Climate injustice and the paradox of climate migration

di Attilio Pisanò

Abstract: Ingiustizia climatica e il paradosso della migrazione climatica – Firstly, the paper links migration to human-induced climate change through the lens of the ontological injustice characterizing human-induced climate change. A formula is then proposed to better explain the non-linearity of the causal process linking greenhouse gas emissions with their final adverse effects. The perspective of (climate) vulnerability is furthermore introduced. Finally, the paper explains the paradox of climate change: to limit the impact of climate change on future migratory flows, it is not sufficient to act in the countries of origin of migrants, but it is necessary to immediately act in the countries of destination of migrants.

Keywords: Climate change; Climate migration; Climate vulnerability; Human rights; Climate justice

1. Who are climate migrants?

Who are Climate Migrants?[1]. The question is not easy to answer. On the one hand, the link between human-induced climate change and migration is extremely complex (*infra*). On the other hand, the expression "climate migrant" is polysemic, alongside other expressions useful for indicating the impact of climate change (not necessarily human-induced) on human mobility[2]: «climate change migrants», «people displaced by climate change», «environmentally induced migration and displacement», «climate change-

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[1] IOM, *Who Are Climate Migrants? A Global Analysis of the Profiles of Communities Affected by Weather-related Internal Displacements*. Geneva, 2024.

[2] IOM uses the generic term "human mobility" «to encompass different types of movements in the context of climate change: migration, displacement and planned relocation». IOM, *Mapping Human Mobility (Migration, Displacement and Planned Relocation) and Climate Change in International Processes, Policies and Legal Framework*, 2018, 6.

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related migration», «environmental migrants», «cross-borders displace persons», «climate refugees»[3].

For these reasons, this paper will deliberately use a broad notion of "climate migrants", identified as climate-displaced persons forced to move, within national borders or across international, either temporarily or permanently, due to climate change related adverse effects[4].

The clear identification of climate migrants is not immediate because the climate crisis we are experiencing is dynamic (climate change is a process developing over time), it will worsen in the next future. Above all, the climate crisis is pervasive because it embraces the whole humanity, being – the climate crisis – closely linked to the civilization of the Anthropocene (or Capitalocene[5]) and threating the environment and ecosystems that guarantee human life.

Therefore, every human being is a potential victim of human-induced climate change.

At the same time, it is worthy to be noted that climate crisis affects humanity in many different ways. Human-induced climate change is as pervasive as its effects are selective[6] amplifying the risks associated with pre-existing conditions of social and/or environmental vulnerability[7], and

[3]Climate refugees are defined by the Environmental Justice Foundation as «persons or groups of persons who, for reasons of sudden or progressive climate-related change in the environment that adversely affects their lives or living conditions, are obliged to leave their homes, either temporarily or permanently, and who move either within their country or abroad». https://ejfoundation.org/what-we-do/protecting-climate-refugees.

[4] A. Sironi, C. Bauloz, M. Emmanuel (Eds.), *Glossary on Migration*, Geneva, 2019, 31.

[5] J.W. Moore (Ed.), *Anthropocene or Capitalocene?: Nature, History and the Crisis of Capitalism*, Oakland, 2016.

[6] "Impacts of the climate crisis" means: «The consequences of realized risks on natural and human systems, where risks result from the interactions of climate-related hazards (including extreme weather and climate events), exposure and vulnerability. Impacts generally refer to effects on lives; livelihoods; health and well-being; ecosystems and species; economic, social and cultural assets; services (including ecosystem services); and infrastructure. Impacts may be referred to as consequences or outcomes and can be adverse or beneficial». UNEP, *Adaptation Gap Report* 2024, VI https://www.unep.org/resources/adaptation-gap-report-2024.

[7] On this point, the cited report IOM remembers that «the intersection of hazards with populations made vulnerable by factors like poverty, social inequality and insufficient infrastructure disproportionately expose certain communities to risk. Vulnerable groups, particularly those in hazard-prone or impoverished areas, often lack the resources to prepare for, respond to or recover from these events». As a result, the IOM concluded that «socioeconomic conditions can magnify the impact of hazards for some, creating a cycle of reduced resilience and increased exposure to risk». IOM, *Who Are Climate Migrants?*, cit., VII. The Human Rights Council Resolution 47/24 (July 2021) expressly indicated the pervasive dimension of the climate crisis and the selective dimension of its effects: «Expressing concern that, while these implications affect individuals and communities around the world, the adverse effects of climate change are felt most acutely by those segments of the population that are already in vulnerable situations owing to factors such as geography, poverty, gender, age, indigenous or minority status where applicable, national or social origin, birth or other status and disability». Consequently, the Resolution calls upon all States «to adopt a comprehensive, integrated, gender-responsive, age-inclusive and disability-inclusive approach to climate change adaptation and mitigation policies, consistent with the United Nations Framework Convention on Climate Change and the objective and principles thereof, to address efficiently the economic, cultural and

reinforcing the risk factors which determine migration flows[8]. In this context, it seems difficult to understand not only "who" the climate migrants are, but also "how many" they will be in the next years. Any potential victim of climate change could be a potential climate migrant forced to move (within national borders or across international, either temporarily or permanently).

Moreover, it is known that, without immediate actions aimed at reducing greenhouse gas emissions, the Earth's average temperature will continue to rise, exceeding the risk threshold of 1.5-2°C established by the Paris Agreement (2015). This means that the number of people affected by climate change will progressively expand, so as to make it impossible, today, to quantify its real impact on human well-being.

In this scenario, risks and impacts of climate change will reinforce each other, in an almost endless loop. Social groups and vulnerable peoples will find themselves facing a perfect storm – without the possibility of prevailing – combining the risks associated with conditions of vulnerability with those related to the worsening climate crisis[9].

social impact and human rights challenges that climate change presents, for the full and effective enjoyment of human rights for all, and particularly to support the resilience and adaptive capacities of people in vulnerable situations, both in rural and urban areas, to respond to the adverse impact of climate change» (§ 4). Human Rights Council, A/HRC/RES/47/24, https://docs.un.org/en/A/HRC/RES/47/24. For a detailed analysis of the Human Rights Council resolutions on human rights and climate change see https://www.ohchr.org/en/climate-change/human-rights-council-resolutions-human-rights-and-climate-change.

[8] A recent scientific contribution published in the *Journal of Environmental Economics and Management*, entitled *Climate Change impacts on the within-country income distributions* (2024), clearly highlights the selective but at the same time pervasive harmful effects of climate change. Indeed, in a scenario in which the average temperature of the earth increases by 3.6°C by 2100, the gap of inequalities would increase within each individual country for all countries in the world. This means, essentially, that the effects of climate change do not impact all social groups in the same way. They "select", they "choose" the groups in distress, aggravating their already precarious social conditions. An increase in inequality, according to Martino Gilli, Matteo Calcaterra, Johannes Emmerling, Francesco Granella, which would be even more accentuated in the countries of sub-Saharan Africa, particularly in Sahel, in the Middle East and in South-East Asia, where the Gini coefficient, measuring inequalities, could increase by up to 6 points. See on this point M. Gilli, M. Calcaterra, J. Emmerling, F. Granella, *Climate change impacts on the within-country income distributions*, in 127 *J. Environ. Econ. Manag.* 1-12 (2024). The Gini coefficient is a statistical measure of inequality that describes how homogeneous or unequal income or wealth is distributed among a country's population. The coefficient takes a value between 0 and 1, and a higher Gini coefficient is associated with a higher inequality. See https://inomics.com/it/terms/il-coefficiente-di-gini-1473340.

