public opinion, have been directed primarily to mitigation activities, relegating to a marginal position the question of adapting and financing such measures in support of the most vulnerable states. This is due, first, to the erroneous idea of temporal distance that has always accompanied the global warming, so that in all the appropriate forums there was a natural propensity for discussing something that would occur in the future or related to sudden-onset catastrophic events, with the consequence of neglecting, on the one hand, the negative effects already visible in the present and, on the other hand, the contribution that the adaptation measures themselves could make to reducing emissions.

Conceptually, however, the relevance of adaptation is extremely important since it tells us that the current effects of the climate catastrophe are avoidable, or at least reducible. Therefore, relocating the issue of adaptation to the centre of international climate policy makes it possible to rebalance the general approach of the system, updating part of the effects of international action to combat climate change.

Adaptation is also relevant because it calls into question the cliché that everyone is both responsible for and victim of climate change. This is generally true but, from a relativistic perspective, we observe that there are appreciable differences between States in relation to both causes and effects. All States, in different ways, are responsible for the production of global warming, and all States are victims, but not all in the same way. Adaptation, therefore, is also fundamental with a view to affirming a sort of "climate justice", as a

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

theoretical legal concept that refers to the need to find a fair and equitable sharing and distribution of both burdens and benefits deriving from the effects connected to climate change as well as responsibilities to fight global warming (on the debate about the meaning and boundaries of this concept see Jafry, 2019).

Only thanks to the strong impetus of the Small Island Developing States (SIDS), which stressed the potential catastrophic impact that sea level rise would have on their very existence and, moreover, highlighting all the damages and losses already in place, and the need to adopt adaptation measures, it has been clarified that the effects of climate change have differentiated impacts due to the vulnerability of a State to this phenomenon.

However, it is precisely the difficulty in identifying, at least at this early stage, unambiguous criteria for assessing the negative impacts of climate change on each State that has certainly favoured poorly structured references within the framework of the UNFCCC. The Convention mentions the negative effects of climate change in the Preamble, recognising them as a common concern of humankind by "[a]cknowledging that change in the Earth's climate and its adverse effects are a common concern of humankind", and introducing the concept of vulnerability of the State to climate change by

> "[r]ecognizing further that low-lying and other small island countries, countries with low-lying coastal, arid and semi-arid areas or areas liable to floods, drought and desertification, and developing countries with fragile mountainous ecosystems are particularly vulnerable to the adverse effects of climate change".

The Convention does not define the concept of vulnerability, but provides a non-exhaustive list of categories of States or areas considered vulnerable due to their specific circumstances and degree of development:

> "(a) Small island countries; (b) Countries with low-lying coastal areas; (c) Countries with arid and semi-arid areas, forested areas and areas liable to forest decay; (d) Countries with areas prone to natural disasters; (e) Countries with areas liable to drought and desertification; (f) Countries with areas of high urban atmospheric pollution; (g) Countries with areas with fragile ecosystems, including mountainous ecosystems; (h) Countries whose economies are highly dependent on income generated from the production, processing and export, and/or on consumption of fossil fuels and associated energy-intensive products; and (i) Landlocked and transit countries".

The subsequent Kyoto Protocol, adopted in 1997 during the Third COP to the UNFCCC, is a binding legal instrument entirely dedicated to climate change mitigation, as it is specifically intended for setting emission reduction targets and obligations (see, ex multis, Nanda, 1999). Notwithstanding the purpose of the Protocol, the concept of adaptation is also mentioned in this legal instrument in the context of certain provisions reiterating the objectives of planning and preparation for adaptation. Art. 10 of the Protocol provides that:

> "[a]ll Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, [...] in order to achieve sustainable development [...] shall: (b) Formulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change and measures to facilitate adequate adaptation to climate change".

Like the Convention, the Protocol does not specify what constitutes an adaptation action.

Between 2001 and 2010, the work of the COPs began to deal significantly with the subject

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

of adaptation, mainly under the pressure of the Least Developed Countries (LDCs). In particular, the decision to create a five-year work programme (Bali Action Plan, BAP), adopted by Decision 1/CP.13, during the 2007 COP, enabled the parties to agree on the importance of promoting appropriate adaptation actions focusing in particular on international cooperation in support of the urgent implementation of adaptation measures, on risk reduction and management strategies, on the means of dealing with losses and damages resulting from climate change or on how to deal with economic differences to improve the resilience of populations and on the role of the UNFCCC as a tool to bring together in a structured way the needs and responses in this field.

In the process of implementing the BAP, the Cancun COP represented a watershed for global discussions on adaptation, as it recognized that "[a]daptation must be addressed with the same priority as mitigation and requires appropriate institutional arrangements to enhance adaptation action and support". Decision 1/CP.16 identified objectives and actions needed to address the problem through institutional mechanisms that can facilitate States in identifying needs and response measures. These decisions underpin the references contained today in the Paris Agreement, adopted during the 2015 COP.

The leading role played by adaptation in the international system for combating climate change is enshrined in the introduction in the latter treaty of two articles specifically devoted to the issue. In addition, there is an explicit recognition, on the one hand, of the link between mitigation objectives and adaptation needs and, on the other hand, of the need to allocate financial resources fairly to support both activities. The Agreement stresses the centrality of adaptation in terms of protecting populations, livelihoods, and ecosystems from the effects of climate change, taking into account the urgent and immediate needs of countries, which are particularly vulnerable to negative effects of global warming.

