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Climate Crisis and Migrations: a conceptual analysis from an ecofeminist perspective

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Agradezco a la vida por permitirme seguir en movimiento.
A Alessandro, mi compañero de vida y aventuras en tiempos de luces y sombras.
A mi familia que trasciende fronteras.
Al profesor Mauro Farnesi por su guía y compañía en el el proceso de investigacion y a todas las mujeres que a través del texto y la palabra me ayudan a encontrarme en el mundo.

Abstract

We are currently facing a climate crisis on a global scale that demands that the academic and political spheres promote inter and transdisciplinary crossroads that incorporate an intersectional perspective when understanding both the climate crisis and the migration phenomenon. In this logic, it is fundamental to emphasize the importance of the categories of race, class, and gender in understanding the progressive climate change and its impacts on human and non-human life in a context of inequality between the Global North and the Global South. Thus, it appears as a fundamental task to generate dialogues that enrich the analysis of the climate crisis and its relationship with migration, as well as to contribute a debate that leads to good practices of mitigation against the impacts of climate change, new forms of consumption and production less aggressive with the environment and a broader understanding of the migratory phenomenon.

Introduction

In a global context in which we are daily witnesses of the progressive climate change and its environmental, social, and political impacts, it appears almost as an obligation for any person, in my case, not only as a social scientist but also as a migrant woman living in Europe, to evidence the role of colonial, patriarchal and capitalist modes of domination and production as critical factors to understand what we will call climate crisis[1]. In this scenario, we face not only a process of aggression against Nature but also a

[1] Aware of the magnitude and consequences of global climate change, this thesis chooses the term climate crisis because it reflects urgency in response to the increase in global temperature and the risks it poses to both biodiversity and human life.

clear differentiation between the people who suffer most from the impacts of this climate crisis, most of whom are in poverty in impoverished countries of the Global South, considering migration as a viable option to change their life conditions. Therefore, articulating the migratory phenomenon with the climate crisis emerges as an essential and engaging topic to analyze within the European and Global Studies framework.

Aware of the importance of the categories of gender, class, and race and the significant contribution that feminist theories and movements have made to the sciences, for this thesis is considered that analyzing the climate crisis and its relation with the migratory phenomenon from an ecofeminist perspective can contribute to the understanding of both phenomena in a global context in which multiple oppressions are present.

At the same time, aware that I based my reflections on a situated knowledge, I consider that my experience as a migrant in European territory alongside influential feminist authors such as Silvia Rivera Cusicanqui, Maria Stella Svampa, Gloria Anzaldua, Donna Haraway, among others who have guided my worldview for a long time, has allowed me to understand the complex geopolitics power relations between the Global South and the Global North which translate into practices, discourses and policies, both environmental and in the field of migration.

The main objective of this thesis is to analyze the direct or indirect effect of the climate crisis on migration from the perspective of intersectional ecofeminism, which starts from the importance of the categories of race, class, and gender in the analysis of the problem. This thesis proposes to answer the following objectives: 1) To develop the theoretical aspects proposed by Ecofeminism, where it will be possible to analyze the historical relationship between man/nature/woman and the role of modern scientific discourse as a promoter of these binary relationships. 2) To develop the

geological eras of the Anthropocene and the Capitalocene, highlighting their most essential criticisms from an intersectional perspective. 3) To analyze statistical information to understand the climate crisis scenario and identify migration as one of the impacts of the same from a framework of relations between North and South Global. 4) Develop theoretical approaches to migration studies emphasizing climate change's direct and indirect effects on the decision to migrate, considering the categories of race, class, and gender as cross-cutting elements.

In this task, the first chapter, will develop the theoretical aspects that will allow us to understand the climate crisis and migration in a holistic approach from an ecofeminist perspective that emphasizes the role of colonialism, capitalism, and patriarchy in the social, economic and political structures that support a growth model that threatens Nature and human and non-human life. At the same time, the theoretical reflection will allow us to evidence the close link between a climate crisis, a crisis of values, and an epistemic crisis, where the role of the occidental scientific understanding of the relationship between men, Nature, and women is called into question.

A second chapter will develop the most meaningful aspects related to the geologic era of the Anthropocene and the Capitalocene. Understanding that the Anthropocene emphasizes the role of humans in the progressive degradation of the environment and global warming and aware that the scientific discourse has found it convenient to popularize the Anthropocene era, it will be also essential to highlight valuable criticisms of this geologic era and expand on the Capitalocene proposal, which introduces stimulating discussions about the role of colonialism, capitalism, and patriarchy as we identify the historical responsibility of the wealthiest countries in the face of the climate crisis.

The third chapter will develop important aspects that evidence the current climate crisis. For this, with the support of official statistical information, we will describe the increase of the greenhouse gas effect in recent decades, thus producing progressive global warming and the most aggressive natural disasters and their impact on both the Global South and the Global North. It should be emphasized that to understand the magnitude of the warming phenomenon and the climate crisis, official reports from international organizations specialized in climate change studies were consulted to understand the magnitude of the warming phenomenon and the consequent climate crisis at a global level. In this same logic, after interpreting the data, we will develop about the impacts of climate change and global warming from the framework of North and South Global relations, which will allow us to demonstrate through the data the responsibility of the wealthiest countries and the impact of the climate crisis on the most vulnerable populations for the most part located in the Global South. In this task, meaningful ideas such as climate colonialism, gender inequality, and the role of the capitalist model will be developed as crucial factors in understanding the climate crisis and its relation with the migratory phenomenon.

The fourth chapter focuses on developing theoretical aspects to understand the migration phenomenon and its relationship with climate change from an intersectional perspective where the role of race, class, and gender will be evidenced as transversal categories at the moment of understanding the aspects that drive a person to undertake migration. Understanding the reasons that lead a person to migrate from an intersectional approach, lead us to develop a discussion around voluntary and forced migration since this current debate introduces the concept of climate refugees and its challenges. It should be emphasized that this thesis is framed on migration and its relationship with the climate crisis, and despite we will analyze the terms of climate refugees and climate migrants, the purpose of this thesis is not to

advocate for the use of any of them in particular but to analyze the interaction of climate crisis with different migrations drivers (environmental driver included), so that we can understand the direct or indirect influence of climate crisis in human migration, either internally or internationally.

1 Theoretical framework

Understanding the current challenges humanity faces regarding migration and climate crisis is fundamental to exploring the meaning of "nature" and the corresponding ecological crisis that globally creates human displacement. Although my intention is not to develop a broad philosophical discussion on the concept of Nature, it is fundamental to take into consideration that our understanding of this concept is the result of a hegemonic ontological process strictly related to the development of science and the understanding of the world based on it, in other words, it is fundamental to highlight that the domain of Nature is deeply linked to the domain of culture.

In addition, to comprehend the concept of Nature, the current social dynamics, and the relationship between men and women, it is vital to highlight the link between Nature and women through history; this is also important since it is one of the starting points of analysis for the ecofeminist theory which analyzes and is critical to the historical connection between Nature and women based on the realities of repression and fertility.

1.1 The modern concept of "Nature" in the light of Ecofeminism

The interest in protecting and defending the environment is not something recent; the fact that the capitalist world is experiencing a crisis has been made clear through multiple economic events, which have resulted in it being conceptualized as a multiple crisis (Biesecker & Winterfeld, 2016). We can affirm that the harmful effects of the growing capitalist model are not only observed at the economic and social level but also on the ecological level, and at the same time we can see that we have not lacked for warnings, the awareness of ecological disasters has been longstanding, active, supported by arguments, documentation, proofs, from the very beginning of what is called the "industrial era" or the "machine age" (Latour & Porter,

2017: 9). In this sense, modernity presents to us a scenario where destructive forces that challenge human intelligence have been unleashed, where knowledge for the production of wealth is accompanied by corresponding threats of side effects, i.e., sooner or later the social situations and conflicts of a "wealth-sharing" society begin to overlap with those of a "risk-sharing" society (Beck et al., 1998).

There are numerous examples and evidence of the need to rethink and look for alternatives and solutions to a climate crisis that is intensifying over time, causing not only irreversible ecological damage but also social problems that require structural changes where politics, economics, and the relationship between man and Nature come into play, taking into account, of course, that these effects manifest themselves in different ways and intensities depending on the geographical location we are paying attention. In this sense, it is fundamental to understand that new inequalities that are being produced must be read not only by geographically situating the territory and the geopolitical relations around it but also by understanding that the constant process of industrialization produces new inequalities both between the relations between the industrialized Global North and the Global South, and within the Global North itself.

In this sense, to understand the current challenges that humanity is facing regarding migration and climate crisis is fundamental to attempt to understand the meaning of "nature" and the correspondent ecological crisis that globally creates human displacement, highlighting the fact that population is covering the Earth creating a critical pressure on the land which is a fundamental starting point in the task of articulating climate crisis with the migration phenomena. As (Holland-Cunz, 1996) indicates, the current scenario of destruction and poisoned Nature demands a philosophy of Nature that substantially revises the relationship of human beings to Nature.

Although the intention of this work is not to develop a broad philosophical discussion on the concept of Nature, it is fundamental to take into consideration that our understanding of this concept is the result of a hegemonic ontological process strictly related to the development of science and the understanding of the world based on it, in other words, it is fundamental to highlight that the domain of Nature is deeply linked to the domain of culture.

> Don't try to define Nature alone, for you will have to define the term "culture" as well (the human is what escapes Nature: a little, a lot, passionately); do not try to define "culture" alone, either, for you will immediately have to define the term "nature" (the human is what cannot "totally escape" the constraints of Nature).(Latour & Porter, 2017:15)

We cannot speak of Nature without referring to culture, which is why it is an important starting point for what follows. This principle will allow us to expand our understanding of other concepts related to our research problems, such as climate crisis, pollution, environmentalism, and the debate regarding voluntary and forced migration. In this sense and recapitulating, understanding the meaning of "nature" leads us to articulate this term with the culture, history, and development of modern science and its paradigms, politics emphasizing the role of the global economy.

At the same time, it is necessary to unveil the dominant aspects hidden behind the modern concept of "nature," which, on the one hand, marginalizes non-dominant epistemologies.[2] and by the other hand, promotes a hegemonic way of understanding "nature" and its relation with

[2] According to (Holland-Cunz, 1996), non-dominant currents are those which a) neither theoretically nor practically have succeeded in imposing themselves in their time within the process of social development, and b) have offered non-dominant conceptual apparatuses of "nature" and the social relationship to Nature, and which c) can attain practical importance concerning current theoretical approaches.

humans[3]. It is now necessary to make these non-dominant traditions heard, to give them a voice. In this task, non-European approaches are essential since they provide decisive impulses, which is only possible to interpret the fundamental disagreements on European soil.

According to Merchant (1989), "nature" could be understood from an individual perspective when we refer to the inherent properties of animals, persons, or things; conversely, to go "against nature" would mean to go against these inherent characteristics or properties. At the same time, this conceptualization can also refer us to think of a sense of purity that implies the lack of human intervention; this type of understanding of Nature can be problematic since can be related to a particular "essence" which involves principles that cannot be chosen or evaded, in this sense, essentialist interpretations, vastly debated by several ecofeminist scholars such as Mies & Shiva, (1998), Svampa, (2021), Holland-Cunz (1996) among others, can be considered as those approaches that start from the pre-existing reality and the possibility of arriving at a potential knowledge of its contents, those approaches, therefore, that assume a structured reality that can be discovered and described, this point will be further elaborated in the following chapters.

For this work, we will frame the following sections on understanding "nature" concerning the environment as a whole or system, where the original landscapes, fauna, and flora prevail (from wild to intermediate degrees of human intervention). This understanding is intended to differentiate it from the word Nature, which is understood exclusively as the essence or property of something.

[3] I prefer to stress the word “humans” despite the numerous literature that emphasizes the relationship between Nature and “man” since, as (D. Haraway et al., 2016) indicate ‘Man’ means a particular kind of being invented by Enlightenment thought and brought into operation by modernization and state regulation and other related things.

1.2 The nature/culture relationship

A significant element to consider when understanding "nature" is the idea that it is pure as long as it is "untouched by man." This idea leads us to think that humans and Nature belong to different worlds where different principles apply. This last idea is fundamental since it brings us to the dichotomy of culture/Nature. According to (Lie, 2016, p. 18)

> Natural construed as the domain of the non-cultural presupposes that there is a categorical difference between what is cultural and what is not. Describing Nature as law-governed challenged the conventional ideas about where humans belonged in the universe. Where Nature is described as law-governed and chancy and human action as essentially free in some sense, it becomes problematic to call human action natural. Given this categorical distinction, it is unsurprising that many would see human action as being a priori unnatural, reaching beyond Nature's postulated necessitarian and chancy behavior.

As we mentioned previously, we must highlight that this differentiation has its roots in a Western tradition and modern philosophy, which underpins the dichotomy of subject/object in sciences, and most definitions of the human stress the extent to which it is distinguished from Nature. Every time we attempt to "bring humans closer to nature," we are prevented from doing so by the objection that a human is, above all, a cultural being who has to escape from, or in any case be distinguished from, Nature.(Latour & Porter, 2017:14).

According to Merchant (1989), it is possible to acknowledge that human beings have lived in an organic[4] relation with Nature since the beginning of our times, where close-knit cooperative organic communities structured the daily interaction with Nature, "the primary view of nature was the idea that a designed hierarchical order existed in the cosmos and society corresponding to the organic integration of the parts of the body-a projection of the human being onto the cosmos" (ibid:6).

The former was the pre-modern scenario that was observed in various communities around the globe, including European ones; many of these biocentric cultures still survive today, mainly in the Global South. These cultures understood that being part of Nature, they should have respect and seek the most harmonious forms of coexistence among all living beings. They are cultures that assumed, in practice, as something normal, the greatness of Nature. (Gudynas, 2014)

In the organic theory indicated by Merchant (1989), at the center, we find the identification of Nature with a nurturing mother, a beneficent female provider that maintains the order of the universe. Along with this image is the idea of an uncontrollable nature that could render violence and chaos.

> The metaphor of the Earth as a nurturing mother gradually vanished as a dominant image as the Scientific Revolution proceeded to mechanize and rationalize the worldview. The second image, Nature as disorder, called forth an essential modern idea, that of power over Nature. Two new ideas, those of mechanism and the domination and mastery of Nature, became core concepts of the modern world. (Ibid 1989:2)

[4] The term organic usually refers to the bodily organs, structures, and organization of living beings

According to Merchant, the relationship to Nature in modern industrialized societies is marked, among other things, by the consideration of Nature as a scientific object and a source of natural resources, by a mechanistic symbolization of Nature, which it is considered possible to dominate.

In the transformation from organic to mechanistic societies, it is crucial to mention fundamental figures that had an impact on environmental philosophy; among these figures, we find Francis Bacon, who, among others, presented a model of science with a specific methodology that separated "real" science from widespread knowledge.[5].