[9] The world that awaits us is described, with a certain physiological margin of approximation, in an article published in 2022 in the Proceedings of the National Academy of Sciences with the title *Climate Endgame: Exploring Catastrophic Scenarios of Climate Change*. What are defined in the article as the «cumulative impacts of global warming», in the event of an increase in the earth's average temperature well beyond the safe limits set by the Paris Agreement, could strongly affect the ability of societies to adapt, with different effects depending on the society, triggering direct "catastrophic risks" («that of international conflicts or increased spread of infectious diseases») or indirect, linked to the exacerbation of already existing vulnerabilities and causing «multiple stresses (economic damage, soil loss and water and food insecurity)». Climate change may therefore generally impact human insecurity and living conditions in the cosmopolis, with multiplier effects on

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2. Background data

According to the Global Report on International Displacement realised by the Internal Displacement Monitoring Centre (IDMC) at the end of 2024, the number of internally displaced people amounted at 83,4 million, because of conflict, violence and disasters. By cross-referencing these data with those of the Notre Dame Global Adaptation Initiative (ND-GAIN)[10], which assesses countries' vulnerability and ability to adapt to climate change, the IDMC underlined that more than three-quarters of people internally displaced by conflict and violence as of the end of 2024 were living in countries with high or very high vulnerability to climate change (approximately 62 million people).

According to the 2022 United Nations High Commissioner for Refugees (UNHCR) Plan for Climate Action 2024-2030, 70% of refugees and asylum seekers fled from highly climate-vulnerable countries, an increase from 56% in 2012. Furthermore, 84% of refugees and asylum seekers originate from only 15 highly climate-vulnerable countries. It means that «significant percentage of forcibly displaced and stateless people are living in the most climate-vulnerable situations in the world, where – together with their host communities – they lack access to environmentally sustainable resources and resilience to the impacts of climate change». «Women, girls, and other groups with specific needs often face higher risks and greater burdens from the impacts of climate change due to existing roles, responsibilities and cultural norms»[11].

If we look specifically at the condition of women and girls, according to the report Progress on the Sustainable Development Goals: The Gender Snapshot 2025, edited by UN Women and by the United Nations Department of Economic and Social Affairs, by 2050, under a worst-case climate scenario, «up to 158.3 million more women and girls may live in extreme poverty (under $2.15 per day) globally as a result of climate change». Of these women and girls, nearly half lives in sub-Saharan Africa. «The total number of additional women and girls expected to be impacted as a result of climate change reaches 309.7 million at $3.65 per day and 422.0 million at $6.85 per day, up to 16.1 million more than the total number of

mortality from hunger, malnutrition, extreme weather events, conflicts, diseases and everything that derives from it at an economic and social level. According to the authors, it is unlikely that there will be «a collapse of systems simultaneously on a global scale». What is plausible, however, is a progressive collapse of regional systems, with cascading effects on a global scale because, it is explained, a sudden change in climate can trigger systemic changes that will affect the most vulnerable states and communities who «will continue to suffer the worst impacts in a warming world, and this will lead to an exacerbation of inequalities». L. Kemp, C. Xu, J. Depledge, K.L. Ebi, G. Gibbins, T.A. Kohler, J. Rockström, M. Scheffer, H.J. Schellnhuber, W. Steffen, T.M. Lenton, *Climate Endgame: Exploring Catastrophic Climate Change Scenarios*, in 119(34) *PNAS* 194-207 (2000).

[10] Notre Dame Global Adaptation Initiative Country Index (ND-GAIN), 2025, University of Notre Dame, https://gain.nd.edu/.

[11] UNHCR, *Focus Area Strategic Plan for Climate Action. 2024-2030*, March 2024, pp. 4-8, https://www.unhcr.org/media/focus-area-strategic-plan-climate-action-2024-2030.

men and boys. Food insecurity may also rise significantly, affecting up to 236 million more women and girls»[12].

Finally, according to the World Bank report Groundswell Part II: Acting on Internal Climate Migration (2021), by 2050, human-induced climate change could leave more than 216 million people in six regions to migrate within their own countries[13], hitting the poorest and most vulnerable regions the hardest and threatening to reverse development gains. A situation which risks becoming explosive if connected to the progressive and inescapable increase of the world population, especially in the poorest countries[14].

In this complex scenario, climate change cannot be considered as a "simple" push-factor of migration flows. It «can act as both a threat multiplier in the onset of other shocks, and as an amplifier in the fallout of such shocks»[15], acting as a push-factor to the extent that it is intertwined with already existing conditions of vulnerability, combining with other factors of distress whose harmful effects – on a social and environmental level – are multiplied exponentially[16].

[12] UNWOMEN, *Progress on the Sustainable Development* Goals. *The Gender Snapshot 2025*, New York, 2025. The impact of climate change on women is specifically focused by the General Recommendation 37/2018 on the gender-related dimensions of disaster risk reduction in the context of climate change: «Women, girls, men and boys are affected differently by climate change and disasters, with many women and girls experiencing greater risks, burdens and impacts. Situations of crisis exacerbate pre-existing gender inequalities and compound the intersecting forms of discrimination against, among others, women living in poverty, indigenous women, women belonging to ethnic, racial, religious and sexual minority groups, women with disabilities, refugee and asylum-seeking women, internally displaced, stateless and migrant women, rural women, unmarried women, adolescents and older women, who are often disproportionately affected compared with men or other women» (§ 2). CEDAW/C/GC/37 (2018) https://www.ohchr.org/en/documents/general-comments-and-recommendations/general-recommendation-no37-2018-gender-related.

[13] Specifically, 17 million in Latin America, 19 million in North Africa, 86 million in Sub-Saharan Africa, 40 million in South Asia, 49 million in East Asia and the Pacific. V. Clement, R. Kanta Kumari, A. de Sherbinin, J. Bryan, S. Adamo, J. Schewe, N. Sadiq, E. Shabahat, *Groundswell Part 2: Acting on Internal Climate Migration.* Washington, DC, 2021, xii-xiii https://openknowledge.worldbank.org/entities/publication/2c9150df-52c3-58ed-9075-d78ea56c3267.