3. Adaptation Obligations in the Paris Agreement and the Human Rights-based Approach

The Paris Agreement provides for different types of obligations of the Parties. Firstly, each State must plan and implement adaptation measures, which are essential in the adoption, or improvement, of processes, policies and/or initiatives aimed at implementing adaptation actions, formulating and implementing national plans, assessing its vulnerability by paying also due attention to vulnerable populations, places and ecosystems, making socio-economic and ecological systems resilient, including through forms of economic diversification and sustainable management of natural resources.

Secondly, the State must submit and periodically update a communication on adaptation, identifying priorities and needs, as well as objectives and actions. This communication is to be considered as a component of, or accompanying, other documents such as the National Adaptation Plan (NAP) and the Declaration on Nationally Determined Contributions (NDCs). The communication on adaptation submitted by each State shall be published and contained in a register kept by the Secretariat. The link with the declarations on the national contribution requires States to foresee a progression over time of the objectives and adaptation measures, so these indications must periodically be revised upwards. Proving the universal value of such a system, as of March 2022, 194 states have adopted their first NDC, while 13 states have communicated the second NDC. It should be also noted that Eritrea has not yet ratified the Paris Agreement, which consists

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

of 193 Parties, but has anyway decided to communicate the first NDC. The European Union, whose 27 Member States present a single NDC, in December 2020, following the adoption of the so-called "Green Deal", updated the first NDC, which had been announced in October 2016.

The obligations laid down in the Agreement shall maintain a differentiation between the parties, in accordance with the principle of common but differentiated responsibility (on the principle see Cullet, 2015). It should be noted that the principle within the Agreement meets two modes of implementation, horizontal and vertical (Maljean-Dubois, 2016; Voigt & Ferreira, 2016). Horizontal application refers to the link between the obligation and the specific circumstances of each State and is associated with the use of formulas such as "in the light of different national circumstances", which accompanies any reference to the principle, or "as appropriate", as specified in the obligation set out in Art. 7. The vertical application refers to a classical differentiation between particular categories of States, so that it is specified that the declarations must not entail additional standards for developing countries and that States, especially industrialized countries, must support, even financially, international cooperation on adaptation, with the aim of exchanging information and good practices, strengthening institutional mechanisms, improving scientific knowledge on climate and early warning systems, assisting developing countries in identify concrete and effective adaptation practices.

Within the framework of the total budget provided for in Article 14 of the Agreement, an overall assessment of the adaptation measures will be carried out to: recognise the efforts made by developing countries; strengthen the implementation of adaptation measures, considering national communications; and to review the adequacy and effectiveness of the measures and support offered; to examine the overall progress made in achieving the global adaptation objective. The global budget will allow us to understand how NAP and NDCs address progresses to be made in achieving the global objectives set out in art. 2.

Decision 1/CP.21, to which the text of the Agreement is annexed, mandates the Conference of the Parties to the Agreement (CMA) to define certain aspects of the actions to be taken to achieve the overall objective of adaptation. The CMA in Katowice, in 2018, adopted a package of twelve decisions to define criteria and procedures for implementing the obligations of the Agreement. Among these acts, Decisions Nos. 9, 10 and 11 are particularly relevant for the present work, as they are dedicated to the definition of criteria for coherence and transparency of commitments, as well as common indicators, providing the basis for the adoption of declarations on adaptation.

The measures above described should not be read in isolation, but systematically integrated with the obligations arising from other areas of international law, those relating to the protection and promotion of human rights. Systematic interpretation is at this point widely supported by doctrine and practice, also with reference to other areas of international law (see, ex multis, Pustorino, 2021; Knox, 2020; Boyle, 2018; Rajamani, 2018; Atapattu, 2018; Savaresi, 2018; on the impact of human rights theory and practice on other areas of international law, see Pisillo Mazzeschi, 2014; Marchisio, 2016). Human rights have gained a central role in the evolution of contemporary international law, producing innovations both on general and specific aspects of the law. In general terms, it would not be erroneous to affirm that a process of "humanization" of international law is ongoing (cf. Meron, T., 2006). It is quite true that, since the end of the Second World War, the creation of the United Nations and the development of principles and concrete

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

rules on the protection and promotion of human rights, State-centred norms aimed at regulating relations between States have been complemented by human-centred norms aimed at protecting people, deriving

> "from universal conventions and, in some cases, they represent indispensable standards that safeguard the fundamental values of the international community. Such expansion of values, and the parallel strengthening of international standards, have led to a gradual weakening of the traditional reserved domain of States".

Furthermore,

> "[t]he evolution of the rules pertaining to specific areas of international law is an example of this change of perspective. Human rights standards and the new anthropocentric perspective have an influence on the rules concerning the protection of the environment"

and, as will result from the analysis of this research, on regulations relating to climate change.

> "In sum, even if contemporary international law remains a system State-centred, international obligations that States accepted during the last seventy years have shifted their action toward the protection of person" (Nucera, 2020: 297).

Moreover, even if an evolutionary and integrated interpretation of the provisions would not to be considered admissible, this systematicity could be identified in the essential link between human rights and climate change, widely explored and recognized or both in the context of international human rights bodies. According to the UN Secretary-General (2020),

> "human Rights obligations, standards and principles have the potential to inform and strengthen international, regional and national policymaking in the area of climate change, promoting policy coherence, legitimacy and sustainable outcomes".

The Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment have recognized that

> "climate change is having a major impact on a wide range of human rights today, and could have a cataclysmic impact in the future unless ambitious actions are undertaken immediately. Among the human rights being threatened and violated are the rights to life, health, food, water and sanitation, a healthy environment, an adequate standard of living, housing, property, self-determination, development and culture" (UN General Assembly 2019:10).