In Bacon's propositions, Nature must not be considered forbidden; on the contrary, it must be considered to be at the service of man and molded through manual manipulation, technology, and experimentation. In this way, Bacon encouraged the need to dominate Nature to increase the benefits of the entire human race under a mechanist worldview.

Social events taking place all over Europe, such as witch trials and anti-feminist movements, influenced Bacon's philosophy. In this context, "the reaction against the disorder in nature symbolized by women was directed not only at lower-class witches but at the queens and noble women who during the Protestant Reformation seemed to be overturning the order of nature" (Merchant, 1989, p. 134),

The Baconian philosophy, fundamental to the rise and expansion of Western science, reinforced the tendencies toward growth and progress inherent in early capitalism. In this line, Nature is the first and broadest productivity that encompasses all other productivities, especially also those that we detach from it to place them in opposition to it (Holland-Cunz, 1996). This

[5] Undoubtedly, an essential figure in the field of philosophy of science is Rene Descartes and his work “Discours de la mèthode”; however, emphasis will be placed on Bacon since his approaches to science and Nature have been studied by environmental feminists due to the relationship that he indicates between Nature and women in his writings.

is the primary and dissociated character of modern industrial societies and their economies: they empty without measuring the sources of their productivity, considering that what is productive are the apparatuses of extraction and not the sources. Shiva (1988), on the contrary, characterizes Nature as an active principle, as an omnipotent and productive force, as the embodiment of the feminine creative principle, as creativity, activity, and productivity.

Under this logic of relations of domination is implicit the relationship between the sexes: on the first level, as finite feminine and masculine corporeality of specific potential[6], on the second, as a market and family economy hierarchically structured according to the sexes and typical of commodity-producing societies (Holland-Cunz, 1996). As we will see throughout the following sections of this work, the images of Nature and the relations of domination immersed in these interpretations of Nature are functional to the commercialization and industrialization processes of modern societies, where land alteration through mining, deforestation, and other natural resource extraction activities are fundamental to the economic development of industrial societies. [7] At the same time, the land alteration, in effect, has an impact on demographics and the consequent migration caused by the alteration of soils and ecosystems in places where the exploitation of natural resources is more accentuated.

> With the disintegration of feudalism and the expansion of Europeans into new worlds and markets, commercial society

[6] In each culture, a symbolic operation grants particular meaning to the bodies of women and men. Thus, masculinity and femininity are socially constructed. Women and men are not a reflection of "natural" reality but are the result of historical and cultural production based on the process of symbolization, and as "cultural producers," they develop a system of standard references.

[7] The activities of extraction of natural resources are not exclusive to industrial societies; nevertheless, in pre-modern societies, technologies were low-level, and in the understanding of the world, man and Woman considered themselves parts of a finite cosmos. Animism and fertility cults treated Nature as sacred, and mining was somehow seen as an abuse of Mother Earth.

> began to have an accelerated impact on the natural environment. The image of the Earth as a living organism and nurturing mother had served as a cultural constraint restricting the actions of human beings. One does not readily slay a mother, dig into her entrails for gold, or mutilate her body, although commercial mining would soon require that. As long as the Earth was considered to be alive and sensitive, it could be considered a breach of human ethical behavior to carry out destructive acts against it. (Merchant, 1989:3)

While the organic framework was for many centuries sufficiently integrative to override commercial development and technological innovation, the acceleration of such changes throughout Western Europe during the sixteenth and seventeenth centuries began to undermine the organic unity of the cosmos and society. Because the needs and purposes of society as a whole were changing with the commercial revolution, the values associated with the organic view of Nature were no longer applicable; hence, the plausibility of the conceptual framework itself was slowly but continuously being threatened.

1.3 Nature, women, and science relationship

As it was formerly exposed, to understand our comprehension of the concept of Nature and the current social dynamics and relationship of men/and women, it is essential to highlight the link between Nature and women through history; this is also important since it is one of the starting points of analysis for the ecofeminist theory which analyzes and is critical to the historical connection between Nature and women based on the realities of repression and fertility.

Regarding the image of Nature as a nurturing mother, evidence of societies in sixteenth-century indicates that this imagery functioned as a norm

against improper use of the Earth and its resources; according to Merchant (1989), this can be observed in diverse theories of the origins of metals and the debates about mining in the sixteenth century, this image of the Earth as a Mother continued to be significant well into the eighteenth century.

Merchant (1989) points out some examples of ancient and pre-modern texts[8] where ethical ideas are presented concerning the extraction of metals; in these texts, the prevailing idea was that the Earth concealed from sight all that she did not want to be disturbed, protecting her resources from the greed of men.

> These ancient strictures against mining were still operative during the early years of the commercial revolution when mining activities, which had lapsed after the fall of Rome, were once again revived. Ultimately, such constraints would have to be defeated by proponents of the new mercantilist philosophy. (Merchant 1989:32)

In the logic of the mercantilist philosophy also related to the mining of gold and iron, the extraction of this last found its purpose not only in the agriculture field but also as the means for the elaboration of weapons for war; it was during the Iron Age that the extraction of resources start to change the image and relationship of man with Nature, where miners shift the image of the Nature as nurturing mother into a "stepmother who wickedly conceals her bounty from the deserving and needy children" (ibid:33). As we can observe, this last conception of Nature responded to the needs to extract resources in a context of growing mercantilism that was heading at the arrival of the industrial societies.

[8] Such as "Natural History" by the Roman compiler Plini and "Art of Metals" written in 1640 by Albaro Barba, director of the Potosi mines in the Spanish West Indies

> The old organic order of Nature in the cosmos, society, and self was symbolically giving way to disorder through the discoveries of the "new science," the social upheavals of the Reformation, and the release of people's animal and sexual passions. In each of these three realms, female symbolism and activities were significant (Merchant, 1989, p. 128)

In this context, we face the domination of scientific knowledge over widespread knowledge and, consequently, the way of understanding the world of different communities, thanks to their epistemologies. As mentioned previously, this scenario is linked with another type of unequal relationship, that is the one of the world of institutions and the public world over the private world of domestic work, both the dominant tradition of men as reason and women as Nature and the identification of men with an "active" role over the women with a "passive" role have lead modern societies to establish the domain of man over women.

For ecofeminists, these divisions give place to an evident and imminent exercise of power marked mainly by a patriarchal order where the power relationship par excellence is that of men over women and human society and culture over the world of Nature. These divisions later translate into the active role of men in the field of environmental decision-making and women in a passive role at the mercy of these decisions.

> The impact of the rejection of women and Nature can be seen in the way both are devalued in commercial/industrial economic systems. Both have been treated as externalities in terms of economic theory and practice. The Earth's resources have been seen as either free (air and oceans) or only worth the cost of extraction or the compensation paid to those who own or occupy the relevant areas. Equally, women's work has been devalued. Most of the women's work across the globe is

> either unpaid or paid at a low rate. (Mellor Mary on Eaton & Lorentzen, 2003:19)

At this point, it is significant to address a fundamental and unresolved issue within Ecofeminism, which concerns the understanding and conceptualization of what "women" means, assuming/or not assuming an essentialist approach.

Ecofeminism is diverse because it comes from different backgrounds and sources of feminist inspiration: anarchist, radical, socialist, spiritualist, and anti-colonialist. However, without the intention of further elaborating on each of these theoretical approaches, we will point out the role played by essentialism in the ecofeminist positions of the early 1970s and the constructivist view that has been critical of essentialism.

In the case of essentialist (cultural) ecofeminists, we can find many feminists of the difference, who maintain that women and Nature are linked due to their "natural" roles as providers of care and mothers, among other things, a good example is the case of Susan Griffin with the book "Woman and Nature: The roaring inside her." In this book, Griffin proposes the recovery of mysticism as a form of knowledge of Nature, rejecting the subject and object dichotomy proposed by modern scientific knowledge, suggesting at the same time that it is necessary to recover the wild femininity that would inhabit the interior of women, suffocated by patriarchal civilization.

At the same time, when analyzing the relationship between Nature and women, we find an eco-maternalist rhetoric that points out the "natural" link between women and motherhood as "creator of life." this ideal of feminine nurturing can be problematic at the moment of move women out of the private sphere. Under this perspective, which seeks to revalue the experience of motherhood, there is, paradoxically, a recovery of the traditional patriarchal discourse that affirmed that women were Nature.

This line of thinking, which we may call "classical ecofeminism," is part of a feminism of difference.[9] That responded to the socio-political context of the 70s, where the fear of atomic war was latent; therefore, the main criticism made by these feminists was oriented to the culture of war, which was part of the Nature of men, as an example of this approach we can mention the case of Mary Daly and her book Gyn/Ecology, according to this author, The male Nature would have, an innate tendency to aggressiveness that would result in a civilization based on war, the virile passion for technology would be necrophilia and craving for domination that is expressed in the obsession to go beyond the limits of Nature and create cyborgs. Under this logic, the armament industry is analyzed as a phenomenon of compensation for the inability of men to give birth (Puleo, 2011).

To the concern for peace in the political and social revolutions in the 70s, we must add the interest in spirituality, both from the feminist theological formation and from groups related to the counterculture movement of the New Wave[10], where, among other things, a vision of divinity as the source of all life on Earth is presented, and a critique of the great religious traditions that have sexism and contempt for the natural world as their fundamental elements.

Thus, this classical essentialist (cultural) ecofeminist political praxis used the feminine stereotypes rejected by the feminism of equality, giving a content of resistance to patriarchy itself: the Woman as a giver of life, the mother who feels responsible for future generations, the Woman incapable

[9] In a simplified way, we could say that both the feminism of difference and the feminism of equality maintain dualism in their analysis. The feminism of equality maintains dualism and the reason-nature hierarchy and places itself only on the side of reason. The feminism of difference also upholds dualism and sides with Nature but denies that Nature is inferior and, on the contrary, affirms its superiority.

[10]. Influential scholars in this field are Rosemary Radford with the book New Woman/New Earth: Sexist Ideologies and Human Liberation (1975), Evelyn Reed and Marija Gimbutas with the book Gaia and God: An Ecofeminist Theology of Earth Healing, among others.

of aggression. Undoubtedly, the emphasis placed by classical Ecofeminism throws an essentialist position that relates women to Nature as the basis for male domination, which meant the marginalization of Ecofeminism within feminist movements in the 80s until the late 90's under the criticism that they merged the categories of sex and gender and at the same time homogenized women's experiences based on the idea of a feminine essence.

> In too many cultures, girls come to adulthood with assumptions about themselves as essentially Other: as instinct-drive, irrational creatures, as a temptress, Earth Mother, dark, evil, damp, passive, moon goddess, and so on. Masculinity, by contrast, elicits associations of rationality, sun, activity, goodness, light, and order. Man evokes law, regularity, and permanence, while Woman implies chaos and unpredictability (Salleh, 2017, p. 68).

Another fundamental aspect to highlight is that behind the idea of a "feminine principle" or essence; we can observe a tendency to deny the diversity of women and women's experiences from different latitudes, which at the same time eliminates categories of analysis such as class and race. This critique leads to evidence that some elite white women may be oppressors of other women of the same Nature; these critics were introduced mainly by socialist feminist and decolonial feminists who presented the concept of intersectionality and the importance of colonialism as a fundamental factor in the patriarchal domination system, as we will see on the following chapters.

Thus, reviewing the role of essentialism in many classical ecofeminist authors, it is crucial to understand many of the reasons for the marginalization of the ecofeminist theory by the mainstreaming feminists, "poststructuralist and other third-wave feminisms portrayed all ecofeminisms as an exclusively essentialist equation of women with nature,

discrediting ecofeminism's diversity of arguments and standpoints" (Gaard, 2011, p. 31).

On the other hand, there are also many critics of this perspective and essentialism, maintaining a constructivist approach in their understanding of the subordination of women and Nature by man. Constructivist approaches are understood as those that start, in terms of the form of human knowledge, from an "invention" rather than a discovery of reality. In this scenario, we can indicate that ecofeminism thinking is plural and diverse since we can find socialist feminism and its materialist account of the women-nature connection focused on the socially constructed association among women (sex), femineity (gender), and Nature as a historical and dynamic construction.[11]As an example, we can mention Caroline Merchant, who emphasizes the role of science and capitalism as roots for the domination of women and Nature, according to Gaard (2011:28) about Merchant's book "Death of Nature":

> (...) Most provocative is her intersectional linkage of racism, speciesism, sexism, colonialism, capitalism, and the mechanistic model of science-nature via the historical co-occurrence of the racist and colonialist "voyages of discovery" that resulted in appropriating indigenous peoples, animals, and land the three centuries of European with-burnings eradicating women herbalists and midwives, along with their "animal familiars" and various gay men.

Consider an intersectional approach, which is also critical to colonialism. It is helpful in understanding that women's oppression does not have only the alignment of women to Nature in its basis since "women often stand in relatively powerless positions even in cultures which have not made the

[11] Karen Warren, Val Plumwood, and Ariel Salleh are also good examples of a constructivist approach and critics of the essentialism proposed by many ecofeminists of the time.

connection of women to nature or which have a different set of genderized dichotomies" (Plumwood, 2003, p. 11).

1.4 The intersectional approach

In the line of a constructivist approach to Ecofeminism, another aspect to consider is the role of intersectionality as a conceptual tool that highlights a multiple-axis framework for the understanding of women's realities and experiences and, at the same time, allows us to address the problematic of migration since it brings to discussion the relationship of categories of race, gender, class among others, that constitute an individual's identity.

While there have been authors since the 1980s who have considered the intersection between the categories of race, class, and the role of colonialism as reflected in Western patriarchal structures and as a product of modernity, it was Kimberly Crenshaw who is attributed with the invention of the term in 1989. Crenshaw begins by analyzing the intersection between categories of race, class, and gender and indicates how this interaction could reinforce discrimination, oppression, and the identity of black women.

While the term intersectionality was first used by Crenshaw to describe the experiences of black women, feminists, and ecofeminists have used this theoretical tool to emphasize the interrelationships not only between race, gender, and class but also with categories such as sexuality, ethnicity, religion, age, and many others. In this way, making visible and emphasizing the importance of these interconnections helps not only to understand the structures of domination in modern societies but also to focus on the existence of differences among women, which in turn can be a source of political empowerment and social reconstruction.

In her studies, Crenshaw distinguishes two aspects of intersectionality: structural intersectionality and political intersectionality. Concerning the

first, Crenshaw argues that intersectionality is not only concerned with positions of oppression; that is, all people are located in positions related to all axes of inequality, whether of privilege or oppression. The location of each person in the social structure does not arise simply from the sum of positions of oppression that we accumulate, but rather, the intersections between axes generate specific situations; in that sense, "intersectional subordination is frequently the consequence of the imposition of one burden that interacts with pre-existing vulnerabilities to create yet another dimension of disempowerment." (Crenshaw, 2021, p. 1249).