[14] According to the Population Institute's 2023 report titled *Population and Climate Change Vulnerability: Understanding Current Trends to Enhance Rights and Resilience* «in many of the countries most vulnerable to the impacts of climate change, populations are growing significantly faster than in the world as a whole. This rapid growth tends to exacerbate vulnerability at the household, community, and national level, as increasing human needs face growing strains from ever more damaging extremes of weather and water in a warming world». Population Institute, *Population and Climate Change Vulnerability. Understanding Current Trends to Enhance Rights and Resilience*, July 2023, https://www.populationinstitute.org/wp-content/uploads/2023/07/Population-and-Climate-Change-Vulnerability.pdf.

[15] V. Clement, R. Kanta Kumari, A. de Sherbinin, J. Bryan, S. Adamo, J. Schewe, N. Sadiq, E. Shabahat, *Groundswell Part 2: Acting on Internal Climate Migration*, cit., xxix.

[16] The World Bank report puts in evidence that «there is ample evidence that people living near or below the poverty line are particularly vulnerable to climate change impacts, losing more and less able to cope with shocks and adapt. This is due to several factors, including lower-quality assets (such as housing stock), greater dependence on livelihoods in climate-sensitive sectors, greater vulnerability to rising food prices during disaster-related supply

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The most recent Intergovernmental Panel on Climate Change (IPCC) Climate Change 2023 Synthesis Report gives us a precise identikit of the "climate victims": those who live in the «global hotspots of high human vulnerability», in West-, Central- and East Africa, South Asia, Central and South America, Small Island, Developing States, the Arctic. But also, those who generally live in conditions of «inequity and marginalization linked to gender, ethnicity, low income or combinations thereof, especially for many Indigenous Peoples and local communities». «Through displacement and involuntary migration from extreme weather and climate events – the IPCC underlines – climate change has generated and perpetuated vulnerability»[17].

Among the climate victims are those who will become climate migrants in the next future. They are only a part of those who will be affected by the adverse effects of climate change which, according to the IPCC, will concern approximately 3.3-3.6 billion people living in context highly vulnerable to climate change[18].

Without exceeding in catastrophism, the relationship between climate change and migration must be read considering that migrations are always multi-causal and complex, they depend on different conditions and factors[19]. Climate change itself affects migration flows in different ways[20]. Migration

shocks, and inadequate public services that leave them more susceptible to climate-related diseases such as diarrhoea and malaria. Disasters resulting from extreme events can reverse decades of development progress, while more gradual climate change impacts from shifts in precipitation patterns to sea-level rise are already affecting livelihoods and straining the natural systems on which these depend. Such shifts have effects across the development spectrum: on health, livelihoods, food security, water supply, and overall human security. Across regions, poverty disproportionately affects rural, young, and undereducated people. Four-fifths of those living on less than US$1.90 per day in 2018 were in rural areas, while children and youth (ages 15–24) together accounted for two-thirds of the global poor. Women, especially those aged 25–34, are also overrepresented among the poor». *Ivi*, §1.1, 1-2.

[17] IPCC, *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, H. Lee and J. Romero (Eds.)], Geneva, 2023, 51. https://www.ipcc.ch/report/sixth-assessment-report-cycle/.

[18] *Ibidem*. Data also cited by the World Bank report *Migrants, Refugees and Societies* (2023): «Climate change is compounding the economic drivers of migration. About 40 percent of the world's population – 3.5 billion people – live in places highly exposed to the impacts of climate change: water shortages, drought, heat stresses, sea level rise, and extreme events such as floods and tropical cyclones. Economic opportunities are dwindling in affected regions, amplifying vulnerabilities and fuelling pressures for migration. Climate impacts are threatening the habitability of entire regions in places as diverse as the Sahel, low-lying Bangladesh, and the Mekong Delta. In some Small Island Developing States, these impacts are forcing leaders to contemplate planned relocations». World Bank Group, *World Development Report 2023. Migrants, Refugees, Societies*, Washington D.C., 2023, https://www.worldbank.org/en/publication/wdr2023.

[19] C. Cattaneo, M. Beine, C.J. Fröhlich, *Human Migration in the Era of Climate Change*, in 13(2) *Rev. Environ. Econ. Policy*, 189-206 (2019).

[20] Climate migration cannot be considered as one monolithic type of mobility. For example, Jan Van Bavel puts in evidence as «with respect to climate change and its potential impact, a well-established distinction in the temporal dimension is the one between fast (or sudden, or rapid) onset events like floods, storms and hurricanes on the one hand and slow onset events with more gradual impact on the other [...]. With respect to the temporal dimension of migration, it is essential to distinguish migration as a change of habitual

flows cannot be represented as "determined" exclusively by the worsening of the climate crisis[21]. The same anthropogenic climate crisis is not a natural phenomenon. It is a consequence of the capitalistic model of economic development. So, it can be said that if there will be climate migrants, the responsibility cannot be found in climate change but in the economic development model which has caused anthropogenic climate change. From this point of view, climate migrants are nothing different from a specific category of "economic migrants"[22]. Finally, we need to remember that extreme conditions of fragility/vulnerability (not only linked with climate crisis) can also cause an impossibility to migrate (the s.c. "trapped populations")[23].

In this framework it is very difficult to explain the migration flows as determined only by climate reasons.

Conversely, climate change may have a decisive role when it amplifies already existing situations of poverty, discrimination, environmental and social degradation, and the daily struggle for survival[24], thus contributing to reinforcing situations of distress representing those conditions that guide

residence from more short-term forms of mobility and circulation [...]. In the space dimension, research distinguishes between short versus long distance moves, national versus international (or cross-border) and even intercontinental migration, as well as migration between rural and urban areas [...]. Agency is a third important dimension when considering climate migration, with the most rudimentary distinction being the one between voluntary and involuntary or forced migration. In the case of climate change induced migration, the distinction is not always clear. For example, many people may feel forced to move in case of very extreme weather events while others even refuse to move when authorities try to force them. Studies on mobility in response to climate change often distinguish between three sorts of mobility: migration in the proper sense, displacement, and planned relocation [...]. A related distinction is between ex-ante and ex-post migration. Ex-ante migration is considered as a risk diversification and insurance strategy for families, as a preventive investment to cope with the expected effects of worsening conditions. Ex-post migration is considered as a coping strategy after sudden events leading to adverse conditions and income loss». J. Van Bavel, *Climate Change and Migration Readiness, Willingness, and Ability*, in R. Schoen (Eds.), *Advances in Social Demography*, Springer Nature 2025, 59, 15-16.

[21] F. Amato, *Antropocene e migrazioni in una prospettiva geografica*, in AA. VV., *Migrazioni e diritti al tempo dell'antropocene*, Napoli, 2023, 154.

[22] Economic migration is defined by the International Organization for Migration (IOM) as «the movement of a person or a group of persons, either across an international border, or within a State motivated solely or primarily by economic opportunities». A. Sironi, C. Bauloz and M. Emmanuel (Eds.), *Glossary on Migration*, cit., 62.

[23] «The concept of "trapped populations" refers to those who have high incentives to move, for instance because of very bad climatic conditions, but lack the means to do so». *Ivi*, 17.