In addition, the Preamble of the Paris Agreement explicitly recognises that

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

Moreover, also with regard to adaptation measures, the Agreement specifies that such measures must be sensitive to gender equality, defined through participatory and transparent processes, taking into account the needs of vulnerable groups, communities and ecosystems, inspired by the best available scientific knowledge and, where appropriate, traditional knowledge, indigenous peoples' cultures and local cultures, so as to integrate adaptation, where appropriate, into relevant socio-economic and

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

environmental policies and measures.

Precisely this integrated approach based on human rights (so-called human rights-based approach) is what today appears to be functional to the enforcement by judicial means of international obligations in the field of combating climate change (Knox, 2016; Atapattu, 2015). The reference cases, both from the point of view of the decisions and of the reasons given by the applicants, and of the appeals still pending, are now numerous and involve courts, domestic and international, treaty-bodies. In addition to this internal practice, there are recent applications pending before the European Court of Human Rights. In other cases, the monitoring bodies of international human rights conventions dealt with the issue of human rights and climate change.

The consistent case-law established is constantly being updated. According to the United Nations Environment Programme (UNEP), as of 1 July 2020, the number of "climate" appeals has almost doubled compared to the previous year, with at least 1,550 appeals filed in 38 states. These complaints are, in a large number, legally based on the positive obligations of the States to take all necessary measures to ensure the exercise of the fundamental rights considered at stake in respect of persons under their jurisdiction. In the context of these individual complaints and communications, reference is made, in the majority of cases, to the right to life, prohibition of torture and inhuman and degrading treatment, to the prohibition of refoulement, to the right to respect for private and family life. However, there are also references to other important rights enshrined in human rights treaties, such as the right to health, the right to food, the right to water, the right of the child to have his or her best interests duly taken into account as a primary consideration.

Among these rights, the principle of non-refoulment seems to have a pivotal role in the case of climate migrants. In this sense, reference can be made primarily to the obligations enshrined in the International Covenant on Civil and Political Rights (ICCPR), that entails for the parties an

> "obligation not to extradite, deport, expel or otherwise remove a person from their territory, where there are substantial grounds for believing that there is a real risk of irreparable harm, such as that contemplated by articles 6 and 7 of the Covenant, either in the country to which removal is to be effected or in any country to which the person may subsequently be removed" (UN Human Rights Committee, 2004: 12).

Arts. 6 and 7 of the Covenant refer, respectively, to the right to life and to the prohibition of torture, inhuman and degrading treatment, and impose positive obligations on the States to protect people under their jurisdiction and adopt a standard of diligence which, in the case of actions having an impact on climate change, cannot also disregard scientific considerations and the capabilities of the State.

It should be noted that, with particular regard to the rights to life and to private and family life, the jurisprudence of the regional courts on human rights and the treaty bodies has always used the parameter of the real and imminent threat of which the State has knowledge, or should have had knowledge, for the activation of the positive obligation of the State to take all necessary measures to prevent the violation of these rights. In many of the cases mentioned, the courts have recognized that the threat posed by climate change is real and based on scientific evidence and is imminent since it weighs not only on future generations, but already on present generations.

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

In these respects, a fundamental role has been recognized, in the mentioned cases, to the studies conducted by the IPCC. The Panel's reports have an indisputable scientific value and are relevant for several reasons. Firstly, they raise awareness in the States on the risks associated with climatic alteration phenomena, precisely pointing out the quantitative and qualitative elements necessary to counteract these phenomena. In addition, these reports accurately identify the causal link between human actions and climate change and identify, based on predictive models, the greenhouse gas emission reduction thresholds, and those measures necessary to achieve the goal of limiting the increase in the Earth's temperature to within 2 °C.

Regarding the capacity of the State, each specific situation must be considered on a case-by-case basis when evaluating due diligence, first by assessing whether it is reasonably an industrialized country, a developing country, a least developed country, or a small island developing State. Depending on whether the State belongs to one of these categories, mitigation and financial obligations may be more or less relevant than adaptation obligations. However, it should be also noted that the category of developing countries has substantially evolved over the years and current aggregations consider new economies (for example that of the so-called BRICS, comprising Brazil, Russian Federation, India, China, and South Africa) or other factors not attributable to the previous logic (Marchisio, 2021: 51). In this regard, a correct interpretation of the obligation would give attention to the substantial elements of the State involved, rather than a formal affinity of the State to a specific group. In the case of an industrialized state, the former should assume greater weight in the evaluation of conduct. Conversely, in the case of a State belonging to one of the other categories, the adoption or need to adopt adaptation measures could take on a greater specific weight. This is because the countries that are the most vulnerable to the effects of climate change, and therefore in need of greater adaptation interventions, are those that have contributed least to climate change, that is, those that logically should have less burdensome mitigation obligations.

A further element of evaluation related to the specificities of the State concerns its technological capabilities. The assessment of the subject's conduct cannot be separated from the application of the principle of the best available technology (BAT) and from an analysis of the costs-benefits associated with the adoption of both mitigation and adaptation measures.

This principle is referred to in several international conventions on the environment and sustainable development with the aim of defining a reference standard that guarantees the flexibility and adaptation of the rules of a treaty to social developments. According to the mentioned principle, no technology or technique can be considered a BAT without effective research into the current State of science and technology. For example, the Helsinki Convention on the Protection and Use of Transboundary Waterways and International Lakes, of 1992, defines how to identify the best available technology through the application, among others, of the following parameters:

> "(a) Comparable processes, facilities or methods of operation which have recently been successfully tried out; (b) Technological advances and changes in scientific knowledge and understanding; (c) The economic feasibility of such technology".