Regarding political intersectionality, Crenshaw argues that, in practice, all politics have intersectional effects. Using the example of black women, she stresses the fact that black women are situated within at least two subordinate groups, groups that often pursue conflicting political agendas. By dividing political energies into two political agendas, agendas that are often opposing, there is an intersectional disempowerment, which men of color and white women rarely have to struggle. In fact, "their specific raced and gendered experiences, although intersectional, often define as well as confine the interests of the entire group"(Crenshaw, 2021, p. 1252). As an example, the author indicates:

> Racism, as experienced by people of color who are of a particular gender -male- tends to determine the parameters of antiracist strategies, just as sexism, as experienced by women who are of a particular race -white- tends to ground the women's movement (idem)

As we can see, intersectionality appears as a fundamental tool to avoid the trap of "essential difference" proposed by many ecofeminists of the difference, proposing at the same time a different approach to the concept of difference in the attempt to deconstruct the universalist categories that dominated ecofeminist debates in the 1980s and 1990s.

Among intersectionality theorists who share the need to recognize the complexity of identity and discrimination, McCall (2005) contributed to intersectionality theory by understanding it as a methodological paradigm for analyzing social inequality. In her analysis, she distinguishes three methodological approaches or complexities of intersectionality as being either anti-categorical, intra-categorical, or inter-categorical.

The first approach, *anticategorical complexity*, is based on a methodology that deconstructs analytical categories, "social life is considered too irreducibly complex to make fixed categories anything but simplifying social fictions that produce inequalities in the process of producing differences (McCall, 2005, p. 1773). The second approach, *inter-categorical complexity*, requires that scholars provisionally adopt existing analytical categories identifying inequality relations between social groups and inequality dynamics in different dimensions. This is the approach in which McCall frames her research studies. Finally, the intra-categorical complexity approach can be situated in the middle between the first and third approaches; according to Kings (2017:67), "this approach is not concerned with understanding or challenging the definition or depiction of groups but rather with quantifying the relationships and inequalities between socially constructed categories" that is, it tends to focus on particular social groups at neglected points of intersection to reveal the complexity of lived experience within such groups.

Despite McCall's proposal being a compelling and valuable methodology for the investigation and analysis of certain groups that may be at unidentified locations in the intersection, focusing only on a macro or micro level of power relations and social categories may entail the risk of ignoring other inequalities that may be the product of other levels of social structures. In

this regard, some feminists[12] who have expressed concern over the seemingly endless list of intersections to which we must address if one is to use intersectionality "correctly" (A.E. Kings, 2017, p. 69). Facing this scenario, we can turn to Winker and Degele (2011), who propose a methodological framework based on a multi-level intersectional analysis, where they consider "social structures, including organizations and institutions (macro and meso level), as well as processes of identity construction (micro level) and cultural symbols (level of representation)" (ibid:52). In the logic of a multi-level approach Winker and Degele (2011:54) indicate:

> We understand intersectionality as a system of interactions between inequality-creating social structures (i.e., of power relations), symbolic representations, and identity constructions that are context-specific, topic-orientated, and inextricably linked to social praxis. The multi-level approach will be able to analyze the interactions of categories of difference on both a single level and throughout all three levels.

As we can see, intersectionality is a fundamental conceptual tool that can be utilized in an infinite number of ways to aid critical thinking in social sciences and ecofeminist debates.

1.5 Decolonial thinking and Ecofeminism

An introduction to decolonial theories implies a theoretical and historical perspective on the question of power, colonialism, capitalism, and modernity. The first one is structured in relations of domination, exploitation, and conflict between social actors who dispute the control of

[12] King (2017) provides the example of Judith Butler, who notes the "etc" in many feminists' lists of social cleavages/divisions and sees it as an embarrassing "sign of exhaustion" on the part of economists

the four basic ambits of human existence: sex, work, collective authority, and subjectivity/intersubjectivity (Quijano, 2000). Colonialism, by the other hand, is understood as a structure, an ethos, and a culture that reproduces itself daily in its oppressions and silences, which in turn structures hierarchies, creates normalization-totalization institutions, and incubates forms of pedagogy that are implanted in the bodies and in the everyday common sense with repressive force (Rivera Cusicanqui, 2018)

Taking the conquest of the societies and the cultures that inhabit what today is called Latin America as a starting point, “a relation of direct, political, social and cultural domination was established by the Europeans over the conquered of all continents. This domination is known as a specific Eurocentered colonialism”(Quijano, 2010, p. 22). This colonial domination has been defeated in the large majority of the cases. America was the first stage of that defeat, and afterward, since the Second World War, Asia and Africa. Following this logic, the coloniality of power is a concept that accounts for one of the founding elements of the current power structure, the primary and universal social classification of the planet's population, around the idea of "race."

Regarding capitalism, (Lugones, 2008; Quijano, 2000) indicates that this refers to "the structural articulation of all historically known forms of control of labor or exploitation, slavery, serfdom, small commodity servitude, small commodity production, wage labor, and reciprocity, under the hegemony of the capital-wage reciprocity, under the hegemony of the capital-salary relationship."

In this logic, decolonial thinking proposes to highlight the current colonial power structures, where the epistemologies and social and political systems keep on reproducing colonial forms of race, class, and gender domination. According to Quijano (2010:24), decolonial thinking and decolonial theories

find their roots in the colonial history of Latin America, which, by Quijano, "is, without a doubt, the most extreme case of cultural colonization by Europe." At the same time, propose political statements from the subalternity in the Global South.

In the case of the natives of the Andes, history demonstrates that decolonial thinking has been present since the moment the Spanish settlers arrived in America, and it is possible to identify them in the political and cultural resistance strategies of many indigenous communities. As it is known, every ancestral culture has its way of perceiving life, a community-based philosophy where the harmony between Nature and living beings is fundamental, where notions of ecodependence and interdependence are fundamental at the moment of thinking the links between humans, and with Nature, these links are the ones have allowed articulating a dialogue between ecology and feminism. Is this cosmovision that has been historically seen as inferior by the Eurocentric epistemologies?

> El Occidente nos ha propuesto en filosofía una “naturaleza humana” inalterable para todos los seres humanos, y en religión, un solo Dios para todos los hombres. Ambas proposiciones son una trampa…Nuestra “naturaleza humana” es distinta de la “naturaleza humana” de las “fieras blancas”. Nosotros forjamos un hombre que no sabía mentir, no sabía robar, no sabía explotar, (ama Hulla, ama súa, ama khella). La ética social del Inkanato salía del cosmos. (Reynaga: 91)[13]

[13] The West has proposed in philosophy an unalterable "Human Nature" for all human beings, in religion, one God only for all men. Both propositions are a trap; our "Human Nature" is different from the "Human Nature" of the "white beasts." We forge a man who did not know how to lie, how to steal, how to exploit. The social ethic of the Inkanato emerged from the Cosmos.

In the quote, Reynaga postulates a principle of the Andean cosmovision and its philosophy, "The social ethic of the Inkanato arise from de cosmos ."The relationship of human beings with Nature is fundamental, vastly different than the modern relationship with Nature, where this last one is seen as an object that is at the service of the people.

Understanding the relationship of the subject with Nature, the community, their food, and time are some of the elements that differentiate the most from the modern way of seeing life proposed by the colonial power structures. This perception of life is reflected in the way of doing politics and the rejection of modern epistemologies. It also suggests critical thinking that questions new social categories such as *mestizaje*, nation-state, capitalism, and colonialism. As Reynaga postulates, "neither Marx nor Christ, we need to think with our heads."[14].

> Modern history meant slavery for the indigenous peoples of America; it was simultaneously an arena of resistance and conflict, a site for the development of sweeping counterhegemonic strategies, and a space for the creation of new indigenous languages and projects of modernity (Rivera Cusicanqui, 2012, p. 95)

It is fundamental to identify the counterhegemonic resistance strategies of the indigenous to understand where the decolonial theory has its roots, practices such as the *ajtaphi and khoa.*[15], and traditional *fiestas* as places where the micropolitics take place. Another fundamental aspect is respect for the ancestral forms of social organizations, where the decisions are taken in a horizontal way, respecting different roles that are cyclic and not static.

[14] Catherine Walsh quoting Fausto Reynaga in Walsh (page 80)
[15] *Ajtaphi:* A way of sharing the food with the community; all the food is placed on a traditional fabric on the ground, and people eat, forming a circle around the food. *Khoa:* Ritual of feeding the Earth.

These few examples can help us understand that the way of understanding life and creating knowledge in many indigenous communities have their bases on an ancestral cosmovision, which later will be understood as part of what De Sousa Santos calls epistemologies of the South, referred to as the production y validation of knowledge which is part of the resistance experiences of social groups that have been suffering the injustice, the oppression, and destruction caused by the capitalism, the colonialism and the patriarchy (De Sousa Santos, 2019).

From a feminist perspective, Maria Lugones' analysis emphasizes the fundamental centrality of gender and sexuality to coloniality and capitalism. Lugones criticizes Quijano's understanding of gender only in terms of sexual access to women. For her, understanding the ways in which gender and sexuality form foundational poles under capitalism: they shape identity, (non-)access to the labor market, expectations of unpaid work, and the multiple forms of violence deployed on those who deviate from its norms.

Class and capitalism remain central to Lugones' concept of the coloniality of gender; as she puts it, "the coloniality of gender is...what lies at the intersection of gender and class and race as central constructs of the capitalist world system of power."[16]

[16] (Bohrer, 2020) quoting Lugones (2011)

2 The Anthropocene and its discontents: toward Capitalocene?

As indicated in previous sections, the role of modernity and the transition of feudal societies to industrial societies meant a change of paradigm that had repercussions at every level of human life, including the way we relate with Nature. The phenomenon of industrialization of societies all over the globe was ruled by the appropriation of the resources of the globe to satisfy the needs of man; in this logic, this process brought with it a gradual modification and transformation of Nature, changing the conditions of its existence and increasing the environmental impacts.

In this scenario, it is fundamental to point out the expansion of the borders of capital and the dominant models of development, whose unsustainable and predatory character can no longer be concealed; in addition, appears as necessary the revision of the anthropocentric paradigm in society/Nature, human/non-human relationship, which is at the basis of western modernity, and has profound repercussions in an environmental, philosophical, sociological and political level among others.

2.1 The emergence of the Anthropocene narrative

The Anthropocene label was proposed by Paul Crutzen; this concept is an essential tool for the analysis of the current climate crisis scenario, which can be considered a geological revolution where humans have a protagonist role.[17], the Anthropocene is then the new epoch of humans, the age of man.

> The stratigraphic scale had to be supplemented by a new age to signal that humankind had become a force of telluric

[17] According to Bonneuil & Fressoz (2016:17), scientists succumbed to anthropocentrism in making humanity a geological marker: the start of the Quaternary was fixed to coincide with the appearance of the genus Homo 2.5 million years ago in Africa (Homo habilis), and the Holocene or 'recent epoch' was proposed by the geologist Charles Lyell based on the end of the last glaciation but also on the then-believed coincident emergence of humans.

> amplitude. After the Pleistocene, which opened the Quaternary 2.5 million years back, and the Holocene, which began 11,500 years ago, 'It seems appropriate to assign the term "Anthropocene" to the present, in many ways, human-dominated geological epoch (Bonneuil & Fressoz, 2016, p. 16)[18]

The Anthropocene is characterized by the fact that the human imprint on the global environment has now become so large and active that it rivals some of the great forces of Nature in its impact on the functioning of the Earth system, is a concept that establishes the idea of a critical "threshold" in the face of problems such as global warming and biodiversity loss; a concept that highlights the limits of nature and questions the dominant development strategies as well as the cultural paradigm of modernity (Svampa, 2019). At the same time, and as a theoretical tool for the subsequent analysis of the climate-related migration phenomenon, this concept is handy because it "appears to encourage cross-disciplinary research as an urgent response to contemporary challenges in the world and science. It therefore also requires a broad cross-disciplinary discussion"(Haraway et al., 2016, p. 4)[19].

Many factors justify talking about the transition of the Holocene to an Anthropocene age, such as global warming, the loss of biodiversity, the excessive increase in industrial activity, and changes in the consumption model, which also involves mutations in the safety and security of food consumption.

[18] Bonneuil & Fressoz quoting Paul Crutzen.
[19] Aware of the current debates around this concept within the social sciences, for this work, I limit myself to taking into account the characteristics and foundations proposed for the use of this term without the intention of engaging in a debate of an epistemological or political nature.

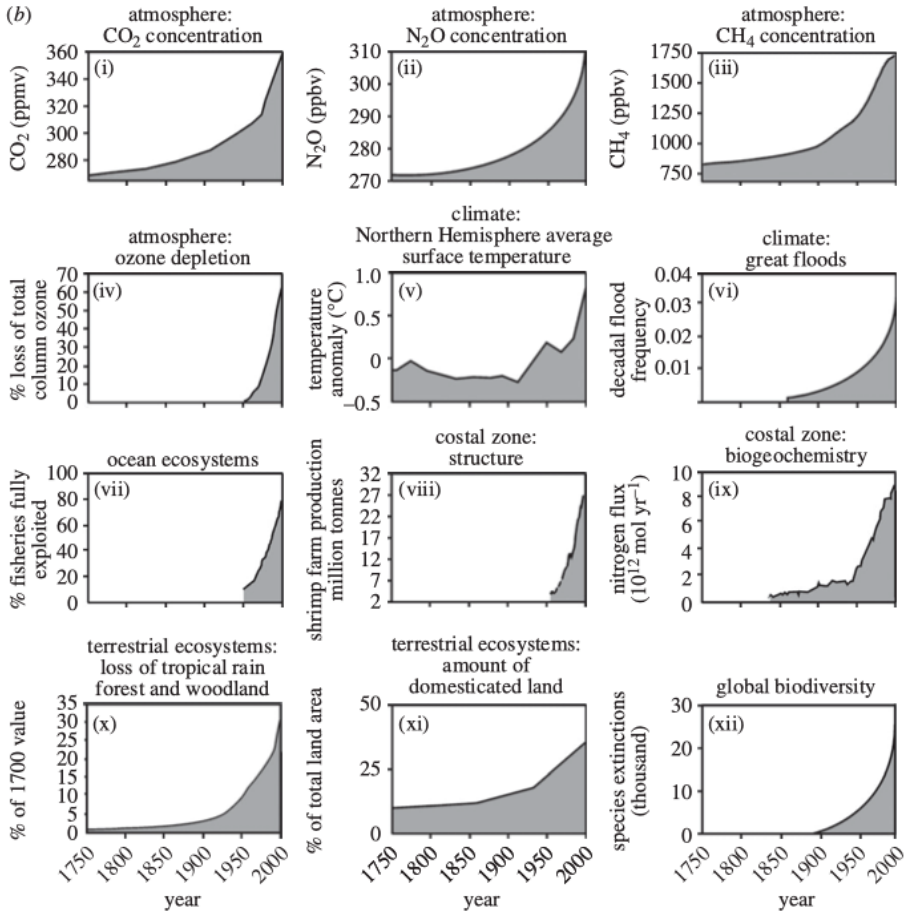
Regarding global warming, we have plenty of evidence to point out the role of green gases.[20] emitted by human activity. According to (Bonneuil & Fressoz, 2016) and (Steffen et al., 2011), from 1750, the atmosphere has been 'enriched' in methane (CH4) to the tune of 150 percent, nitrous oxide (N2O) by 63 percent and carbon dioxide (CO2) by 43 percent. As a result, since the middle of the 20th century, the temperature has risen by 0.8°C, and the scenarios forecast by the Intergovernmental Panel on Climate Change (IPCC) predict a temperature increase of between 1.2°C and six °C by the end of the 21st century. Scientists consider that a barrier of more than two °C is considered a danger threshold, and the temperature increase could well be higher if everything continues as it is now (Svampa, 2019),(Bonneuil & Fressoz, 2016). Another alarming factor concerns the loss of biodiversity, where Ocean acidification is the flip side of climate change, a product of carbon dioxide concentration that changes water chemistry and threatens the life of marine ecosystems. (Fig 1)