[24] On this specific point the Report 2023 IPCC is very clear: «The level of risk will also depend on trends in vulnerability and exposure of humans and ecosystems. Future exposure to climatic hazards is increasing globally due to socio-economic development trends including migration, growing inequality and urbanisation. Human vulnerability will concentrate in informal settlements and rapidly growing smaller settlements. In rural areas vulnerability will be heightened by high reliance on climate sensitive livelihoods. Vulnerability of ecosystems will be strongly influenced by past, present, and future patterns of unsustainable consumption and production, increasing demographic pressures, and persistent unsustainable use and management of land, ocean, and water. Loss of ecosystems and their services has cascading and long-term impacts on people globally, especially for Indigenous Peoples and local communities who are directly dependent on ecosystems, to meet basic needs». IPCC, *Climate Change 2023: Synthesis Report*, cit., § 4.3, 99.

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migratory flows (within national borders or across international, either temporarily or permanently).

3. Climate injustice

It is impossible to deal with the relationship between climate change and migrants without using the lens of vulnerability[25].

According to the IPCC, vulnerability should be considered as the «propensity or predisposition to be adversely affected and encompasses a variety of concepts and elements, including sensitivity or susceptibility to harm and lack of capacity to cope and adapt»[26]. A propensity/predisposition which, according to the International Strategy for Disaster Reduction Secretariat, should be read as the set of «conditions determined by physical, social, economic, and environmental factors or processes, which increase the susceptibility of a community to the impact of hazards»[27].

The two definitions (IPCC and ISDRS) well explain the specificity of "climate vulnerability" which may be defined as the propensity/predisposition to risks determined by the adverse effects of human-induced climate change which increase the susceptibility of a community to the impact of environmental or social hazards.

Climate vulnerability is a meta-category which merges together environmental vulnerability and social vulnerability[28], and which poses itself as a question of justice given that the disproportionately adverse effects of climate change concern social groups and peoples who are already in fragile conditions and who have no responsibility in the process linking the causes of the climate crisis to its most deleterious effects.

Injustice is a structural element of the climate crisis.

It depends mainly on the fact that the causal process linking causes and effects of climate change is not linear and does not allow to immediately identify who is responsible for climate damage whose negative effects will materialize beyond spatial and temporal proximity.

The relationship between climate justice and migration represents a privileged point of view to better understand the "unjust nature" of the human-induced climate change specifically intended as the alteration of the

[25] On the concept see: I. Trujillo, *Vulnerability, Human Rights and Climate Change*, in N. Gullo (Ed.), *Human Rights and The Environment. Legal, Economic and Ethical Perspectives*, Napoli, 2021, 459-462; B. Pastore, *Semantica della vulnerabilità, soggetto, cultura giuridica*, Torino, 2021; O. Giolo, B. Pastore (Eds.), *Vulnerabilità. Analisi multidisciplinare di un concetto*, Roma, 2018; T. Casadei (Ed.), *Diritti umani e soggetti vulnerabili*, Torino, 2012.

[26] IPCC, *Annex II: Glossary* [V. Möller, R. van Diemen, J.B.R. Matthews, C. Méndez, S. Semenov, J.S. Fuglestvedt, A. Reisinger (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* [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.)]. Cambridge-New York, 2022, 2927.

[27] International Strategy for Disaster Reduction (ISDR) (2004), *Living with risk: A global review of disaster reduction initiatives*, vol. I, New York-Geneve, United Nations, https://www.unisdr.org/files/7817_7819isdrterminology11.pdf.

[28] See. I.M. Otto et al., *Social Vulnerability to climate change: a review of concepts and evidence*, in 17 *Reg. Environ. Change* 1651-1662 (2017).

climate system (with a consequent rise in the temperature of the earth's atmosphere) due to anthropogenic emissions of greenhouse gases, over a period spanning several decades. Emissions that are mainly due to the use of fossil fuels to guarantee the processes of economic and social development in the most industrialized countries.

Defined in this way, climate change appears to be a direct consequence of the industrialization processes favoured by fossil fuels (coal, oil, methane). Industrialization which has guaranteed prosperity and well-being to a part of the world's population.

Some data allow us to immediately understand the reasons why the fight against human-induced climate change should be placed in the broader context of the fight against social and economic inequalities characterizing the world in which we live in.

According to the OXFAM report entitled Climate equality: a Planet for the 99% (2023) «the richest 1% of the world's population are responsible for as much carbon pollution as the people who make up the poorest two-thirds of humanity», the richest 10% of the world's population is responsible for 50% of greenhouse gas emissions, while the poorest 50% are responsible for only 8% of emissions[29].

Despite the fact that the fight against climate change through law began in 1992 with the United Nations Framework Convention on Climate Change (UNFCCC), despite the solemn commitments made by the international community with the 2015 Paris Agreement, the most recent Emissions Gap Report 2024 of the United Nations Environmental Programme (UNEP)[30] certifies a new record for global greenhouse gas emissions in 2023, with a percentage increase of 1.3 points compared to 2022 levels. Emissions that, according to the report, come for 77% from the G20 countries and for which China, the United States, India, the European Union, Russia, Brazil are largely responsible (for 63%).

If we look at the historical responsibility of countries, the reality does not change.

Our World in Data[31], a project promoted by Oxford University and the NGO Global Change Data Lab, has put in evidence that since 1750, 63.4% of cumulative CO2 emissions are attributable to just 10 countries: the United States (24%), China (15%), Russia (6.7%), Germany (5.2%), the United Kingdom (4.4%), Japan (3.8%), India (3.5%), France (2.2%), Canada (1.9%), Ukraine (1.7%).

If we look at private companies operating in the Oil & Gas sector, the responsibility for human-induced climate change is attributable to a few companies. According to the most recent Carbon Major Report, published in May 2025[32] by the non-profit think tank Influence Map, in 2023 half of the world's CO2 emissions would have been produced by just 36

[29] Oxfam, *Climate Equality: a Planet for the 99%*, November 2023.
[30] United Nations Environment Programme, *Emissions Gap Report 2024: No more hot air … please! With a massive gap between rhetoric and reality countries draft new climate commitments*, Nairobi, 2024, https://www.unep.org/emissions-gap-report-2024.
[31] H. Ritchie, P. Rosado, M. Roser, *CO_2 and Greenhouse Gas Emissions*, 2025 published online at OurWorldinData.org. Retrieved from: https://ourworldindata.org/co2-and-greenhouse-gas-emissions.
[32] Influence Map, *Carbon Major Report*, 2025.

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multinationals in the Oil & Gas sector (including Saudi Aramco, Coal India, ExxonMobil, Shell) and, in the period between 1854 and 2003, 69% of global CO2 emissions would be attributable to a total of 180 companies (including the Italian ENI, in 34th place with 9,443 million tons of CO2 equivalent - MtCO2e).

Therefore, in the face of a responsibility concentrated in a few states or companies, the ultimate effects of climate change will affect billions of people in the coming decades.

There is therefore a direct link between economic development and human-induced climate change. The more we consume, the more we use fossil fuels, the more greenhouse gases are released into the atmosphere, the more we contribute to altering the climate system, the more the threats to human well-being and planetary health increase.