The principle of BAT (or even best available technique, science, or scientific knowledge) is also referred to, for example, in the Convention for the Protection of the Atmosphere against Long-Range Transboundary Pollution (Art. 6), the UNFCC (Art. 4.1. lett. c and d),

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

the Kyoto Protocol (Art. 9) and the Paris Agreement (Preamble, Arts. 4.1, 7.5, 14.1) (other references to the principle in international conventions are mentioned in Merkouris, 2012).

The BAT principle becomes even more relevant, in a system such as that devoted to fight climate change, if we consider the pace of scientific research and progress, which makes it possible that a technique considered as the best a few years ago can no longer be characterized as such. While the UNFCCC and the Kyoto Protocol explicitly refer to the principle about mitigation actions, Article 7 of the Paris Agreement recognises that adaptation actions must be based on and guided by "the best available science".

It should be noted that, however, where this principle has not been expressly referred to, it has been applied through the extensive interpretation of certain provisions of the treaties on the management of shared natural resources. There are several cases in which international tribunals have adopted dynamic and evolutionary interpretations of the provisions of a treaty. The International Court of Justice (ICJ) has recognized since 1971 the importance of adopting an evolutionary as well as systematic interpretation. In the advisory opinion on Legal Consequences for States of the Continued Presence of South Africa in Namibia (South West Africa) notwithstanding Security Council Resolution 276 (1970), the Court affirmed that "an international instrument has to be interpreted and applied within the framework of the entire legal system prevailing at the time of the interpretation" (see, inter alia, Nucera, G. G., 2022). According to the ICJ, following the use of a generic term

> "the presumption necessarily arises that its meaning was intended to follow the evolution of the law and to correspond with the meaning attached to the expression by the law in force at any given time".

For example, in the Gabčíkovo-Nagymaros Project case, with reference to some generic terms used in the 1977 Treaty concerning the construction of a dam on the river Danube, the ICJ highlighted that:

> "[b]y inserting […] evolving provisions in the Treaty, the parties recognized the potential necessity to adapt the Project. Consequently, the Treaty is not static, and is open to adapt to emerging norms of international law".

Furthermore, in the Pulp Mills on the River Uruguay case, the ICJ recognized the need to apply the best available technology in order to comply with the pollution prevention obligations under Article 41 of the Uruguay River Statute. Both Argentina and Uruguay agreed on the application of the BAT principle. According to Argentina, "Uruguay has failed to take all measures to prevent pollution by not requiring the mill to employ the "best available techniques", even though this is required under Article 5 (d) of the […] Convention [on Persistent Organic Pollutants]" (ICJ, Judgement of 20/4/2010, Pulp Mills on the River Uruguay, at 220) and "the mill does not use best available techniques and that its performance is not up to international standards, in the light of the various techniques available for producing pulp", while Uruguay maintains that it "has complied with its duty to prevent pollution by requiring the plant to meet best available technology ("BAT") standards" (ICJ, Pulp Mills, at 192).

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

4 Duty of Care and Relevance of Climate Change Adaptation Measures

Among the many above mentioned cases, it seems appropriate to refer to some of them and to the reasoning that the court or supervisory body has carried out to adopt a decision. In most cases, the attention of the judges, and of the doctrine that has commented on these decisions, has focused on the role of mitigation measures in protecting human rights. This approach focusing on reducing greenhouse gas emissions is a relic from the past when the concept of mitigation assumed centrality in the international system.

However, the most prudent case-law has not failed to point out that adaptation measures, in line with the new approach of the Paris Agreement, are as relevant as mitigation actions. In particular, the analysis will focus on the cases Urgenda Foundation v. the Netherlands, Teitiota v. New Zealand, Neubauer, et al. v. Germany.

The fil rouge among these cases is the definition of the standard of conduct that uses as a benchmark the criterion of diligence, to be evaluated according to the need to put in place measures to ensure the exercise of the right (or rights) in question.

It should be noted that, obviously, the standard varies according to the fundamental right at stake, higher in the case of rights of an absolute nature, such as the right to life or the prohibition of torture, or inhuman and degrading treatment, and relatively less in the case, for example, of the right to respect for private and family life.

In the cases examined, the reasoning adopted by the courts leads to the conclusion that, to guarantee the exercise of the fundamental rights referred to, the State must take all the necessary measures imposed by the positive obligation. According to the Human Rights Committee, and with reference to the ICCPR,

> "[t]he duty to take positive measures to protect the right to life derives from the general duty to ensure the rights recognized in the Covenant, which is articulated in article 2, paragraph 1, when read in conjunction with article 6, as well as from the specific duty to protect the right to life by law which is articulated in the second sentence of article 6. States parties are thus under a due diligence obligation to undertake reasonable positive measures, which do not impose on them disproportionate burdens, in response to reasonably foreseeable threats to life".

Moreover,

> "[i]n light of article 2, paragraph 1, of the Covenant, a State party has an obligation to respect and to ensure the rights under article 6 of all persons who are within its territory and all persons subject to its jurisdiction, that is, all persons over whose enjoyment of the right to life it exercises power or effective control".

In the case of possible breaches connected to climate phenomena, these measures are to be found in the implementation of international obligations on climate change mitigation, derived from the international scientific work of reference, in particular the reports published by the IPCC, and from the relevant national documents. However, the innovative rulings also refer, in a differentiated manner, to adaptation measures.

In the case of Urgenda Foundation v. the Netherlands, the Court of Appeal has recognised the possibility of using, with a view to prevent possible violations of the right to life or the right to respect for private and family life, together with mitigation, adaptation measures "to counter the consequences of climate change, including raising dikes to protect low-lying areas". In the present case, the State had noted that

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

> "adaptation and mitigation are complementary strategies to limit the risks of climate change and that Urgenda has failed to appreciate the adaptation measures that the State has taken or will take".