In addition to all of the above, or rather we could say interrelated, the excessive increase in industrial activity and the changes in the consumption model show us the tendency to limit the useful life of products, forcing people to renew them over and over again, to maximize the profits of capital. At the same time, the industrial activity linked to deforestation, soil contamination by fertilizers, and water pollution are strictly related to mutations in food consumption and production in recent decades; a model built by the planet's large agri-food companies is accompanied by a degradation of all ecosystems: expansion of monocultures that lead to the annihilation of biodiversity, a tendency to overeating, pollution by fertilizers and pesticides, clearing and deforestation, and land grabbing. All these

[20] Greenhouse gases are gaseous constituents of the atmosphere that absorb and emit radiation at specific wavelengths within the spectrum of radiation emitted by the Earth's surface, by the atmosphere itself, and by clouds. This property causes the greenhouse effect. Water vapor (H2O), carbon dioxide (CO2), nitrous oxide (N2O), methane (CH4), and ozone (O3) are the primary GHGs in the Earth's atmosphere (Shukla et al., 2022, p. 220)

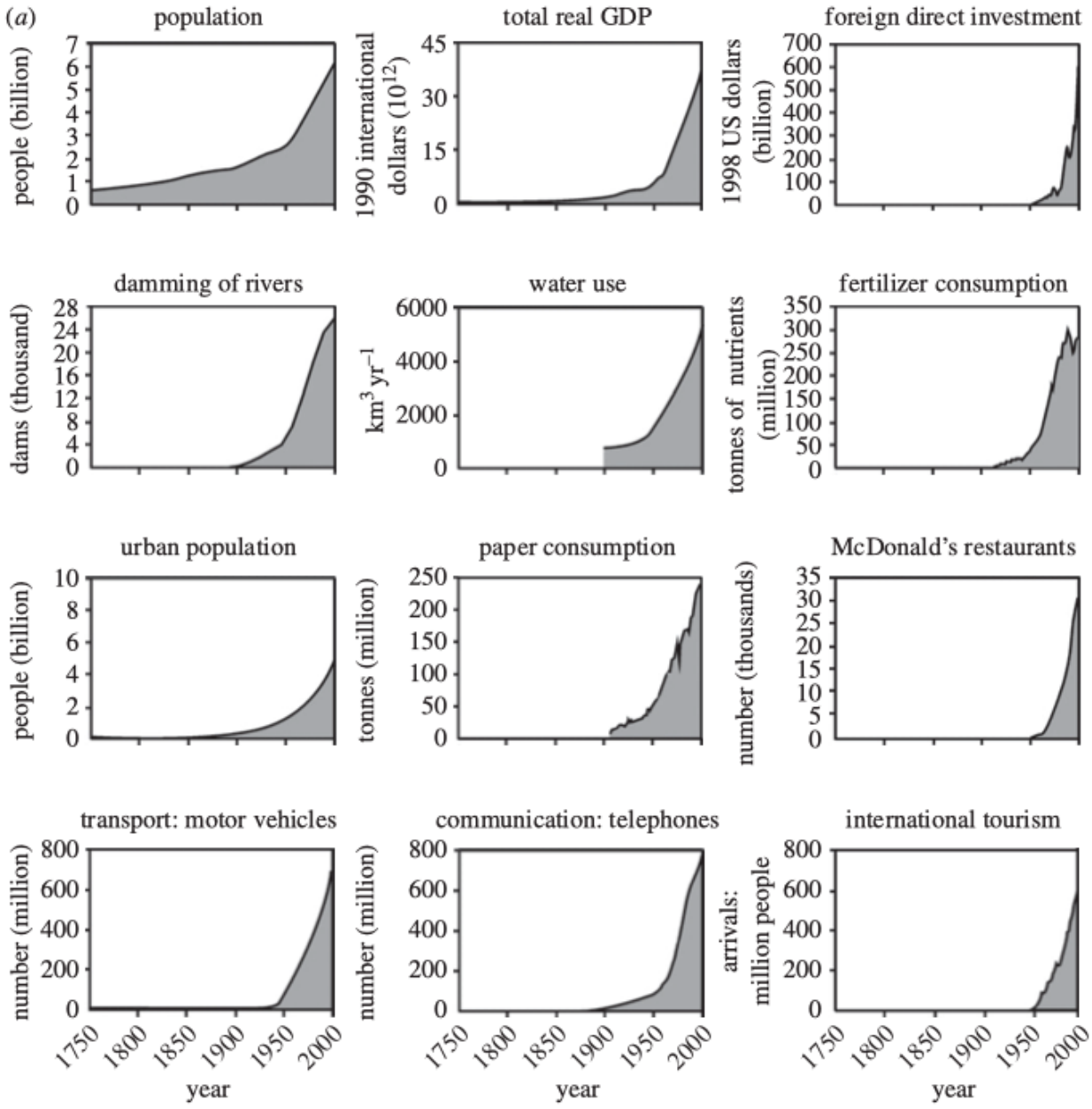
forms of production and ecosystem degradation are responsible for the increase in greenhouse gas emissions, not only during the production process but also in the transport of goods. All of the above mentioned is of utmost importance to understanding the migratory phenomenon due to the modifications in the life cycles of Nature, as we will see in the following sections. (fig 2.)

Figure 1: Global scale changes in the Earth system as a result of the dramatic increase in human activity



Source: Steffen et al., (2011) The Anthropocene: conceptual and historical perspectives

Figure 2: The increasing rates of change in human activity since the beginning of the Industrial Revolution.



Source: Steffen et al., (2011) The Anthropocene: conceptual and historical perspectives

2.2 Beyond the Anthropocene: The Notion of Capitalocene

As different authors point out, the human species' role in the progressive climate change is more than evident. However, it is also meaningful to do a more in-depth analysis where the role of the economic and political structures behind human actions can be evidenced as the failure of the promises of "progress"[21] In this line, we can highlight that it is an inaccurate idea that undifferentiated humanity is responsible for the rupture in the Earth System since most of the individuals historically responsible for carbon dioxide emissions -the super agents of the Anthropocene- are form developed, industrialized western countries (Adelman, 2020, p. 26), and that "neither modernity nor the Anthropocene are comprehensible in the absence of the histories of (carbon) colonialism and capitalism" (D. J. Haraway, 2016, p. 45).

This last idea proposed by Adelman and shared by Haraway highlights an important issue that corresponds to the historical responsibility and role of the countries of the global North in the face of the current climate crisis and the growing migration due to the former. This fundamental element may go unnoticed in the Anthropocene discourse.

In times of continuous climate disasters and crisis scenarios in hyper-globalized contexts where it is necessary to promote discussions, theorize, model, and manage the growing phenomenon of globalization, the scientific discourse found it convenient to popularize and promote the Anthropocene, "climate change modeling is a powerful positive feedback loop provoking change of state in systems of political and ecological discourses" (D. J.

[21] established by modernity.
Adelman (2020, p.38) indicated, "Progress narratives have, and always had, a dark side. Modern liberal notions of universal justice were developed through the construction of otherness and accompanied by the resultant exploitation, expropriation, and dispossession of such others — including indigenous peoples, women, and Nature. In short, the West's development was contingent upon the underdevelopment of the rest of the world through political, economic, and carbon colonialism, and ecologically unequal exchange."

Haraway, 2016, p. 45). However, many scholars agree that we should be cautious with the concept of Anthropocene since there is a risk of masking or downplaying structures of social and environmental exploitation such as colonialism, capitalism, and patriarchy when it comes to rethinking the climate crisis, as Dipesh Chakrabarty points out regarding the Anthropocene: "(…) human history and geological history have converged as an unintended consequence of individual greenhouse gas emissions undifferentiated by class, gender, race or historical context"[22]

> The master narrative reproduces and reinforces the existing relations of domination and subordination due to its tacit acceptance of hierarchical dualism, such as "human and nature," civilization and barbarism, and man and woman.[23] This is because these dualisms inherent to the Anthropocene help obscure the white, male, and heterosexual subjectivity of Western rationality (Saitō, 2022, p. 106).

In this logic, among the various scholars of the Anthropocene, several proposals have emerged and provide critical perspectives on the role of humanity in the climate crisis, revisiting the debate on the Nature/Society separation and the prevailing forms of social organization since modernity based on capital, arguing the need for new ways of thinking about humanity in Nature and Nature in humanity. For example, Jason Moore (2016) points out that the concept of the Anthropocene can be controversial because it diminishes the importance of the forms in which the mode of production reinforces the anthropocentric epistemologies of modernity. In this logic, we find the Capitalocene proposal, which, according to this author, posits capitalism as a situated and multispecies world-ecology of capital, power, and re/production.

[22] In Adelman, 2020
[23] Saito, quoting Plumwood 2002

In the words of Parenti & Moore (2016, p. 81), The Capitalocene argument says three things that the Anthropocene perspective does not—and cannot. *First*, it insists that the history of capitalism is a relation of capital, power, and Nature as an organic whole. *Second*, the history of capitalism cannot be reduced to the burning of fossil fuels. *Third*, the Capitalocene argument challenges the Eurocentric view of capitalism emerging in England during the eighteenth century.

Concerning the *first* point, Saito (2022) and Haraway (2016) share the idea of a "half story" narrated in the Anthropocene. It is an incomplete history because it does not consider or discuss the naturalization of inequalities, alienation, and violence that historically have been part of modernity and its strategies of power and production. Avoiding this critique of modernity does not allow us to promote the questioning of these relations of power at both a political and scientific level.

Moore highlights that Nature and humans "co-produce" together, encouraging a debate that moves from the idea that the addition of Humanity and Nature or capitalism plus Nature narrates histories. At this point, it is also essential to emphasize a criticism of Cartesian dualism (so inherent to modernity) that appears as part of the problem.

> No less than the binaries of Eurocentrism, racism, and sexism, Nature/Society is directly implicated in the modern world's colossal violence, inequality, and oppression. This argument against dualism implicates something abstract—Nature/Society—but quite material. For the abstraction, Nature/Society historically conforms to a seemingly endless series of human exclusions—never mind the rationalizing disciplines and exterminist policies imposed upon extra-human natures. These exclusions correspond to a long history of subordinating women, colonial populations, and

> peoples of color—humans rarely accorded membership in Adam Smith's "civilized society"(Parenti & Moore, 2016, p. 2).

In this sense, and following Moore's reasoning, Nature is an active medium that affects capitalism, so it is proposed to replace the dualism of Nature plus Society with Society in Nature or Nature in Society. The idea that "capitalism operates on nature" is replaced by the scheme that capitalism "works through" the web of life because what is constructed is an interconnected network of social and natural dispositions of agents.

Related to the second and third ideas, no narrative of modern social thought is as powerful as the idea that it all began with coal and steam: capitalism, industrial civilization, and all the rest. This perspective is based on a substantial rather than a relational view of capitalism and Nature. In this narrative, fossil fuels become the spark that ignites the circuit of capital and unleashes the dynamism of modern economic growth. From this naturally follows "the destruction of nature on a planetary scale ."According to Moore, the fossil capital narrative ignores the epochal revolution in landscape change between 1450 and 1750. It is undoubtedly essential to give the importance they deserve to the networks of sugar, extraction of precious metals, plantations, indigenous genocides, and slavery, with their labor innovations and their relocations and repositioning of animals and things, removing human and non-human workers of all kinds. In this logic, D. J. Haraway (2016, p. 48) highlights:

> Technological determinism did not produce the Third Carbon Age. Coal and steam engines did not determine the story. The infectious industrial revolution of England mattered hugely, but it is only one player in planet-transforming, historically situated, new enough world relations. The relocation of peoples, plants, and animals; the leveling of vast forests; and the violent mining of metals preceded the steam engine, but

> that is not a warrant for wringing one's hands about the perfidy of the Anthropos, or of Species Man, or Man the Hunter.

As we can see from the above, the dominant Anthropocene argument states that the origins of the modern world are rooted in the Industrial Revolution in England around the 19th century. In this context, the driving forces that take center stage in the Anthropocene narrative are coal and steam, leaving aside the categories of class and capital, let alone the role of imperialism and colonialism. Likewise, in addition to coal and steam as a symbol of the beginning of this new era, the role of Anthropos is emphasized: humanity as an undifferentiated[24] Mass that has become a “planetary agent."

> The construction of humanity as a "collective" actor has encouraged several important mis-recognitions: 1) a neo-Malthusian view of population, ignoring the modern world system's existing patterns of family formation and population movement, 2) a view of historical change dominated by technology-resource complexes; (3) a concept of scarcity abstracted from relations of capital, class, and empire; and (4) assigning responsibility for global change to humanity as a whole, rather than to the forces of capital and empire that have given modern world history its coherence (Parenti & Moore, 2016, p. 82)

Based on the above, we can see that the Anthropocene considers humanity as a geological force based on demography and technology but does not explicitly relate them to questions of power, labor, and capital, forgetting

[24] Placing the Anthropocene discourse in the context of global capitalism, we should not forget that since the beginning of capitalism, many humans were excluded, such as the American Indians, or were designated as partially human, as were also European women. This idea is essential as it evidences the need to review which humans we are talking about when we refer to the responsibility for the climate crisis from a decolonial approach.

that “the driver of these changes was not “humanity” in the abstract; it was the people living and working and above all owning in the capitalist mode of production who have caused the thoroughgoing changes to all earth systems and formations” (Altvater, 2016, p. 144). At the same time, imagining humans since the rise of capitalism entangles us with ideas of progress and the spread of alienation techniques that turn humans and other beings into resources. Such techniques have segregated humans and policed identities, obscuring collaborative survival (Tsing, 2015, p. 18).

> The Anthropocene discourse is deeply concerned about this "risk civilization." However, cloistered as it remains within a humanistic mindset, it appears unwilling to acknowledge (the significance of the fact) that non-human existence and freedom—and Earth's very art of Life-making are menaced by the human enterprise itself, whose potential to emerge relatively unscathed from its civilizational game of Russian roulette will only leave humanity stranded on a planet once prosperous in life turned into a satellite of resources. (Eileen Crist, 2016, p. 26)

As Crist (2016) points out, this discourse is not simply wrong in itself; it also undermines our ability to imagine and care for other worlds, both those that exist precariously now (including the so-called wilderness, for all the tainted history of that term in racist settler colonialism), and those that we need to bring into being in alliance with other creatures, to recover pasts, presents, and futures still possible.