4. The causal formula of climate injustice. The paradox of climate migration

«It is important to remember that climate change is primarily caused by greenhouse gas emissions from major emitting countries. There is an important aspect of causality and international responsibility that must be considered when referring to climate change displaced persons. While people suffering from so-called "natural disasters", such as earthquakes and tsunamis, may experience similar hardships in the context of those events, the responsibility for responding to climate change is quite different, and differentiation is needed. However, the countries that are historically the most responsible for the climate crisis spend more money securing their borders to keep migrants out than on tackling the crisis that forces people from their homes in the first place»[33].

With these words, the Special Rapporteur on the promotion and protection of human rights in the context of climate change, Ian Fry, explained, in 2023, the difference between a natural disaster and a human disaster, in the context of climate change.

The climate crisis has been caused by the major emitting countries which are the same countries that today, instead of trying to contribute to a possible solution, reducing greenhouse gas emissions (the most relevant cause of climate crisis), secure their borders avoiding any de facto assumption of responsibility.

Climate-displaced persons are thus condemned twice by rich and industrialized countries: the first time when the costs of economic growth and social well-being of the most developed societies (because of the greenhouse gas emissions) were unloaded on them. The second time when climate-displaced persons are rejected by the same countries that forced them to move.

From a normative point of view, the specificity of the climate issue is well described by the United Nations Framework Convention on Climate

[33] Human Rights Council, *Providing legal options to protect the human rights of persons displaced across international borders due to climate change*, Report of the Special Rapporteur on the promotion and protection of human rights in the context of climate change, Ian Fry (2023), A/HRC/53/34, §10.

Change (UNFCCC) according to which human-induced climate change should be «attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods» (art. 1^2).

Additionally, the UNFCCC explains that human-induced climate change – having an unnatural impact on the natural climate variability – may have «adverse effects» on the «composition, resilience or productivity of natural and managed ecosystems or on the operation of socio-economic systems or on human health and welfare» (art. 1^1).

The difference between climate change (art. 1^2) and its «adverse/deleterious effects» (art. 1^1) appears as the perspective through which understanding the causal link between human behaviours (which cause climate change) and their final adverse/deleterious effects (caused by climate change).

I.e.:

a) The emission of greenhouse gases, over time, causes long-term human-induced climate change (first level of causation).

b) Human-induced climate change has "deleterious effects" on the composition, resilience, or productivity of natural and managed ecosystems, the operation of socio-economic systems, or human health and welfare (second level of causation).

c) These adverse/deleterious effects may determine violations/threats on human security and human rights (third level of causation).

Following this pattern, the climate crisis can be effectively represented as a process, a "climate chain".

With the expression "climate chain", we describe the complex and articulated path triggered by human activities (greenhouse emissions and their consequence on climate variability, i.e. climate change), whose final step is represented by the actual threats for specific groups of more vulnerable people determined by the adverse/deleterious effects on the socio-economic systems, human health, and welfare.

In other words, long-term anthropogenic gas emissions, at the global level, cause what can be called a "climate damage", specifically intended as the damage suffered by the climate system (the totality of the atmosphere, hydrosphere, biosphere, and geosphere and their interactions) due to the release of greenhouse gases into the atmosphere over a specific area and period of time (art. 1).

Climate damage (the direct consequence of long-term anthropogenic greenhouse emissions) causes several related specific events (more severe and widespread wildfires, sea level rise, extreme weather events, drought, melting glaciers, floods, etc.) whose adverse/deleterious effects impact the local level, endangering human health, livelihoods, food security, water supply, human security, economic growth and human rights[34].

[34] See IPCC, *Summary for Policymakers*, in *Climate Change 2023: Synthesis Report*, cit., 1-34.

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The climate chain describes the non-linear relationship between overall human activity and climate change-related adverse/deleterious effects, and it can be represented as follows:

GHG emissions at the local level (lC, local cause) produce harmful effects at the global level

(gE, global effects, the so-called "climate damage")

(Place, Time) (local) Cause (PTlC) → (global) Effect (gE)

→ ≡ causes/determines

*

The global effect (gE) turns into global cause (global cause, gC) of specific events (drought, famine, heat waves, etc.) at local level (lE, local effects)

(global) Effect (gE) = (global) Cause (gC) → (Place, Time) (local) Effects (PTlE)

*

The place (P) and time (T) of the GHG emissions at the local level (lC) are different from the place (P) and time (T) of the local harmful effects (lE)

$PT_{lC} \neq PT_{lE}$

This representation may help to better understand the complex causal link between the behaviours which alter the climate system and the final deleterious effects on human security caused by the alteration of climate system. The link between initial causes at local level (GHG emissions) and the final harmful effects at local level is not direct but is mediated by categories as time and space.

This means that anthropic GHGs are emitted over the time and in different places (several local sources) causing a global damage because they alter the climate system (the totality of the atmosphere, hydrosphere, biosphere, and geosphere and their interactions).

This global damage (the climate damage) causes several local related specific events whose adverse/deleterious effects affect human security.

Therefore, if we are looking for the juridical accountability of a specific actor engaged in climate change (a carbon major or a single man/woman consuming energy produced by fossil fuels), who is at the origin of the "climate chain", we should find some elements helping us to establish its climate fingerprint, its specific contribution to climate change in a given period of time (its historical fingerprint), namely its specific engagement in climate damage (first level of causation).

Furthermore, it is very difficult to find sufficient elements aimed at directly linking its specific historical climate fingerprint to climate change-related adverse/deleterious effects (second level of causation) which affect human security (third level of causation) impacting migration flows (fourth level of causation).

Therefore, the only way to prevent climate migration is to act, collectively, at the level of the international community, to decrease local greenhouse gas emissions, specifically in those countries that emit the most.

The "paradox of climate migration" is revealing more clearly.

To limit the impact of climate change on future migratory flows, it is not sufficient to act in the countries of origin of migrants (through adaptative measures), but it is necessary to immediately act (through mitigative measures) in the most economically developed countries, usually

the countries of destination of migrants, those the most industrialized, the most historically responsible for climate crisis we are living[35].

5. Environmental justice and climate justice. The KlimaSeniorinnen ruling

A clear understanding of the dynamics characterizing the nonlinear causal link between local events that alter the climate-system, and the local effects of climate system alteration plays a fundamental role in distinguishing the climate issue from the environmental one.

From a normative point of view, the distinction between global climate damage and its negative effects at the local level appears useful both to explain the specificity of the climate issue and to understand the different nature and effectiveness of measures to fight human-induced climate change through the mitigation or the adaptation.

Adaptation measures alone do not solve the climate issue. On the contrary, they amplify the injustice of climate change, allowing richer countries to become richer, leaving the most vulnerable countries in their condition of vulnerability although "mitigated" by possible adaptive measures.

On 9 April 2024, the European Court of Human Rights sentenced on these points in the Verein KlimaSeniorinnen Schweiz vs Switzerland case[36]. Specifically, the Court recognized the violation of the European Convention on Human Rights (art. 8) by the Swiss Federal Government for failing to take appropriate measures to fight against human-induced climate change[37].