However, the State used this as an argument for justifying the failure in reducing its emissions and the Court concluded that "while it is certainly logical for the State to also take adaptation measures, this does not take away from its obligation to reduce CO2 emissions quicker than it has planned".

The same approach was rightly confirmed by the Netherlands Supreme Court, which, however, did not fail to point out more clearly that the positive obligations imposed by Articles 2 and 8 of the ECHR do not include the duty to take the necessary preventive measures and maintaining a certain discretion in the choice of measures, having regard to the specific circumstances of the case. The Dutch Court specifically refers to the extensive case-law of the Court of Strasbourg on Arts. 2 and 8. In particular, on Art. 2, the Court refers to the judgments: Öneryildiz v. Turkey, Budayeva et al. v. Russia, Kolyadenko et al. v. Russia. On Art. 8, the Court refers to judgments in cases: Taşkin et al. v. Turkey, and Tătar v. Romania. According to the Supreme Court, those measures

> "may encompass both mitigation measures (measures to prevent the threat from materialising) or adaptation measures (measures to lessen or soften the impact of that materialisation)".

In the case Ioane Teitiota v. New Zealand, the Human Rights Committee recognized the link between climate change and the right to life, already identified by the Committee's General Comment No. 36 (view of 24/10/2019). According to the General Comment:

> "Environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life. Obligations of States parties under international environmental law should thus inform the contents of article 6 of the Covenant, and the obligation of States parties to respect and ensure the right to life should also inform their relevant obligations under international environmental law. Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors. States parties should therefore ensure sustainable use of natural resources, develop and implement substantive environmental standards, conduct environmental impact assessments and consult with relevant States about activities likely to have a significant impact on the environment, provide notification to other States concerned about natural disasters and emergencies and cooperate with them, provide appropriate access to information on environmental hazards and pay due regard to the precautionary approach".

In assessing whether the expulsion of the author of the communication to his country of origin was the result of a clearly arbitrary, erroneous or unjust assessment which would create a real risk to his life, the Committee noted that the New Zealand courts had thoroughly analysed Teitiota's request and that the government of Kiribati has adopted "steps to address the effects of climate change, according to the 2007 National Adaptation Programme of Action submitted by Kiribati under the [UNFCCC]".

The Committee recognized that

> "without robust national and international efforts, the effects of climate change in receiving States may expose individuals to a violation of their rights under articles 6 or 7 of the

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

> Covenant, thereby triggering the non-refoulement obligations of sending states. Furthermore, given that the risk of an entire country becoming submerged under water is such an extreme risk, the conditions of life in such a country may become incompatible with the right to life with dignity before the risk is realized".

Faced with such a scenario, the rise in the sea caused by the effects of climate change would fall perfectly within the hypotheses of application of the prohibition of refoulement provided by the potential violation of the right to life and/or the prohibition of torture, inhuman and degrading treatment in cases of repatriation of the person. However, the Committee did not automatically apply this hypothesis and used as a benchmark the measures which the State would have had to take, including the most extreme, in relation to the period remaining before the situation degenerates to the point of making the place uninhabitable. The Committee notes that

> "the timeframe of 10 to 15 years, as suggested by the author, could allow for intervening acts by the Republic of Kiribati, with the assistance of the international community, to take affirmative measures to protect and, where necessary, relocate its population",

and adds that "the Republic of Kiribati was taking adaptive measures to reduce existing vulnerabilities and build resilience to climate change-related harms". Precisely because of the adaptation measures already approved by the State and those that it could have put in place in the next 10 to 15 years, the Committee could not detect a violation of the right to life of the author of the communication.

The adoption of adaptation measures is therefore interpreted as a central element of the standard of protection imposed by the right to life, even to a greater extent than the possible measures to reduce greenhouse gas emissions that the Republic of Kiribati has adopted or could and should have adopted.

The duty of the State to protect the life and physical integrity of persons under its jurisdiction is also the subject of the ruling of the German Federal Constitutional Court in the case of Neubauer, et al. v Germany (order of 24/3/2021). According to the Court, the risks posed by climate change give rise to this duty to protect, to be achieved by adopting measures that contribute to stopping anthropogenic global warming. These actions must be complemented by positive measures aimed at alleviating the consequences of climate change, i.e., adaptation measures. In relation to these, the Court recognised that, although not directly aimed at limiting climate change, adaptation is key to alleviating its negative effects on people. The Court further points out that

> "[n]evertheless, alongside the duties of protection [...], a mechanism for safeguarding the ecological minimum standard could indeed acquire its own independent validity if, in an environment transformed to the point of being toxic, adaptation measures would still be capable of protecting life, physical integrity and property but not the other prerequisites for social, cultural and political life".

If, on the one hand, the State has the duty to cooperate with other States to try to solve the climate problem and to "do its part" in terms of reducing greenhouse gas emissions, on the other hand, where climate change is not preventable or has already occurred, the State is obliged to address the risks by implementing positive measures aimed at alleviating the consequences of climate change, and keep the risks at acceptable levels.

In the present case, the Court has held that it cannot be established at present that the State has violated its duty to protect with the reduction path regulated until 2030, possibly

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

still oriented towards a 2 °C target. There is no evidence that the health consequences of global warming of 2 °C and the corresponding climate change in Germany could not be sufficiently alleviated by supplementary adaptation measures under constitutional law (Federal Constitutional Court, Neubauer, at 167).