3 Development in climate science, impacts, and risks.

In line with the previous chapters, in this so-called Anthropocene era, the importance of current economic and political structures and their relationship with the climate crisis becomes evident. In this context, capitalism as a global economic model, among its principles, is based on exploiting and transforming natural resources to satisfy human and commercial needs under the premise that when a natural resource is exhausted, the market will be in charge of finding a new alternative.

> Capitalist theory dictates that society need not worry about fossil fuel depletion or any finite resource because the market's invisible hand will inevitably conjure up a viable alternative. If this assumption were valid and an inexhaustible well of alternative resources and products existed, then the resource consumption rate might correlate with increased social well-being. However, that is not the reality of our situation. We live in a world of finite resources, and as incredible as the power of human innovation has proven itself to be, even ingenuity has its limits (Park, 2023, p. 8)

Starting from the beginning of European modernity, we must go back to the 18th century, when energy from water, wind, and forests was used extensively to increase production as part of a plan for large-scale civilizational progress and ecological destruction.[25] Following Moore (2016),

[25] This is a fundamental issue that will be discussed from a decolonial perspective in the following sections since, as mentioned in the previous chapters, understanding migration linked to the climate crisis from an ecofeminist perspective requires a geographically situated analysis in order to understand the meaning of civilizing processes and the idea of development.

it is fundamental to go back even further than the Industrial Revolution to understand the socio-ecological transformations, where we find "cheap nature" strategies centered on workforce, food, energy, and natural resources. “These Four Cheaps were an important factor in forming early modern capitalism—what Marx calls the era of the original, or "primitive," accumulation of capital."[26].

Later, with the advent of the Industrial Revolution, a remarkable advance in production processes was observed; time and space were compressed, resulting in a more excellent production of goods and services in the shortest possible time. The increasing use of fossil fuels has visibly affected transportation, industry, communication, and mobility.

We know that the primary source of energy generation continues to be through the burning of fossil fuels; however, in a global context, the economic system - in its quest to perpetually generate more wealth and prosperity - has instigated unsuspected and undesirable consequences. We know that burning fossil fuels releases carbon dioxide and other greenhouse gases into the atmosphere; we also know that every product produced generates waste and that production processes often use toxic substances that lead to the pollution of land, air, and water. In this sense, it is evident that we are facing a system that is currently revealing severe environmental consequences and presents us with significant challenges to overcoming the problem of atmospheric pollution and the corresponding global warming.

3.1 Greenhouse gas emissions and global vulnerability

The climate crisis represents an existential threat to humans and non-humans of the present and future generations, with consequences that progressively transform life on Earth and impact the livelihood of millions of

[26] Elmar Alvater in (Parenti & Moore, 2016, p. 143).

people, threatening human health, access to water, and food security, among many others. Given that the causes of this crisis transcend geographic boundaries and the actions to address it involve significant economic costs, political and economic pacts do not come to an adequate outcome.

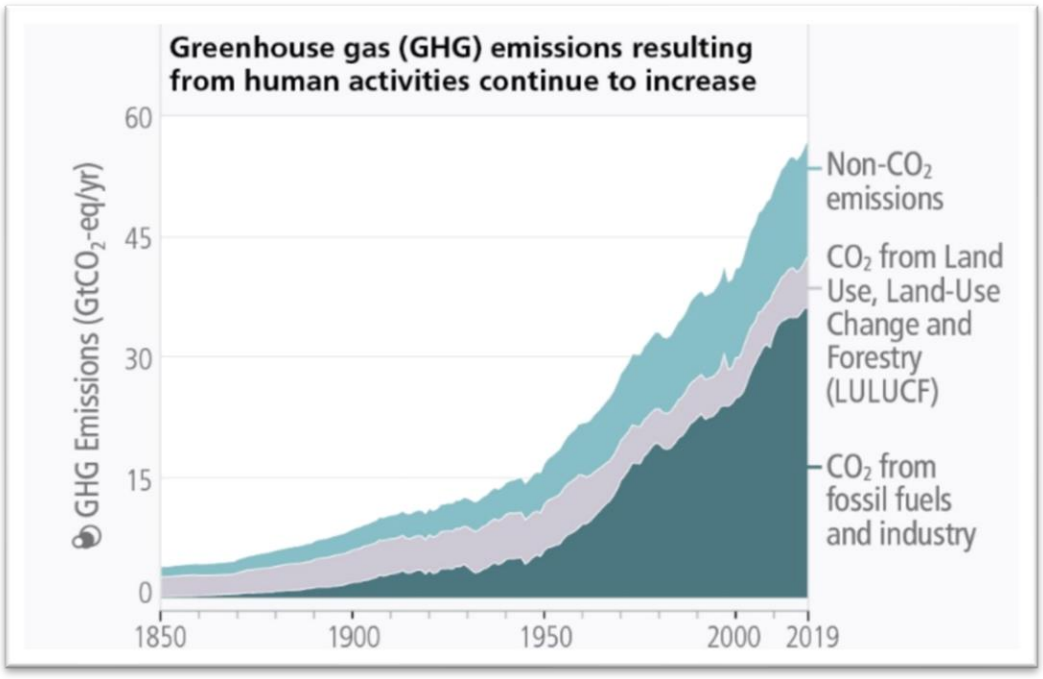
To better understand why we speak of the climate crisis, briefly explain some of the more technical aspects used in the study of climate change from the natural sciences. A common concept when studying the climate crisis is the greenhouse gas effect and its relation to global warming.

In this sense, it is crucial to start by indicating that the Earth's atmosphere is composed mainly of nitrogen, oxygen, and greenhouse gasses: water vapor, carbon dioxide, methane, and nitrous oxide. These are called greenhouse gasses because they produce the greenhouse effect, absorbing an optimal amount of solar heat as it reflects off the Earth's surface, thus maintaining a temperature zone suitable for living things. While the production of these gasses is a normal phenomenon, the industrial era marked a significant milestone because since the early 1860s, the amount of these gasses produced has reached more than 500 billion tons, which has led to an additional industrial greenhouse effect, causing too much solar energy to be trapped and thus leading to an increase in the global average temperature, In addition, "extensive deforestation and land-use changes have compromised the planet's ability to maintain equilibrium by absorbing excess carbon" (Cuomo, 2011, p. 691).

According to the sixth report presented by the IPCC (2023), global greenhouse gas emissions have continued to increase during 2010-2019 (fig. 3, fig. 4), with uneven historical and current contributions from unsustainable energy use, land use, and land-use change, lifestyles, and consumption and production patterns between regions, between and within

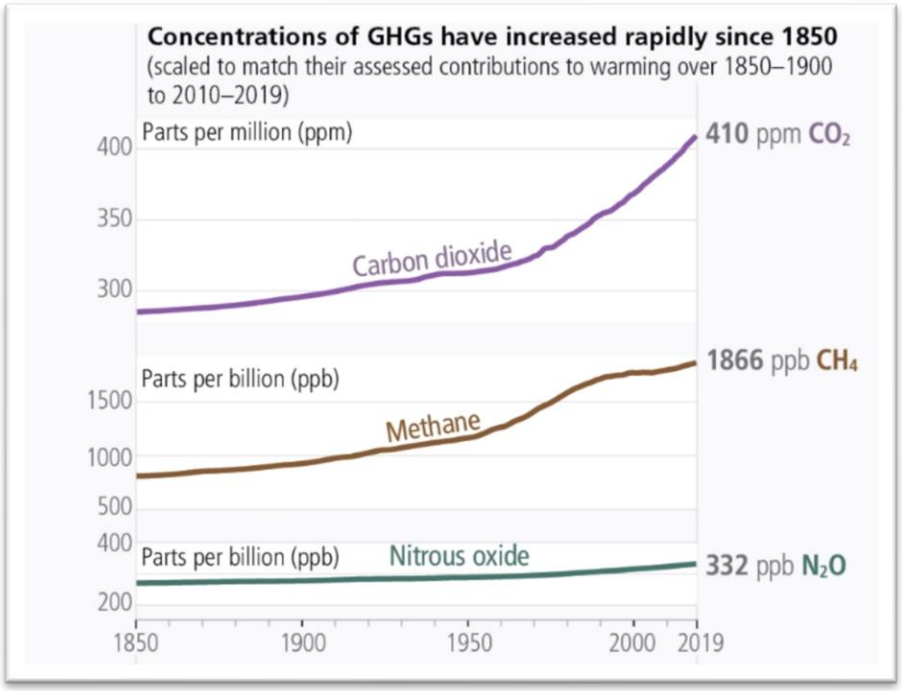
countries, and between individuals. Human activities, primarily through greenhouse gas emissions, have unequivocally caused global warming, with global surface temperature reaching 1.1 °C above 1850-1900 by 2011-2020. Climate change has caused widespread adverse effects on food and water security, human health, economies, and society, as well as related losses and damages to nature and people. Historically, Vulnerable communities have contributed the least to climate change and are disproportionately affected.

Figure 3: Greenhouse gas emissions resulting from human activities



From: IPCC AR6 SYR Longer Report (2022)

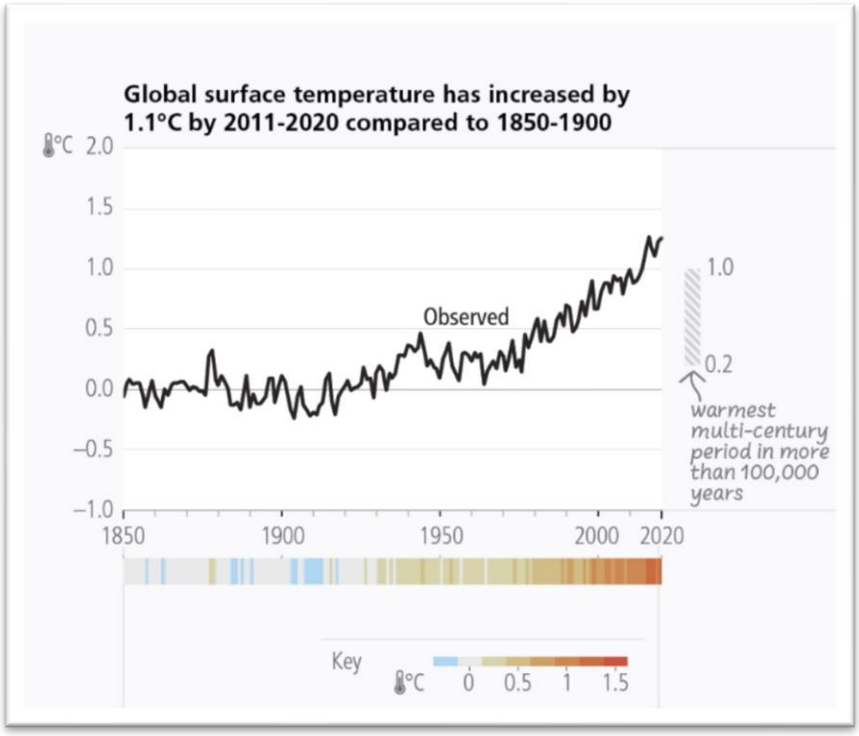
Figure 4:Concentration of GHGs from 1850 to 2019



From: IPCC AR6 SYR Longer Report (2022)

The information provided in the latest ICC report shows how climate change is resulting in extreme weather and climate phenomena in all regions of the planet and can be evidenced at all planet latitudes. In this scenario, there is no room for skepticism when the evidence of the changes observed in extreme phenomena such as heat waves, droughts with heavy rainfall, and tropical cyclones are clearly visible, and it is also evident that they have intensified in recent years, as we can observe daily in numerous press reports.

Figure 5:Global surface temperature from 1850 to 2020



From: IPCC AR6 SYR Longer Report (2022)

Warm extremes have become more frequent and intense in all coastal regions since the 1950s, while cold extremes have become less frequent and less severe, with a high degree of confidence that man-made climate change is the primary driver of these changes. In this scenario, according to Shukla et al. (2022), it is possible to distinguish different types of climate-related changes, among which we find:

- Sea level rise is directly related to the risk of flooding in coastal regions, as well as erosion and salinization of agricultural land.
- Increased intensity of tropical cyclones and storms.
- Changes in rainfall patterns affect agricultural productivity.
- An increase in temperatures implies risks such as more frequent and intense forest fires and the melting of glaciers.

- Change in atmospheric chemistry, related to crop productivity, marine and coastal ecosystems.

The phenomena mentioned above are closely related to the reduction of food security and have affected hydric security; all these climatic changes undoubtedly have an impact not only at the climatological level but also at the social level, which, as we will see in the following chapters is related to the migratory phenomenon.

In the case of agriculture and forest care, we can observe that in many cultures, agricultural work is based on sexual division, where men perform specific tasks, such as planting and clearing the land or forest, while women are in charge of sowing seeds, irrigation, and harvesting are practiced by women. In this sense, for these cultures where forests and agricultural production are the basis of their livelihood, deforestation, changes in rainfall and soil regimes, among others, can be devastating. “Loss of tree cover increases the burden of obtaining forest resources and water, increasing soil erosion and decreasing agricultural productivity.” (Chioma Steady, 2023, p. 315)

Some of the challenges in agriculture, forestry, and water are related to access to land, which has gender implications. Privatization of formerly communally owned land can have an impact on water resources.

The transfer of communal ownership of water resources into private hands has significant implications regarding access, preservation, conservation, and accountability (idem p.318). Much of the environmental problems can be traced back to colonialism and the legacy of its policies, which included the extraction of resources for export that devastated the land. Other environmental consequences include deforestation, desertification, drought, scarcity of fresh and clean water, scarcity of biomass for fuel, loss of soil fertility, loss of biodiversity, and the impact of climate change.

Table 1: Global Vulnerability Assessment

Vulnerability assessment		
Region	Climate Disaster	Countries
Sahara, Middle East and Central Asia	Droughts	Niger, Sudan, Ethiopia, Somalia, Yemen, and Iran, all the way to Western/Northern China
Sub-Saharan Africa	Droughts and floods	Kenya, Uganda, Tanzania, Nigeria, Mozambique, and South Africa
South and Southeast Asia	Melting Himalayan ice sheets, droughts, floods and storms	India, Pakistan, Bangladesh, southern and eastern China, Myanmar, Vietnam, Philippines and Indonesia
Latin America and part of US	Water shortages and floods	Mexico, Andean countries like Peru and Brazil
Small Islands	Sea level rise and cyclones	Comoro islands, Kiribati, Tuvalu, the Maldives and Haiti
The Artic Region	Melting of ice caps	

Source: Elaborated by the author based on the Human Impact Report: Climate Change - The Anatomy of a Silent Crisis, 2009)

Based on the above and in table 1, in the following section, we will see that when we talk about the climate crisis and its impacts, vulnerability is more significant in places with poverty and, in turn, is exacerbated by inequality and marginalization linked to gender, ethnicity, low income, or combinations thereof, especially for many indigenous peoples and local communities. According to the IPCC, approximately 3.3 to 3.6 billion people live in highly vulnerable contexts to climate change. Between 2010 and 2020, human mortality from floods, droughts, and storms was 15 times higher in highly vulnerable regions compared to very low-vulnerability regions (IPCC, 2022, p.17).