Particularly, the difference between the climate issue and environmental issues was explained in paragraphs 414-419 through the lens of causation as a characteristic element of the climate issue.

Preliminary, the Court clarified that «there are important differences between the legal questions raised by climate change and those

[35] The mitigation of climate change is considered a human intervention to reduce emissions or enhance the sinks of greenhouse gases. Conversely, adaptation in human systems is the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities. IPCC, *Annex I: Glossary* [A. Reisinger, D. Cammarano, A. Fischlin, J.S. Fuglestvedt, G. Hansen, Y. Jung, C. Ludden, V. Masson-Delmotte, R. Matthews, J.B.K Mintenbeck, D.J. Orendain, A. Pirani, E. Poloczanska, J. Romero (Eds.)], in *Climate Change 2023: Synthesis Report*, cit., 120, 126.

[36] European Court of Human Rights, Grand Chamber, *Case of Verein KlimaSeniorinnen Schweiz and Others v. Switzerland*, Application n°53600/20, 9 April 2024. Cfr. A. Savaresi, *Verein KlimaSeniorinnen Schweiz and Others v. Switzerland: Making climate change litigation history*, in 34(1) *RECIEL*, 279-287 (2025); M. Wewerinke-Singh, *Climate Protection Obligations under the European Convention on Human Rights: The* KlimaSeniorinnen *Judgement*, in 21 *Eur. Const. L. Rev.*, 356-374 (2025); M. Carducci, *La sentenza* KlimaSeniorinnen *e il* Carbon Budget *come presidio materiale di sicurezza, quantitativa e temporale, contro il pericolo e come limite esterno alla discrezionalità del potere*, in *DPCE online*, 2024, 2, 1415-1433; F. Gallarati, *L'obbligazione climatica davanti alla Corte europea dei diritti dell'uomo: la sentenza* KlimaSeniorinnen *e le sue ricadute comparate*, in *DPCE online*, 2024, 2, 1457-1478; R. Pisillo Mazzeschi, *Diritti umani e cambiamento climatico: brevi note sulla sentenza KlimaSenniorinnen della Corte di Strasburgo*, in *Dir. um. dir. int.*, 2024, 2, 383-400.

[37] G. Grasso, *'Oltre' "KlimaSeniorinnen": la Svizzera tra esecuzione della decisione della Corte EDU e processo decisionale democratico*, in *DPCE*, 2024, 4, 1007-1016.

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[environmental] addressed until now» [414]. Then explained that «the Court's existing case-law in environmental matters concerns situations involving specific sources from which environmental harm emanates», adding that «those exposed to that particular harm can be localised and identified with a reasonable degree of certainty, and the existence of a causal link between an identifiable source of harm and the actual harmful effects on groups of individuals is generally determinable».

Consequently, the Court continued, «the measures taken, or omitted, with a view to reducing the impugned harm emanating from a given source, whether at the regulatory level or in terms of implementation, can also be specifically identified». The Court therefore concluded by explaining that in environmental matters «there is a nexus between a source of harm and those affected by the harm, and the requisite mitigation measures may be identifiable and available to be applied at the source of the harm» [415].

According to the Court, «the key characteristics and circumstances» of climate change are significantly different» from those characterizing environmental issues.

1) Firstly «there is no single or specific source of harm» because «GHG emissions arise from a multitude of sources». The harm – the Court explains – derives from «aggregate levels of such emissions»;

2) Secondly, CO2 – the primary GHG – «is not toxic per se at ordinary concentrations». Indeed, «the emissions produce harmful consequences as a result of a complex chain of effects» [416];

3) Third, the Court explains «that chain of effects is both complex and more unpredictable in terms of time and place than in the case of other emissions of specific toxic pollutants» because «aggregate levels of CO2 give rise to global warming and climate change, which in turn cause incidents or periods of extreme weather; these in turn cause various harmful phenomena such as excessive heatwaves, droughts, excessive rainfall, strong winds and storms, which in turn give rise to disasters such as wildfires, floods, landslides and avalanches». The immediate danger to humans – the Court concludes – arises from those kinds of consequences in the given climate conditions: «in the longer term, some of the consequences risk destroying the basis for human livelihoods and survival in the worst affected areas. Whole populations are, or will be, affected, albeit in varying ways, to varying degrees and with varying severity and imminence of consequences» [417];

4) Fourthly, the Court points out that «the sources of GHG emissions are not limited to specific activities that could be labelled as dangerous. In many places, the major sources of GHG emissions are in fields such as industry, energy, transport, housing, construction and agriculture, and thus arise in the context of basic activities in human societies». Consequently, it concludes, «mitigation measures cannot generally be localised or limited to specific installations from which harmful effects

emanate» but they are necessarily «a matter of comprehensive regulatory policies in various sectors of activity». Also specifying that «adaptation measures may to a greater extent depend on local action. However, without effective mitigation [...] adaptation measures cannot in themselves suffice to combat climate change» [418];

5) Finally, as fifth point, the Court puts in evidence that «combating climate change, and halting it, does not depend on the adoption of specific localised or single-sector measures» given that «climate change is a polycentric issue» which must be addressed through «decarbonisation of the economies and ways of life». A real rethinking of the economic development model that requires «a very complex and wide-ranging set of coordinated actions, policies and investments involving both the public and the private sectors». Actions that must also involve individuals but which «involve issues of social accommodation and intergenerational burden sharing, both in regard to different generations of those currently living and in regard to future generations» [419].

As the European Court of Human Rights clearly points out, unlike the environmental issue which, therefore, remains, even in cases of transnational pollution, limited in time and space to a well-circumscribed territorial area, as far as cause and effects are concerned, in the climate issue there is no direct and immediate link between the local events that alter the climate system and the local effects of the alteration of the climate system.

If, therefore, to prevent climate migration, it is not enough to act where the effects that will determine the "choice" to migrate will occur, but it is necessary to act where the climate chain begins, reducing greenhouse gas emissions.

6. Climate change, vulnerability and migration in the UN Approach

The relationship between climate change, vulnerability and migration has been progressively emerging also in some of the most important United Nations climate governance documents[38].

[38] Adele Del Guercio recalls how in the United Nations framework migrants "in vulnerable situations" are defined as "persons who are unable effectively to enjoy their human rights, are at increased risk of violations and abuse and who, accordingly, are entitled to call on a duty bearer's heightened duty of care". "The idea that these people are *inherently* vulnerable or that they lack resilience and agency is rejected, and it is recognized that vulnerability is the consequence of "multiple and intersecting forms of discrimination, inequality and structural and societal dynamics that lead to diminished and unequal levels of power and enjoyment of rights". It is therefore a *situational* vulnerability, with respect to which personal circumstances (age, gender, disability) and also relational, contextual and structural factors, inherent in the country of origin, transit or destination (discrimination, trafficking, torture and violence, armed conflicts, environmental and climatic phenomena that can make a person susceptible to being exposed to situations of violence or violence, exploitation. The circumstances referred to may also change over time. Vulnerability is therefore a dynamic (not static) condition. A. Del Guercio, *Persone in migrazione e*

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The founding document of climate law[39] introduced the theme of vulnerability, although in a generic way. Art. 3*2* of the UNFCCC (1992) recognized among his principles «the specific needs and special circumstances of developing country Parties, especially those that are particularly vulnerable to the adverse effects of climate change» (art. 3[2]). A principle that must be interpreted and understood in the light of the guiding principle of the Convention, that of the «common but differentiated responsibilities» (art. 3[1]).