The standard of protection required by the right to life is therefore linked to the combination of the two elements, the complementarity of which is fundamental to correctly assess the conduct of the State. The duty to protect fundamental rights entails a combination of mitigation and adaptation measures for which the State is responsible for the political choices made, also taking into due account the indications of the international scientific community. Referring to the indications of the scientific community, the Court recalls the reports of the IPCC. In particular, the judgment refers to the measures referred to in 5th Assessment Report.

The Court's reasoning highlights the centrality of adaptation in assessing the possible violation of the right to life, so that

> "whether or not the measures are sufficient to protect fundamental rights could only be evaluated by comparing the climate action measures taken with the possible adaptation options".

5. Conclusion

In the cases mentioned above, there is a tendency to recognize that the negative effects of climate change can cause serious repercussions on the exercise of certain human rights, both with reference to the sudden-onset climate events, such as droughts or hurricanes, and in relation to the slow-onset events, such as desertification or rising oceans.

Logically, it follows that failure to comply with international obligations to combat climate change consequently leads to a breach of the positive obligation of States to take all measures necessary to ensure the exercise of certain fundamental rights, in particular the right to life or the right to respect for private and family life, in respect of persons under their jurisdiction, in cases where a causal link between prejudice and extreme phenomena or progressive climatic deterioration can be demonstrated.

The cases analysed, on a closer investigation, also denote another trend, in the consolidation phase, namely the recognition of the complementarity of adaptation measures with respect to mitigation actions, as essential means to define the necessary standard of conduct guaranteed by the due diligence obligation.

This approach coincides perfectly with the evolution that the legal-institutional framework to combat climate change is experiencing, with a "promotion" of the issue of adaptation as a central theme of the system, as well as the mitigation and financing of cooperation, and an essential means to achieve the objective of containing the rise in temperature within 2 °C, enshrined in the Paris Agreement, subsequently updated to 1.5 °C by the Glasgow Climate Pact and reiterated by the Sharm el-Sheik Implementation Plan.

Moreover, it is clear, as pointed out in the cases of Urgenda Foundation v. the Netherlands and Neubauer et al. v. Germany, that the use of adaptation measures alone would not be sufficient in relation to the objective of protecting persons under the State's jurisdiction. Such measures alone would not be adequate to contain the risks of violation of these

Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

rights, but rather there must be a balance between mitigation and adaptation interventions.

It is up to the State to define the right balance between mitigation and adaptation measures, taking into account the scientific data and evidence that are regularly made available to decision-makers by the international scientific community. The balance between the two measures is therefore to be found on a case-by-case basis, due to the situation of each State, assessing its vulnerability to the effects of climate change, its economic and technological capacities, as well as the contribution that the State has historically made to the alteration of the global climate, in line with the principle of common but differentiated responsibility and their respective national capacities and circumstances.

To conclude, it should be noted that since a human rights-based approach serves generally as a catalyst for promoting the achievement of an environmentally sustainable future, adaptation measures represent a decisive criterion for the purposes of protecting climate-induced migrants by triggering the applicability of the principle of non-refoulement, which is the cornerstone of the international protection system, as a first step for the subsequent and connected applicability of reception measures and towards more stable forms of protection that also consider aspects related to integration.

References

Ara Begum, R., Lempert, R., Ali, E., Benjaminsen, T.A., Bernauer, T., Cramer, W., Cui, X., Mach, K., Nagy, G., *Stenseth*, N.C., Sukumar, R., & Wester, P. (2022). 2022. Point of departure and key concepts. In 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* (pp. 121–196). Cambridge University Press.

Atapattu, S. (2015). *Human rights approaches to climate change. Challenges and opportunities*. Routledge.

Atapattu, S. (2018). *The Paris Agreement and human rights. Is sustainable development the 'new human right'? Journal of Human Rights and the Environment, 9*(1), 68-88.

Biermann, F., & Boas, I. (2008). Protecting climate refugees. The case for a global protocol. *Environment: Science and Policy for Sustainable Development, 50*(6), 8-17.

Bodansky D. (2016). The Paris climate change agreement: A new hope? *American Journal of International Law*, *110*(2), 288-319.

Bodansky, D. (1993). The United Nations framework Climate Change Convention. A commentary. *Yale Journal of International Law, 67*(4), 451-558.

Bodansky, D., Brunnée, J., & Rajamani, L. (2017). *International climate change law*. Oxford University Press.

Borges, I. (2019). *Environmental change, forced displacement and international law. From legal protection gaps to protection solutions*. Routledge.

Boyle, A. (2018). Climate change, the Paris Agreement and human rights. *International and Comparative Law Quarterly*, *21*(2), 759-777.

Bueno Rubial, M. P., & Siegele L. (Eds.) (2020). *Negotiating climate change adaptation. The common position of the Group of 77 and China*. Springer.

Burkett, V.R., Suarez, A.G., Bindi, M., Conde, C., Mukerji, R., Prather, M.J., St. Clair, A.L., & Yohe, G.W. (2014). 2014: Point of departure. In C.B. Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L.White (Eds.), *Climate change 2014. Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects.* Contribution of Working Group

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, 169-194.

Cantor, D. J. (2021). Environment, mobility, and international law: A new approach in the Americas. *Chicago Journal of International Law*, 263-322.

Cordini G., Fois, P., & Marchisio, S. (2017). *Diritto ambientale. Profili internazionali, europei, comparati*[3]. Giappichelli.

Cullet, P. (2015). Principle 7. Common but differentiated responsibilities. In J. E. Viñuales (Ed.), *The Rio Declaration on Environment and Development. A commentary* (pp. 229-244). Oxford University Press.