3.2 Climate coloniality, vulnerability[27] and responsibility

As mentioned in the previous section, since the 1860s, the amount of greenhouse gases has reached more than 500 billion tons, a quantity strictly linked to the production model of the Industrial Revolution. This surplus of industrial greenhouse gases captures too much solar energy, thus causing a progressive increase in the global average temperature, which leads to an additional industrial greenhouse effect. In addition to this phenomenon, "extensive deforestation and changes in land use have compromised the planet's ability to maintain equilibrium by absorbing excess carbon" (Cuomo, 2011, p. 691).

In this global context, empirical evidence highlights the role of the most privileged societies in the excessive production of greenhouse gases and the impact of the consequent climate crisis on human populations, especially the poorest and most vulnerable. Attributing responsibility to human beings in a general way needs to be more complex and diverts attention from the accurate sources of the problem.

> Attributing blame to humans in a simplistic way diverts attention from the real sources of the problem and reproduces the narrow view that there is a universal greedy human nature that inevitably leads to planetary destruction, as well as the erroneous assumption that everyone naturally desires the lifestyles enabled by modern Western colonial development (Cuomo, 2011, p. 697).

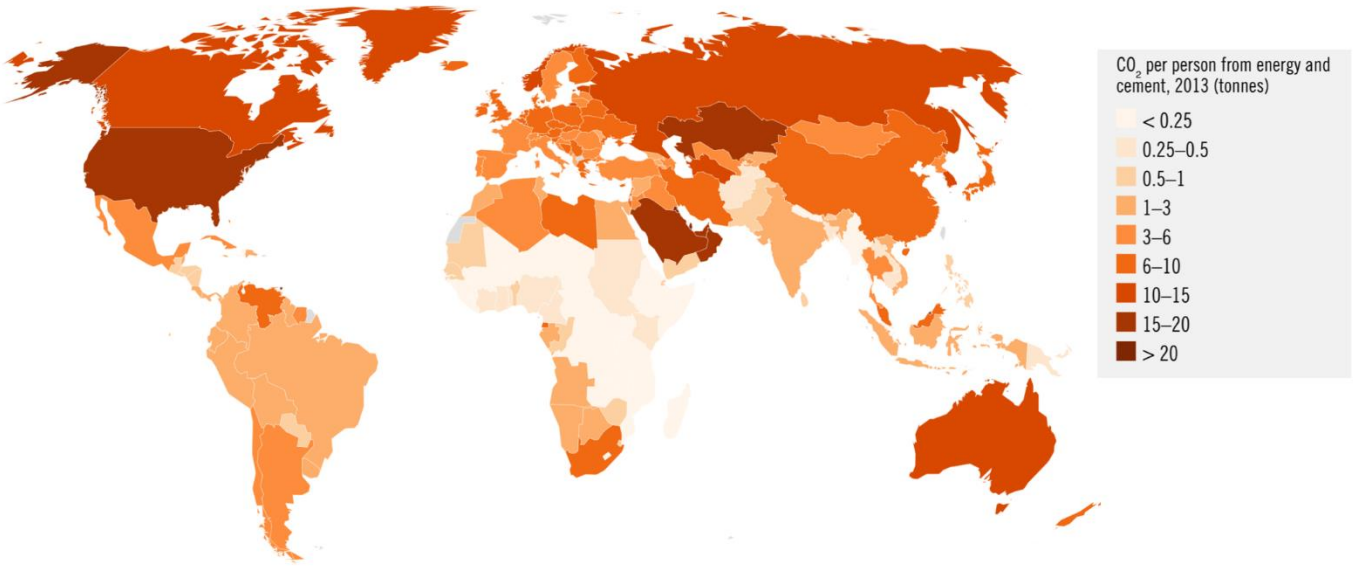
The undifferentiated humanity presupposed in persistent Anthropocene narratives has already proven problematic. The universalism of the

[27] Understood as "the degree to which a system is susceptible to and unable to cope with adverse effects of climate change, including climate variability and extremes" according to the Intergovernmental Panel on Climate Change's (IPCC).

Anthropocene obfuscates historical and contemporary power imbalances and responsibilities, as well as diverse differentiation and racializations.

As we can see in the following figure, it is clear that some countries and people living there contribute in a different way than people living in countries that present -in most cases- higher levels of poverty and a more significant impact of climate change, which means that the people that contribute the least to the climate change are the ones to suffer the most, i.e., the people that are living in the Global South. This is one of the main reasons behind the criticism of using the word Human in the Anthropocene discourse. In this logic, we find that despite often being talked about as a scientific question, climate change is, first and foremost, a deeply political and moral issue (Chakrabarty, 2014, p. 9).

Figure 6: CO2 per person from energy and cement



In this logic, recognizing the responsibility of a political and economic structure that has historically promoted the accumulation of natural wealth and other benefits, such as the extraction and excessive use of oil, coal, and chemicals, is responsible, along with the great world powers that apply it disproportionately, for the continuing damage that has been and is produced by the industrial greenhouse effect.

In this task of recognizing the responsibility of the climate crisis concerning a system marked by relations of inequality between the Global North and South, authors such as Sultana (2022), Svampa (2019), Chakrabarty (2014), among others, make visible the importance of identifying that racism, colonialism, and patriarchy immersed in this system are part of this web of relations of inequality that go hand in hand with the destruction of the environment. According to Sultana (2022, p. 3):

> Climate change lays bare the colonialism not only of the past but of current coloniality that governs and structures our lives, which are co-constitutive of processes of capitalism, imperialism, and international development. (…) The colonial logic of extractivism continues through neocolonial and post-World War II development interventions. The ecologically unequal exchange between the Global South and the Global North, the ongoing extractive capitalism, and the imperial structures of global trade and domination in establishing policies and ideologies all contribute to maintaining climate coloniality.

As developed in previous sections, coloniality is based on racial domination and hierarchical power relations established during active colonialism and which continue in post-colonial spaces, where the colonial matrix of power persists. When we analyze climate change from this perspective, we may see that coloniality is experienced. Thus, "climate coloniality occurs when

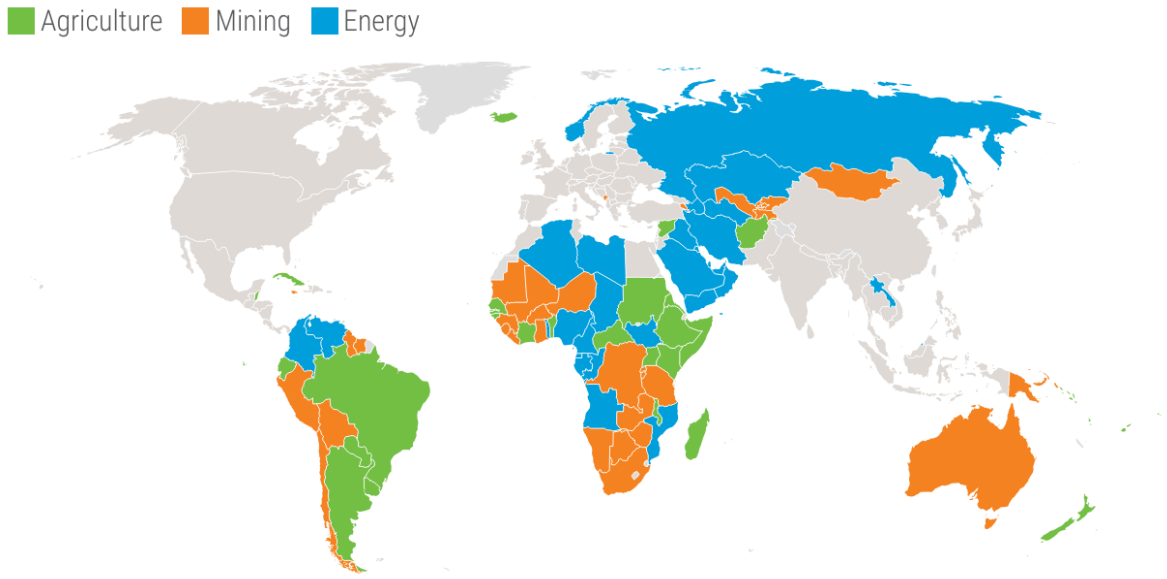
Eurocentric hegemony, neocolonialism, racial capitalism, unequal consumption, and military domination are co-constitutive of the climate impacts experienced by racialized populations who are disproportionately vulnerable and disposable" (Sultana, 2022, p. 4).

Coloniality is experienced through continuous ecological degradations, both of public knowledge and that of more covert, such as managing toxic wastes, mining, and deforestation, among others. It is these logics of resource exploitation under the man/nature dichotomy that are at the heart of global capitalism, from where the ideologies of development and economic growth are fed, reproducing numerous forms of colonial racialized damages in the Global South and vulnerable communities in the Global North.

As we can see in the graph below, commodity dependence is an interesting indicator to help us understand the colonial dimension of the climate crisis. As we know, this indicator reveals what percentage of raw materials constitute a country's exports. At the same time, it should be noted that this indicator is closely related to a country's underdevelopment and vulnerable economies. The graph indicates that in the case of agriculture, mining, and energy, the unequal relations between the Global South and the Global North are more than notorious.[28].

[28] This is part of an "unequal exchange" dynamic where "rich countries and monopolistic corporations leverage their geopolitical and commercial dominance in the world economy to depress or cheapen the prices of resources and labor in the global South." (Hickel et al., 2022, p. 2)

Figure 7: Global Commodity dependence



Source: The United Nations Conference on Trade and Development. The State of Commodity Dependence Report (2021)

As we may see, context matters in understanding climate crisis from the lens of coloniality, and as we will see in the following sections, class, gender, and race.

3.3 Tackling climate inequalities: class, gender and race.

As was stated in this chapter, we know that the climate crisis is intrinsically linked to the current global economic model, which is based on class, gender, and race inequality, and we may add consumption without end. It is this economic model that allows the wealthiest countries to continue growing at the cost of poverty and social, political, and economic vulnerability of the poorest countries (fig.8). According to (Khalfan et al., 2023), we can find that the richest 1% of the planet was responsible for 16% of global carbon emissions, which at the same time es equal to the poorest 66% of the world.

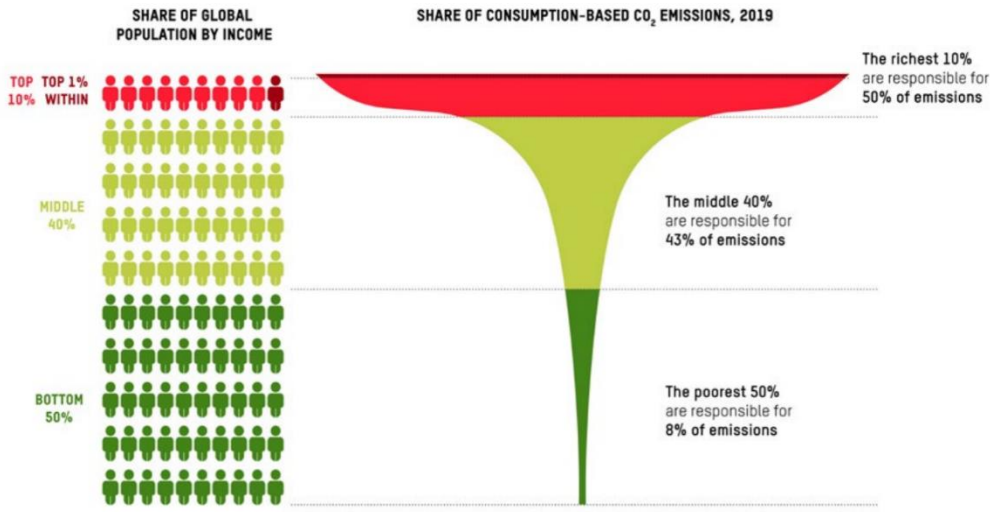
According to the OXFAM report (Khalfan et al., 2023, p. 16) and as shown in Figure 8, "Global North countries drain resources worth over US$10 trillion per year from the Global South, enough to end extreme poverty 70 times over. They exploit land and resources to fuel their consumption – and even climate-mitigation plans".

As we can see in the figure below, the richest 10% of individuals around the globe are responsible for 50% of carbon emissions, while globally, the poorest people are responsible for 8% of carbon emissions, and the middle classes (mainly of the Global North) are responsible for the 43% of emissions.

In this scenario, it is crucial to make visible social and structural factors that influence lifestyles closely linked to carbon emissions; for example, many studies have shown that in countries with higher rates of inequality, there is a continuous search for status, for this the ability to consume luxury items, vehicles, clothing, accessories, and others is essential. Undoubtedly, advertising and the market sell the lifestyle of the richest people as a goal to achieve, and the price to get there is to consume more and more.

By this logic, rich people's lifestyles undoubtedly involve excessive carbon emissions. Among the aspects that have caught the attention of climate change scientists about the super-rich lifestyle is the use of private air transport, yachts, and mansions that occupy large land extensions. According to the Oxfam report (2023), one billionaire produces an average of over 8,000 tons of CO_2 annually. The primary cause is the use of private jets, whose carbon footprint is at least ten times greater than that of commercial airlines, and the use of yachts, which are kept on permanent standby in the cast of the last one, generate around 7,000 tons of CO_2 a year.

Figure 8: Share of Global population by income vs share of consumption-based CO2 emissions 2019



Source: Oxfam report (2023)

Another fundamental variable to take into account when understanding the populations most affected by the climate crisis is the gender issue. As we know, the prevailing patriarchal structures at a global level translate into a marked sexual division of labor, where women also play the role of household caregivers, which is strictly related to a division between public and private space, the first dominated mainly by men and the second by women.[29]. According to Krylova & Escobar (2023), female-headed households evidence a clear difference from male-headed households; the first ones are particularly vulnerable to the impacts of hazards because they tend to be poorer, especially in rural areas. The different economic activities between women and men lead to income disparities, which contribute to gender differences in financial resilience and, in many cases, result in minor

[29] In the case of a study of the 2015 Nepal earth wake, it was found that the death rate of 55% of women was partially related to the fact that more women were indoors in fragile buildings while men were migrant workers in other countries. (Picard 2021)

access to credit for women, who are more likely to be uninsured or underinsured.