Only from the Report on the Relationship between Climate Change and Human Rights edited in 2009 by the United Nations High Commissioner for Human Rights, on behalf of the Human Rights Council[40], the vulnerability approach becomes a criterion both to describe the specific weight of the adverse effects of human-induced climate change and to justify adaptive measures that have as their primary objective precisely to limit, at the local level, the risks related to the adverse effects of climate change.

In particular, the 2009 Report highlighted the structural injustice of climate change due to the fact that, although the historical responsibilities for climate change were to be attributed to the most industrialized countries, «impacts of climate change are distributed very unevenly, disproportionally affecting poorer regions and countries, that is, those who have generally contributed the least to human-induced climate change» (§ 10).

Furthermore, the report dedicated an entire section (section C) to the impact of climate change on «specific groups» (women, children, indigenous people) explaining that «the effects of climate change will be felt most acutely by those segments of the population who are already in vulnerable situations due to factors such as poverty, gender, age, minority status, and disability» and emphasizing how «under international human rights law, States are legally bound to address such vulnerabilities in accordance with the principle of equality and non-discrimination» (§ 42).

Finally, a specific section was focused on "displacement" (section D) moving from the risks already highlighted by the first IPCC report (1990) which estimated that by 2050, «150 million people could be displaced by climate change-related phenomena, such as desertification, increasing water scarcity, and floods and storm and it was pointed out that climate change-related displacement will primarily occur within countries and that it will affect primarily poorer regions and countries»[41].

vulnerabilità nel quadro giuridico internazionale ed europeo, in V. Lorubbio, M.G. Bernardini (Eds.) *Diritti umani e condizioni di vulnerabilità*, Trento, 2023, 223.

[39] "Climate law" refers to the set of international obligations assumed by States in the fight against human-induced climate change. Cfr. M. Carducci, *Cambiamento climatico (diritto costituzionale)*, in *Digesto delle Discipline Pubblicistiche. Aggiornamento*, Milano, 2021, 51.

[40] Human Rights Council, *Report of the Office of the United Nations High Commissioner for Human Rights on the relationship between climate change and human rights*, 2009, A/HRC/10/61
https://www.refworld.org/reference/themreport/unhrc/2009/en/65384.

[41] The Report defined four different types climate change-related displacement scenarios: a) Weather-related disasters, such as hurricanes and flooding; b) Gradual environmental deterioration and slow onset disasters, such as desertification, sinking of coastal zones and possible total submersion of low-lying island States; c) Increased disaster risks resulting in relocation of people from high-risk zones; d) Social upheaval and violence attributable to climate change-related factors. *Ivi*, § 56.

The report concluded that climate change-related impacts have a range of implications for the effective enjoyment of human rights. Effects on human rights which «can be of a direct nature, such as the threat extreme weather events may pose to the right to life but will often have an indirect and gradual effect on human rights, such as increasing stress on health systems and vulnerabilities related to climate change-induced migration» (§ 92).

The selective nature of the adverse effects of climate change emerged very clearly:

«Particularly vulnerable are those living on the "front line" of climate change, in places where even small climatic changes can have catastrophic consequences for lives and livelihoods. Vulnerability due to geography is often compounded by a low capacity to adapt, rendering many of the poorest countries and communities particularly vulnerable to the effects of climate change. Within countries, existing vulnerabilities are exacerbated by the effects of climate change. Groups such as children, women, the elderly and persons with disabilities are often particularly vulnerable to the adverse effects of climate change on the enjoyment of their human rights. The application of a human rights approach in preventing and responding to the effects of climate change serves to empower individuals and groups, who should be perceived as active agents of change and not as passive victims» (§ 94).

While the Paris Agreement (2015) linked vulnerability to adaptation and resilience measures, the 2022 report The impacts of climate change on the human rights of people in vulnerable situation, edited by the Secretary General of the Human Rights Council (2022[42]), returned to the theme of the relationship between vulnerability and climate change, highlighting, once again, the disproportionality of the risks of adverse effects due also to the fact that those most affected by climate change are also those who bear the least responsibility.

In this framework, the categories most at risk were identified: indigenous peoples, local communities, peasants, migrants[43], children, women, persons with disabilities, people living in small island developing States and least developed countries, persons living in conditions of water

[42] Human Rights Council, *The impacts of climate change on the human rights of people in vulnerable situations*, United Nations, 2022, A/HRC/50/57 https://www.ohchr.org/en/documents/thematic-reports/ahrc5057-impacts-climate-change-human-rights-people-vulnerable.

[43] With reference to the migrants, the Human Rights Council adopted in 2018 the Report *Addressing human rights protection gaps in the context of migration and displacement of persons across international borders resulting from the adverse effects of climate change and supporting the adaptation and mitigation plans of developing countries to bridge the protection gaps.* The Report underlined that «vulnerability implies less adaptive capacity and can be both "situational" and "personal". It can result from multiple and intersecting forms of discrimination, inequality and structural and societal dynamics that lead to diminished and unequal levels of power and enjoyment of rights. The negative impacts of climate change can reduce adaptive capacity and affect a person's ability to move, the freedom with which they choose to do so, and their vulnerability before, during and after migration. Vulnerability may occur throughout migration and regardless of whether or not movement was "voluntary". It can be enhanced by restrictive migration and border control policies» (§ 14). Human Rights Council, A/HRC/38/21, 2018, https://docs.un.org/en/A/HRC/38/21.

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scarcity, desertification, land degradation and drought, and others in vulnerable situations who are at risk of being left behind.

Additionally, the report on the one hand focused on the impossibility of establishing a direct-linear link between climate change and the risks related to the adverse effects of climate change, because the impacts of climate change «can vary based on a number of factors, including geography, poverty, age, gender, sex, disability, migration status, religion, race and cultural or ethnic background. Multiple forms of discrimination, including racism, sexism and classism, may combine, overlap, or intersect, especially in the experiences of people in vulnerable situations» (§ 15).

On the other hand, the report directly related climate change and social justice:

«Climate change is both an environmental and a social justice crisis that raises interconnected demands for climate action and social equality. At a global level, patterns of consumption and production perpetuate historical inequities dating back to colonialism. Industrialized countries have historically contributed disproportionately to environmental degradation and climate change. While together the members of the Group of 20 (G20) are responsible for 80 per cent of the world's greenhouse gas emissions, all the small island developing States and least developed countries combined account for only about 2 per cent of global emissions. The people at the margins, in both the global North and South, are left to bear the brunt of the impacts. The uneven distribution of wealth and power – both within and among countries – is a key driver of climate injustice. Protecting the human rights of people in vulnerable situations from the worst impacts of climate change requires urgent action to limit global warming to the greatest extent possible» (§17).