De Schutter, O. (2020). Changements climatiques et droits humains. l'affaire Urgenda. *Revue trimestrielle des droits de l'homme*, *123*(3), 567-608.

European Commission & European Environment Agency. (2012, March 6). Adaptation options. https://climate-adapt.eea.europa.eu/en/knowledge/adaptation-information/adaptation-measures

European Parliament, Policy Department for Citizens' Rights and Constitutional Affairs, Directorate-General for Internal Policies. (2020). *Climate change and migration. Legal and policy challenges and responses to environmentally induced migration*.

Felipe Pérez, B. (2018). Beyond the shortcomings of international law. A proposal for the legal protection of climate migrants. In S. Behrman & A. Kent (Eds.), *Climate refugees. Beyond the legal impasse?* (pp. 214-229). Routledge.

Ferris, E., & Bergmann, J. (2017). Soft law, Migration and climate change governance. *Journal of Human Rights and the Environment, 8*(1), 6-29.

Fraser, S. (2016). Climate Persecutors. Climate change displacement and the international community as persecutor. *New Zealand Journal of Environmental Law, 20*, 107-133.

Garlick, M., Franck, M., & Bower, E. (2018). Enhancing legal protection for people displaced in the context of disasters and climate change. In S. Behrman, & A. Kent (Eds.), *Climate refugees. Beyond the legal impasse?* (pp. 118-125). Routledge.

Gemenne, F., & Blocher, J. (2017). How can migration serve adaptation to climate change? Challenges to fleshing out a policy ideal, *The Geographical Journal*, 1-12.

Gervasi M. (2016). Rilievi critici sull'Accordo di Parigi. le sue potenzialità e il suo ruolo nell'evoluzione dell'azione internazionale di contrasto al cambiamento climatico. *La Comunità internazionale*, *LXX1*(1), 21-48.

Jafry J. (Ed.) (2019). *Routledge handbook of climate justice*, Routledge.

Kälin, W. (2010). Conceptualising climate-induced displacement. In J. McAdam (Ed.), *Climate change and displacement. Multidisciplinary perspectives* (pp. 81-103). Hart Publishing.

Kälin, W., & Schrepfer, N. (2012). *Protecting people crossing borders In the context if climate chang. Normative gaps and possible approaches*, UNHCR Legal And Protection Policy Research Series, No. 24.

Klein, D., Carazo, M. P., Doelle, M., Bulmer, J., & Higham A. (Eds.) (2017). *The Paris Agreement on Climate Change. Analysis and commentary*. Oxford University Press.

Knox, J. H. (2016). *Human rights principles and climate change.* In C. Carlarne, K. Gray, & R. Tarasofsky (Eds.), *The Oxford handbook of international climate change law* (pp. 213-238). Oxford University Press.

Knox, J. H. (2020). The Paris Agreement as a human rights treaty. In D. Akande, J. Kuosmanen, H. McDermott, & D. Roser (Eds.), *Human rights and 21st century challenges. Poverty, conflict, and the environment* (pp. 323-347). Oxford University Press.

Kozoll, C. M. (2004). Poisoning the well, Persecution, the environment, refugee status. *Colorado Journal of International Environmental Law and Policy*, *15*(2), 271-307.

Lesnikowski, A., Ford, J., Biesbroek, R., Berrang-Ford, L., Maillet, M., Araos, M., & Austin, S.E. (2017). What does the Paris Agreement mean for adaptation?. *Climate Policy, 17*(7), 825-831.

Maljean-Dubois, S. (2016). The Paris Agreement. A new step in the gradual evolution of differential treatment in the climate regime. *Review of European, Comparative & International Environmental Law, 25*(2), 151-160.

Marchisio, S. (1992). Gli atti di Rio nel diritto internazionale. *Rivista di diritto internazionale, LXXV*(3), 581-621.

Marchisio, S. (2007). Le convenzioni internazionali ambientali e lo sviluppo sostenibile. In P. Fois (Ed.), *Il principio dello sviluppo sostenibile nel diritto internazionale ed europeo dell'ambiente*, Atti del IX Convegno della Società italiana di diritto internazionale (pp. 181-199). Editoriale Scientifica.

Marchisio, S. (2016). La nuova frontiera del disarmo. Aspetti umanitari, sicurezza umana e diritti umani. In S. Marchisio (Ed.), *Disarmo, limitazione degli armamenti e diritti umani* (pp. 9-23). Editoriale Scientifica.

Marchisio, S. (2021). *International Law*. Giappichelli.

Mayer B. (2021). Climate Change Adaptation Law. Is There Such a Thing? In B. Mayer, & A. Zahar (Eds.), *Debating Climate Law* (pp. 1-14). Cambridge University Press.

Mayer, B. (2011). The international legal challenges of climate-induced migration. Proposal for an international legal framework. *Colorado Journal of International Environmental Law and Policy, 23*(3), 358-415.

McAdam, J. (2012). *Climate change, forced migration and international law*. Oxford University Press.

McAdam, J. (2020). Protecting people displaced by the impacts of climate change. The UN Human Rights Committee and the principle of non-refoulement. *American Journal of International Law*, *114*(4), 708-725.

Merkouris, P. (2012). The principle of sustainable development and best available technology under international law. In K. Makuch, & R. Pereira (Eds.). *Environmental and Energy Law* (pp. 37-60). Wiley-Blackwell.

Meron, T. (2006). *The humanization of international law*, Brill.

Montini M. (2017). Riflessioni critiche sull'accordo di Parigi sui cambiamenti climatici. *Rivista di diritto internazionale*, *C*(3), 719-755.