In this scenario and communities with highly segmented gender roles, women who do not have the same access to communications technology as men, who did not receive the same training on evacuation drills, or who lack the means to evacuate with their children and elderly in their care are more vulnerable in situations of climate disasters. At the same time, when climate-related disasters occur, the response is often migration, which women cannot easily access due to the economic cost to the family and their responsibilities as caregivers in the domestic sphere. Consequently, it is often the men.[30] who migrate, and the women face a heavier workload as they do not only domestic work but also agricultural work or other low-paid activities.

In other cases, and as a result of global warming and water scarcity, women and children are forced to walk long distances to find water, which leads to school dropouts in the case of boys and girls and a consequent lack of education and increased exposure to dangerous situations such as gender-based violence. In this regard, many studies have shown that violence tends to increase in the aftermath of a disaster, where women and children are in danger of suffering sexual and physical violence. At the same time, "sexual exploitation of women and girls also increases after a disaster, with women often forced to provide sexual favors in return for food and benefits"(Erman et al., 2021, p. 31).

It is also important to mention that in most low-income countries, land ownership is dominated by men, which reduces women's capacity to react

[30] In a Bangladesh study related to climate disasters, it was found that male heads of households were typically responsible for evacuation decisions. In many cases, women's independent movement was restricted, so the absence of a male head of household delayed evacuations. Picard (2021), quoting Alam and Collins (2010)

to production losses resulting from climate crises since land ownership is linked to financial inclusion and access to credit.

> Women tend to rely on informal finance more than men, making it more difficult for them to access funds in case of a disaster. In the developing world, men are, on average, 22 percent more likely than women to have borrowed from a financial institution or used a credit card in the past year; in high-income countries, they are 7 percent more likely to do so. (…) poor women frequently face more barriers in accessing credit or insurance than poor men. They point to women's lack of collateral due to gender gaps in land ownership and more unstable labor arrangements and to their lack of access to information (Erman et al., 2021, p. 42)

In this sense, patriarchal structures are visible in all social dynamics that continue to reproduce the vulnerability of women and girls in the face of the ongoing climate crisis, even more so in contexts where the lack of education and access to financial markets, the excessive workload (paid and unpaid) and the lack of participation in climate negotiations, result in discussions and decision making that do not take into account the gender factor when seeking solutions to global warming-related disasters.

When referring to the race variable when talking about the climate crisis, it is fundamental to revisit the role of colonialism and the practices of exploitation and extractivism carried out in different regions of the Global South, which directly affect native communities through water pollution, deforestation, and mining, among others. In this logic, in the name of progress, indigenous communities are forced to live in what Svampa calls "zonas de sacrificio."

> Vivir en una “zona de sacrificio” supone la radicalización de una situación de desigualdad y de racismo ambiental, donde se interseccionan lo social, lo étnico y la problemática de género. Por otro lado, la configuración de zonas de sacrificio se refiere a un proceso, general y extendido en el tiempo, de desvalorización de otras formas de producción y de vida, diferentes a la economía dominante. Con el paso del tiempo, lo que queda para las comunidades locales son los impactos ambientales y sociosanitarios, cuerpos y territorios convertidos en áreas de sacrificio, áreas completas donde lo que predomina es el sufrimiento ambiental, y las vidas mismas devienen descartables y sacrificables (Svampa, 2021, p. 10)[31]

As one of the most significant examples, we can begin to refer to the African continent, whereas in many other latitudes - environmental problems are articulated with colonialism and the legacy of its extractivist practices.

> Africa is well endowed with natural resources, but the situation is that Africa has yet to come anywhere close to making the most of its natural wealth, and most of the wealth now being produced is not being retained within Africa for the benefit of its people. Colonialism was not merely a system of exploitation but one whose essential purpose was to repatriate the profits to the so-called 'mother country.' From an African viewpoint, that amounted to consistent

[31] Living in a "sacrifice zone" implies the radicalization of a situation of inequality and environmental racism, where social, ethnic, and gender issues intersect. On the other hand, the configuration of sacrifice zones refers to a process, general and extended in time, of devaluing other forms of production and life, different from the dominant economy. With time, what remains for local communities are the environmental and socioeconomic impacts, bodies and territories converted into sacrifice areas. In these entire areas, what predominates is environmental suffering, and lives themselves become disposable and sacrificable.

> expatriation of surplus produced by African labor from African resources. It meant the development of Europe as part of the same dialectical process in which Africa was underdeveloped (Chioma Steady, 2023, p. 318)[32]

From a broader perspective, we find that the situation of the African continent is quite similar to that of other territories in the global South that live in contexts of poverty and environmental vulnerability, situations that are closely linked to territories that are based on agricultural labor and that have large populations living in rural areas.

In this scenario, we find the example of the Latin American continent, which represents one of the unequal regions of the planet, where historically, governments have justified extractivism and environmental depredation in the name of development, causing the expulsion of peasant and indigenous populations as well as the criminalization and even murder of environmental defenders (Svampa).

Undoubtedly, the dispossession of land and expansion of extractivist practices brought with it another problem that hit more violently the indigenous and peasant populations, namely the contamination of water and soil from mining activities that make use of polluting substances, the use of pesticides and herbicides, disposal of toxic waste, a practice that is considered as part of a logic of "toxic colonialism" where countries of the Global South are used as dumping ground.

In the African case, one of the many examples of environmental vulnerability is that caused by the extraction of hydrocarbons, where oil leaks into the soil and streams, as well as oil flares, are common, contaminating and destroying marine life, the primary source of animal protein for these

[32] The author quotes Walter Rodney in his book "How Europe Underdeveloped Africa."

communities. In the Latin American case, mining practices have shown that in addition to contamination by the use of toxic substances such as mercury, the consumption of millions of liters of river water in these practices threatens the lives of peasant and indigenous populations living in these territories as well as the life of the flora and fauna.

Another critical factor that is a significant threat to indigenous and peasant populations is the expansion of agro-business, which alters natural ecosystems through glyphosate and transgenic seeds and causes soil and water contamination in Argentina, Bolivia, Paraguay, and Brazil. For example, Svampa (2021) indicates that in Argentina, at least 12 million people live in areas where more than 500 million liters of agrochemicals are dumped annually and where exposure levels rise to 40-80 liters/kilos per person per year.

On this point, it is interesting to mention the phenomenon of the green revolution, which has also been widely debated due to the levels of water and soil contamination caused by the agro-industry (Shiva, 1988, p. 154):

> The green revolution has also resulted in soil toxicity by introducing excess trace elements in ecosystems. Fluorine toxicity has been introduced with irrigation by the Nagarjuna Sagar project. Twenty-six million hectares of India's land are affected by aluminum toxicity. In the Hoshiarpur district of Punjab, boron, iron, molybdenum, and selenium toxicity has built up with green revolution practices and threatens crop production and animal health.

Finally, in this scenario of increasing agro-industry expansion, we can observe that multinationals are moving their operations to territories such as Africa, Asia, Latin America, and the Caribbean due to cheaper labor. In this scenario, women occupy the most significant labor force in agribusiness

dealing with food processing, textile, and garment industries as their labor force is cheap and unprotected. As an example, "in countries such as Kenya, Ethiopia, and Zambia, women provide the major labor force and use pesticides and other chemicals that result in spontaneous abortions, miscarriages, infertility, and other reproductive problems" (Chioma Steady, 2023 p. 320)

4 The effect of the Climate crisis on human migration

As highlighted in the previous sections, the climate crisis is a global problem that represents a significant threat to future generations. Despite that we daily hear on the news about the global warming impacts all over the world, it is essential to highlight that these impacts are unevenly distributed and they hit more violently in global South countries, with significant impacts on nutrient cycling, biodiversity, ecosystems, soil structure and access to water, among many other things. In this scenario, even though humans are experts at adapting to diverse climate adversities, we can observe that when local conditions are no longer sustainable for meeting basic needs such as food, shelter, and safety, people may decide or find themselves forced to migrate as the impacts of environmental hazards become more and more intense.

Many studies show that displacement completely changes the lives of those who decide to migrate and exacerbates their vulnerabilities, increasing social, economic, and physical risks and challenges in unfamiliar environments. However, for these people, displacement can serve as a vital strategy and the only solution to the unsustainable living conditions resulting from ongoing climate disasters.

As we will see in the following sections, there are numerous theoretical approaches when analyzing the migration phenomenon concerning the climate crisis; however, in most cases, scholars of this phenomenon agree on the importance of economic and social factors resulting from the climate crisis when deciding to move from the place of origin. In this sense, the decision of many individuals to migrate is understood from the close and complex relationship between their social, economic, and environmental contexts, as well as their resilience when facing climate changes in their places of origin.

4.1 Gender, class and race inequalities: migration in a climate crisis scenario

All the evidence mentioned above shows the importance of recognizing the current environmental transformations that are leading to a climate crisis scenario. In this sense, human activities derived from a political and economic system that promotes over-consumption and over-production articulated with unsustainable economic growth appear as meaningful elements to pay attention to when trying to understand the global migration landscape in relation to climate change.

Undoubtedly, understanding the migration phenomenon and its relation to climate change is a complex task that requires the articulation of various factors; however, for this thesis, we will focus on an intersectional and ecofeminist perspective where the variables of gender, class, and race are transversal to the analysis. In this task, for a better understanding of the data, it is necessary to start with a general description of the migration situation at the global level, identifying north-south relations, the environmental risks of each region, and the role of gender in migration dynamics related to climate change.

According to data provided by the International Organization for Migration, in 2022, it was estimated that there were around 281 million international migrants in the world, which is equivalent to 3.6% of the world's population, meaning that almost 281 million people were living in a country other than their country of origin. In this scenario, it is worth noting that the vast majority of people migrate internally while a smaller percentage migrate across borders.

An analysis of international migrant population flows in relation to mobility between the Global North and South shows that Europe is currently the largest destination of international migrants, with 87 million migrants

(30.9% of the international migrant population), closely followed by the 86 million international migrants living in Asia (30.5%). North America is the destination of 59 million international migrants (20.9 percent), followed by Africa with 25 million migrants (9 percent).

The United States of America remains the top destination for migrants, with more than 51 million international migrants. Germany has become the second most prominent destination, with almost 16 million international migrants, while Saudi Arabia is the third largest destination country for international migrants, with 13 million. The Russian Federation and the United Kingdom round out the top five destination countries, with nearly 12 million and 9 million international migrants, respectively.

As we saw in Chapter 3, environmental factors can be understood as interacting with other factors to affect migration decisions, such as the interaction of natural disasters with the economy through their impact on income and wages. Thus, even if individuals continue to see their migration decisions as primarily economically motivated, deteriorating environmental conditions can be linked to migration dynamics by analyzing the impact of environmental change on the economy.

While the impact of disasters may appear more immediate, their impact is also influenced by socioeconomic factors that determine the vulnerability of individuals and communities to the adverse effects of environmental shocks and their resilience to them. "Vulnerability or resilience to these situations- that is, the capability to cope or adapt to them- will determine the degree to which people are forced to migrate" (Martin, 2010). Disasters can also affect other drivers of migration, such as employment prospects or the accessibility of markets and, thus, the ability to remain in an area (Kraler et al., 2020).

We know that we currently live in contexts with significant inequalities, and this is no exception when it comes to the climate crisis and its role in migration. As we indicated previously, it is widely accepted that the rich nations bear most of the historical responsibility for the current climate crisis. "Forty percent of the carbon emissions of today's richest 10% are associated with the consumption of individuals in North America and the EU, and about one-fifth with the consumption of individuals in China and India" (Khalfan et al., 2023). Moreover, there is considerable evidence that millions of people living in countries with high poverty rates will reside in areas of high environmental risk over the next five decades and will be the least able to protect themselves. A significant proportion of these people will need more financial, social, political, or even physical resources to migrate out of these environmentally hazardous areas, while those with more significant resources will continue to be more likely to do so.

The above is linked to a Global commodity dependence (Figure 7), where the most powerful and favored social sectors have exceeded the limits of their territories, resorting to the importation of biodiversity from other areas of the world with abundant resources but impoverished by the constant extraction and exploitation of Nature. These extractivist dynamics currently show severe impacts not only in the exploited areas but also bring with them social impacts such as the impoverishment and expulsion of thousands of people from lands that historically belonged to them and generated their daily sustenance.

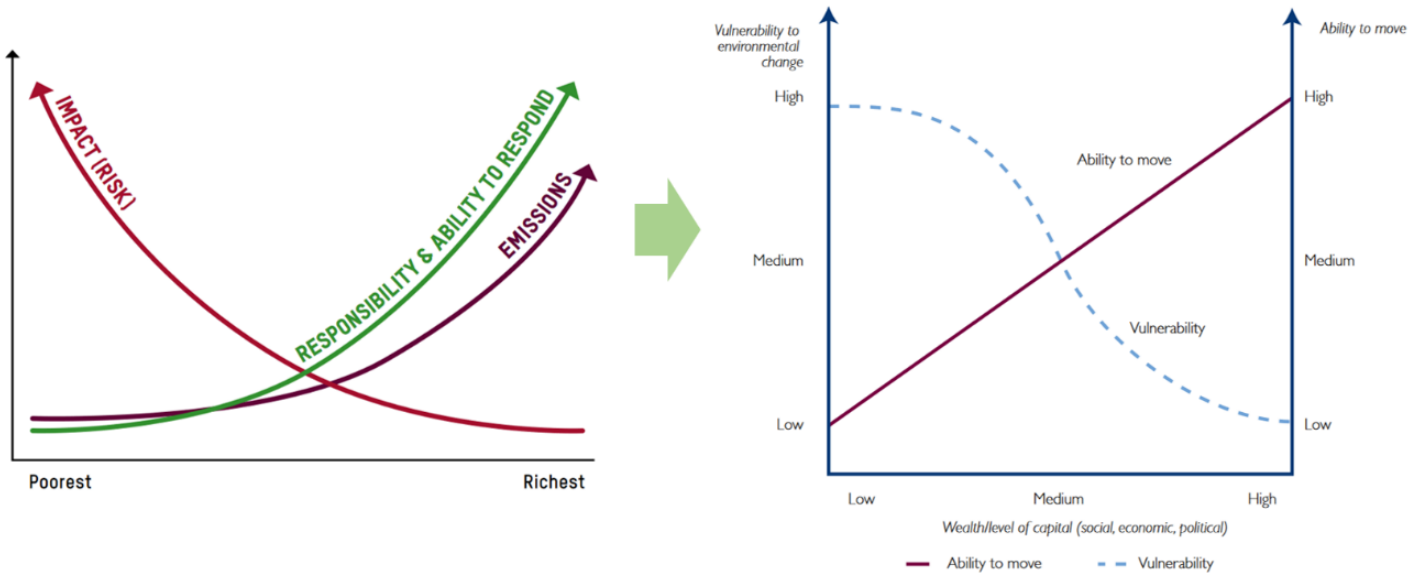
> El deterioro de los territorios que han habitado una buena parte de los pueblos del Sur durante miles de años, y de sus condiciones básicas de existencia, ha expulsado a las personas, obligando a unos movimientos migratorios sin precedentes. Muchos pueblos han sido desposeídos de su derecho a permanecer y se ven obligados a seguir la misma

> ruta que siguen las materias primas y los frutos de los monocultivos que se extraen de los lugares donde antes vivían: el viaje del Sur al Norte[33].(Herrero, n/d, p. 5)

In the same way that there is inequality in terms of carbon emissions and commodity dependence, we also find that migration processes also reflect inequalities when referring to those who are able to migrate voluntarily, those who have no choice but to stay in their places of origin in contexts of violence, danger, and climate crisis, and others who are forced to move because life in their places of origin becomes unsustainable. In this logic, we observe that there is a direct relationship between class, racial, and gender inequalities and the people moving; as shown in Figure 11, racial, class, and gender inequalities make certain groups more vulnerable and less resilient to climate change than other social groups. For marginalized groups, lower adaptive capacity may be a factor leading to forced displacement.