With specific reference to climate migrants, the Report then underlined that:

« [Climate change and its impacts] whether sudden-onset natural disasters or slow-onset events, are becoming an increasingly important driver of migration. The Internal Displacement Monitoring Centre estimates that extreme weather events, including floods, storms and drought, accounted for more than 89 per cent of the disaster displacements between 2008 and 2020. Disasters contributed to internally displacing 30.7 million people in 2020 alone. The relationship between climate change and migration is complex. However, climate change is projected to increase future movement of people. Those who lack resources for planned migration experience higher exposure to extreme weather events, particularly in low-income developing countries. The risks faced by persons that move because of climate change include difficulties in exercising their human rights throughout the migration process. Migrants in irregular situations are at particular risk of being subjected to exploitation, marginalization and human rights violation» (§22).

The concept of climate vulnerability (environmental and social) plays a fundamental role in the governance of migration flows, as shown by this

brief review of some of the most important United Nations climate governance documents[44].

Governing climate migration means acting, also through the human rights approach, on conditions of vulnerability, considering potential victims of climate change as agents of change and not condemned to resilience or leaving their homes to find greater environmental and social security elsewhere.

7. Conclusion

Conceptualizing the climate crisis as a matter of vulnerability is perhaps the best heuristic key to fully understanding its nature.

The pervasive and at the same time selective dimension of the climate crisis reflects the two dimensions of vulnerability: the "ontological" one, common to all human beings; and the "situational" one, linked to accidental and situations affecting specific human beings[45].

The pervasive dimension of the climate crisis highlights the ontological vulnerability that characterizes the human condition. Every human being, precisely because is ontologically vulnerable, is a potential victim of the climate crisis. From this point of view, the climate crisis reveals both the fragility of the human condition, of every living being, even those to come (future generations), and the fragility of the conditions that more generally favour human life, which are also affected by human behaviours.

The climate crisis, therefore, is pervasive because vulnerability is an ontological condition of humanity.

At the same time, the selective dimension of climate crisis particularly concerns some individuals or groups who are marginalized or in distress because of age, gender, social and/or environmental degradation, etc.

If, therefore, the climate crisis potentially affects every human being, the harmful effects of the climate crisis disproportionately impact groups in situational vulnerable conditions.

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[44] For a detailed analysis see M. Mayrhofer, *Framing UN Human Rights Discourses on Climate Change: The Concept of Vulnerability and its Relation to the Concepts of Inequality and Discrimination*, in 37 *Int. J. Semiot. Law*, 91-117 (2024).

[45] M. Fineman, *The vulnerable subject and the responsive state*, in 60 *Emory Law J.*, 251-275 (2010); M. Fineman, *The vulnerable subject: Anchoring equality in the human condition*, in 20 *Yale J. Law Feminism* 1-23 (2008). Baldassare Pastore explains: «Vulnerabilità», invero, è parola che può assumere diversi significati. In un primo senso, indica la suscettibilità di subire ferite (vulnera), ossia, in generale, la suscettibilità di subire danni causati da fenomeni naturali o da attività umane. Può essere predicata, così, di esseri umani, specie animali, ambiti naturali, costruzioni umane. Si tratta di un concetto che indica una possibilità reale, connessa a una serie di situazioni, da cui dipende il verificarsi di determinati stati di cose, e che si manifesta in determinate occasioni. In un secondo senso, «vulnerabilità» e «vulnerabile» sono termini che designano una particolare suscettibilità, da parte di un soggetto e/o di più soggetti, di subire determinati danni per effetto di determinate azioni o determinati fenomeni naturali. Qui la parola designa caratteristiche che sono possedute in misura diversa da soggetti diversi in ragione della loro maggiore o minore esposizione al rischio di essere danneggiati. Si tratta, così, di una suscettibilità (al danno, all'offesa) che presenta componenti interne ed esterne, variamente graduate, con riguardo alle varie circostanze della vita». B. Pastore, *Concetto di vulnerabilità*, in V. Lorubbio, M.G. Bernardini (Eds.), *op. cit.*, 18.

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However, the representation of the climate crisis as a question of vulnerability risks shifting the focus of the problem from the perpetrators to the victims[46]. They, the vulnerable people or groups, are seen as weak, passive people, suffering the effects of the climate crisis, unable to develop forms of adaptation or resilience, a real threat for the global order (what order?), knocking on the doors of industrialized countries in search of benevolence, giving rise to apocalyptic waves of migration[47].

This flow of representation feeds the rhetoric of the exceptional nature of migratory flows, of the "panic" created by the hordes of climate migrants[48], it also perpetuates new racist stereotypes[49], but it is also the basis of the process of border securitization[50] which generally characterizes the response of the richest countries, the main responsible for the climate crisis[51], the most interested in maintaining the *status quo*. These countries, instead of reducing their greenhouse gas emissions (responsible for the climate crisis), promise to help the most affected populations economically by financing adaptive measures or using the rhetoric of "loss and damage", following the logic of "I break, I pay".

Conversely, climate migration is not a pathology to be cured, as well as potential climate migrants are not victims of an adverse fate.

Climate migration represents a consequence of global injustice and inequalities in a world marked by a growing gap in opportunities and capabilities not only between North and South, but also within the same industrialized societies.

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[46] K. Brown, *Vulnerability: Handle with care*, in 5(3) *Ethics Soc. Welf.*, 313–321 (2011).
[47] G. Bettini, *Climate Barbarians at the Gate? A critique of apocalyptic narratives on 'climate change'*, in 45 *Geoforum*, 63-72 (2013).
[48] E. Giacomelli, *Panicocene. Narrazioni su cambiamenti climatici, regimi di mobilità e migrazioni ambientali*, Milano, 2023.
[49] A. Baldwin, *The Other of Climate Change: racial futurism, migration, humanism*, London-New York, 2022.
[50] Fabio Amato says it clearly: «Nella misura in cui l'attuale aumento della migrazione transnazionale è caratterizzato dalla diversificazione delle condizioni di mobilità umana, è anche caratterizzato da un prevedibile ridimensionamento delle politiche di accoglienza e da una più marcata militarizzazione ai confini di molti paesi che ricevono rifugiati. Come tale, la "crisi dei migranti" deve essere intesa come una "crisi razziale irrisolta" che deriva dalle divisioni neocoloniali nel sistema internazionale». F. Amato, *op. cit.*, 167. See also I. Boas, *Climate Migration and Security. Securitisation as a Strategy in Climate Change Politics*, London, 2015.
[51] Cfr. M. Raitieri, *I flussi eco-migratori tra miti e paure. Incertezze giuridiche nella gestione della (in)sicurezza climatica*, in *Eur. Pub. Law Online Rev.*, 2024, 1, 559-588.