Nanda, V. P. (1999). The Kyoto Protocol on Climate Change and the challenges to its implementation. A Commentary. *Colorado Journal of International Environmental Law and Policy, 10*(2), 319-333.

Negozio, F., & Rondine, F. (2022). Analysing national responses to environmental and climate-related displacement. A comparative assessment of Italian and French legal frameworks. *Quarterly on Refugee Problems, 61*(1), 53-70.

Noble, I.R., Huq, S., Anokhin, Y.A., Carmin, J., Goudou, D., Lansigan, F.P., Osman-Elasha, B., & Villamizar, A. (2014). Adaptation needs and options. In C.B. Field, V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, & L.L. White (Eds.), *Climate change 2014: Impacts, adaptation, and vulnerability. Part A: Global and sectoral aspects.* Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (pp. 838-850). Cambridge University Press.

Nollkaemper, A., & Burgers, L. (2020, January). A new classic in climate change litigation: The Dutch Supreme Court decision in the Urgenda Case. *EJIL:Talk!*. https://www.ejiltalk.org/a-new-classic-in-climate-change-litigation-the-dutch-supreme-court-decision-in-theurgenda-case/

Nucera, G. G. (2020). Information via satellite: A human rights perspective. In P. Achilleas, & S. Hobe (Eds.), *Fifty years of space law / Cinquante ans de droit de l'espace* (pp. 285-339). Brill/Nijhoff.

Nucera, G. G. (2022). The interpretation of treaties as living instruments. In G. Pascale, & S. Tonolo (Eds.), *The Vienna Convention on the Law of Treaties. The role of the treaty on treaties in contemporary international law* (pp. 211-247). Edizioni Scientifiche Italiane.

Pisillo Mazzeschi, R. (2014). La protezione internazionale dei diritti dell'uomo e il suo impatto sulle concezioni e metodologie della dottrina giuridica internazionalistica. *Diritti umani e diritto internazionale, 8*(2), 275-318.

Platform on Disaster Displacement (PDD). (2018). State-led, regional consultative processes. Opportunities to develop legal frameworks on disaster displacement. In S. Behrman, & A. Kent (Eds.), *Climate refugees. Beyond the legal impasse?* (pp. 126-154). Routledge.

Nucera, G.G. (2023). Adressing Climate-induced Migration
Quarterly on Refugee Problems, 2023, Vol. 62, Issue 1, 15-34
ISSN 2750-7882, Section: Research Articles
Open Access Publication, https://doi.org/10.57947/qrp.v62i1.21

Pustorino, P. (2021). Cambiamenti climatici e diritti umani. *Ordine internazionale e diritti umani*, *8*(3), 596-605.

Rajamani L. (2016). The 2015 Paris Agreement. Interplay between hard, soft and non-obligations. *Journal of Environmental Law, 28*(3), 337-358.

Rajamani, L. (2018). Human rights in the climate change regime. From Rio to Paris and Beyond. In J.H. Knox, & R. Pejan (Eds.), *The Human Right to a Healthy Environment* (pp. 236-251). Cambridge University Press.

Savaresi, A. (2018). Climate change and human rights. Fragmentation, interplay and institutional linkages. In S. Duyck, S. Jodoin, & A. Johl (Eds.). *Routledge Handbook of Human Rights and Climate Governance*, Routledge, 31-43.

Schloss, C. (2018). Cross-border displacement due to environmental disaster. A proposal for UN guiding principles to fill the legal protection gap. In S. Behrman, & A. Kent (Eds.), *Climate refugees. Beyond the legal impasse?* (pp. 243-264). Routledge.

Sciaccaluga, G. (2020). *International law and the protection of "climate refugees"*. Palgrave Macmillan.

Scott, M. (2020). *Climate Change, Disasters, and the Refugee Convention*. Cambridge University Press.

Scovazzi, T. (2018). La sentenza d'appello sul caso Urgenda. *Rivista giuridica dell'ambiente, 33*(4), 821-854.

UN General Assembly. (2019). Human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment. Note by the Secretary-General of 15/07/2019 (UN Doc. A/74/161).

UN Human Rights Committee. (2004). General Comment 31 of 26/5/2004 (CCPR/C/21/Rev.1/Add.13).

UN Secretary General. (2020). Statement of UN Secretary-General to the Human Rights Council on 24/02/2020. https://www.un.org/sg/en/content/sg/statement/2020-02-24/secretary-generals-remarks-the-un-human-rights-council-%E2%80%9Cthe-highest-aspiration-call-action-for-human-rights-delivered-scroll-down-for-all-english

Van Asselt H. (2016). International climate change law in a bottom-up world. *Questions of International Law, Zoom-in, 26,* 5-15.

Viñuales, J. E. (2016). The Paris Agreement on Climate Change. Less is more. *German Yearbook of International Law, 59,* 11-45.

Voigt, C., & Ferreira, F. (2016). Dynamic differentiation. The principles of CBDR-RC, progression and highest possible ambition in the Paris Agreement. *Transnational Environmental Law, 5*(2), 285-303.

Weerasinghe, S. (2018). *In harm's way. International protection in the context of nexus dynamics between conflict or violence and disaster or climate change*, UNHCR Legal and Protection Policy Research Series, No. 39.

Weerasinghe, S. (2020). *Refugee law in a time of climate change, disaster and conflict. A working legal analysis of the refugee definition in the 1951 Convention and the regional refugee criteria, particularly where conflict and/or violence interacts with disaster*. UNHCR Legal and Protection Policy Research Series, No. 40.

Wood, T. (2015). Developing temporary protection in Africa. *Forced Migration Review, 49,* 23-25.