[33] The deterioration of the territories that have been inhabited by a good part of the peoples of the South for thousands of years and of their primary conditions of existence has expelled people, forcing unprecedented migratory movements. Many people have been dispossessed of their right to remain and are forced to follow the same route as the raw materials and the fruits of the monocultures that are extracted from the places where they used to live: the journey from the South to the North.

Figure 9: Dimensions of climate inequality related to vulnerability to environmental change and ability to move.



Source: Elaborated by the author based on (Khalfan et al., 2023) and the Human Impact Report: Climate Change - The Anatomy of a (Silent Crisis, 2009)

Following the logic above, scholars such as (Mbembe, 2019) and Anzaldua (2007) emphasize that in these contexts of great inequality, the mobility of specific populations is seen as a danger that must be combated by reinforcing borders no longer as mere demarcation lines but as a process by which specific spaces are transformed into uncrossable places for thousands of people who are subjected to a process of racialization and their lives are judged as undesirable.

> (...) we are witnessing a bifurcation between life on the one hand and bodies on the other hand. Nowadays, not everybody is thought of as containing life. Discounted bodies are believed to contain no life as such. They are, strictly speaking, bodies at the limits of life, trapped in uninhabitable worlds and inhospitable places. The kind of life they bear or contain

> is not insured or uninsurable, folded as in extreme and thin envelopes. (...) Such bodies on the precipice are the most exposed to droughts, storms and famines, toxic waste, and various experiences of effacement. (Mbembe, 2019:10)

Understanding the migratory phenomenon from an intersectional perspective means observing that the category of "migrant" has many dimensions; migrants have a gender, belong to an ethnic group, to a social class, and when migrating to a place that is not their own, they generally face a racialized and sexually stratified labor market. In the same way, analyzing the complexity of the migratory phenomenon implies accepting that there are no closed concepts and categories but rather concepts in continuous transformation, considering that each individual is a product of a society in which they were socialized so that we find ourselves in front of people who have a social and cultural baggage that in many occasions can confront the uses and customs of the autochthonous populations, an element widely worked by the studies of multiculturalism and interculturality.

Following this logic, ecofeminism has proved to be a beneficial body of theory for criticizing a dichotomous woman-nature vision, proposing, among its various approaches, the articulation between body and Nature, emphasizing interdependence, complementarity and the role of care in the context of the current environmental crisis. On the other hand, ecofeminists have put on the public agenda the importance of women's reproductive work, which is invisible and unrecognized. This work of care, necessary for the sustainability of life, has traditionally been undervalued, as has sustaining Nature and maintaining its cycles, today threatened by the predatory dynamics of capital (Svampa, 2021). Consequently, ecofeminism stresses that, just as there is an ecological debt and an ecological footprint, there is

also a debt of care and a footprint of care associated with the sexual division of labor[34].

In recent decades and globally, as a result of the confluence of a set of factors, women's access to paid employment within a patriarchal have profoundly altered the previous model for the distribution of domestic and care tasks, which forms the basis of economic structures, the labor market and the maintenance of human life. Despite this being a significant step for women to be political subjects and economically independent, the passage of women into the public world of employment has not been accompanied by a sharing of care work with men, and society and the state do not take responsibility for the tasks of social reproduction either. In this logic, as domestic work cannot be left undone, women take on double or triple shifts and transfer part of these jobs to other women in the family or, when class relations allow it, hire women who perform these jobs in often precarious conditions.

Regarding migration, the role played by migrant women in care work is particularly notorious. A global care chain is created in which migrant women (mostly from impoverished countries) who take on childcare, care of the elderly and disabled, or cleaning, feeding, and companionship as precarious employment (mostly in wealthy countries), leave these same functions uncovered in their places of origin, where other women, grandmothers, sisters or daughters take them on as best they can.

In this regard, according to (Mora, 2008), the growing demand for precarious jobs in the northern hemisphere in economic globalization has been met mainly by immigrants from poorer nations, a large percentage of whom are women. Migration status and the marginal position of immigrants in social

[34] Svampa (2021) quoting Yayo Herrera (2011) in "Propuestas ecofeministas para un sistema cargado de deudas"

hierarchies make them particularly vulnerable and lucrative for employers. This is also an emerging pattern in intra-regional Latin America's migration: some countries are "specializing" in sending, while others are "specializing" in receiving female migrants, mainly for domestic and service work.

When looking in detail at migration in the context of environmental disasters, women's experiences are also notably different from those of men. According to (Erman et al., 2021, p. 20), lower socioeconomic status and limited access to information and agency seem to drive women's disaster vulnerability and contribute to their higher disaster-related mortality rates, while women's mortality is weaker in countries where women have a better socioeconomic status. Thus, access to warning information and safe shelters matters. In addition, in many cases, adding to the limited knowledge of women about the location of shelters, the final decision to evacuate falls on male family members; this situation puts women at greater risk in the event of a climate disaster when a man does not accompany them.[35].

Concerning the labor situation, we can observe that:

> (…) Several other studies, although based on anecdotal evidence and indirect inferences, state that women had greater employment losses after Hurricane Mitch, which hit several Central American countries; they were also slower to re-enter the waged labor market. These difficulties could result from an increase in domestic duties after a disaster, which tends to affect women more than men. (…) Women tend to take on more responsibility for managing post-disaster needs than men—for example, cleaning up after a

[35] Erman (2021), quoting Neumayer and Plümper (2007) case study of the 1991 Bangladesh cyclone

> flood and taking care of children who cannot go to school (Erman et al., 2021, p. 26)

On the other hand, another aspect where women are particularly vulnerable, along with children, is the risk of physical and sexual violence and human trafficking, risks that may increase in situations following a climate disaster and possible migration.

Delaney and Shrader (2000) observed reports of an increased level of sexual violence and coerced prostitution after Hurricane Mitch, particularly among adolescent girls in temporary shelters in rural areas who were often forced to provide sexual favors in return for food and benefits.

4.2 A conceptual approach: Drivers of migration

When we refer to human movement, we can find that historically, people tend to move at different scales and different distances, from moving to nearby communities to visit friends or obtain food or other goods to distances that may even involve crossing seas in search of inhabiting other territories, following Lee (1966, p. 50): "No matter how short or how long, how easy or how difficult, every act of migration involves an origin, a destination, and an intervening set of obstacles. Among the set of intervening obstacles, we include the distance of the move as always present."

For this work, the mobility we are interested in is of the second type, which is defined as migration and involves the change of a habitual residence from one location to another. It is essential to mention that even though the phenomenon of migration can be understood as an individual behavior, we must understand this behavior also as part of complex social dynamics since individuals very often migrate with others. As we can see in the present

days, we face ourselves to a behavior that can be recognized as mass migrations that are intertwined with environmental challenges and international security.

People migrate for many possible reasons, which are mainly linked to the possibility of accessing new resources, finding opportunities, or escaping from danger; in the case of the migration closely linked to the climate crisis, we can find that indeed, the act of migrating is a survival strategy, since life in migrants' hometowns is threatened by constant climate disasters. In any of the scenarios where human mobility occurs, we will find that migrants face material and symbolic costs, as it takes time, money, and energy to move and re-settle, as well as the potential dangers they may face in a new location.

As will be seen in the following sections, we can observe that migration studies have produced a series of definitions and differences between the different types of human mobility, such as forced migration, voluntary migration, refugees, displacement, internal migration, and transnational migration among others, for these categorizations it is evident the importance of contextualizing in time and space the migratory eras as well as the factors that lead to this migration.

According to Bakewell (2021), it is essential to note that in the last quarter of the 19th century, until the outbreak of World War I, migration began to gain increasing attention in the political sphere. This period witnessed massive movements of people worldwide, mainly from Europe and Asia to the Americas, through the Asia-Pacific and Central Asian regions. Undoubtedly, the most common factors in this wave of migration were to seek fortune, to flee from violence against minority groups, or conditions of slavery in a regime of servitude. In this scenario, all were considered

migrants, differentiated by race, national origin, and social class rather than by the reason for their displacement.

Later, in the twentieth century, we find another historical moment for the analysis of migration, which meant one of the main concerns for the emerging national community it is the case of the situation of chaos generated in Europe by the aftermath of World War I and the Russian Revolution, which left hundreds of thousands of people homeless, thus finding themselves in a situation that led to a new wave of migration.

When we refer to migration related to the climate crisis, scholars such as McLeman and Gemenne (2018) find that we can indicate three essential things that can explain the interest and importance of the focus on environmental migration. Over the last decades, humankind has started to pay more attention to the progressive climate change and its impacts at a global level, making evident the extent and scale of human degradation of the environment and the role of human activity in this scenario.[36].

Secondly, faced with the challenges of climate change and the evidence of its impacts on the environment and humanity, migration studies began to focus on the relationship between climate disasters and human displacement due to climate change. As one of the many examples, we find the case of the great famines and the constant natural disasters during 1970 and 1980 in the African continent and Asia that brought with them a series of human displacements at the internal level that later would be observed to be transferred to an international level. It was from these scenarios that the variables of poverty and vulnerability to climate change began to attract the attention of scholars in the field of migration and climate change, thus showing that the poorest people are those who experience more loss or damage and, therefore, are in need to move, in the same way, the condition

[36] Exposed in detail in the previous chapter.

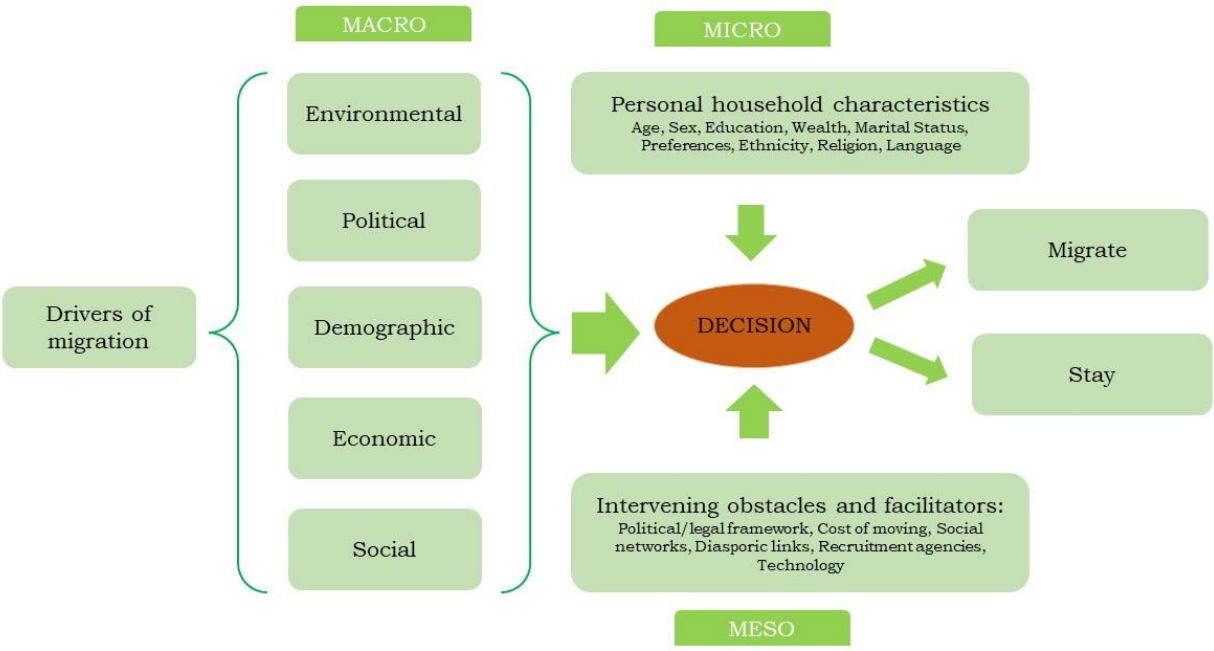
of defenselessness, insecurity and chronic exposure to natural disasters are features that are present in people who are most at risk to progressive climate change.

In this regard, the IPCC, since its first report in 1990, has mentioned that changes in temperature and carbon emissions can lead to human displacements due to the loss of houses, hazard events such as floods and landslides, access to food, water, and energy, lack of employment, among others. At the same time, the IPCC reports have mentioned that developing countries are at greater risk of suffering human displacement due to the climate crisis and internal migration from rural to urban areas.

The third important aspect related to the studies of migration and climate change can be found in the 1990s, when "after the end of Cold War security agencies and security scholars began taking an interest in broader influences on internal security, including environmental factors and warned of environmental conflicts and environmental refugees to come in future decades" (McLeman & Gemenne, 2018, p. 4).

As we can see, migration is a multi-causal and complex phenomenon, and it is impossible to single out climate change as a single factor in understanding migratory movements. Therefore, many academics, such as Warren (2016) and Mcleman (2018), among others, point out the importance of highlighting the interaction of environmental factors and climatic variability with social, cultural, demographic, and economic processes that operate from the local to global scales to influence migration decisions. In this logic, migration due to climate change can be understood as a complex interplay of processes that creates specific contexts and outcomes worldwide.

Figure 10:conceptual framework for the 'drivers' of migration



Source: Elaborated by the authors based on the Foresight Report (2011).

Following Figure 9 based on the Foresight report (2011) and Black et al. (2011), we can briefly describe what each one of these drivers means:

Economic drivers: We can mention an economic model of migration that includes imbalances in labor markets and wage differentials at the macro level and another model that suggests an individual cost-benefit analysis of expected wages at the micro level. These drivers have direct effects on both internal and international migration. A third complementary model suggests that households migrate to minimize risk and overcome market failures in non-labor markets (for example, capital or crop insurance markets). "Whether at the individual or the household level, and whether concerning expected income or income volatility, economic drivers influence migration in diverse and non-deterministic ways" (Foresight, 2011, p. 44). In this regard, Black et al. (2011) mention:

> However, income and wage differentials alone cannot explain the specifics of migration. More broadly, migration is not a general process of people moving from poorer to more affluent places. It is a particular process as people move from one relatively poor area to another specific, relatively rich area. The scale and direction of movement are linked to the personal circumstances of migrants, such as class, ethnicity, religion, language, education levels, and connections with people in planned destinations, mitigated by the intervening effects of migration policies. (pag.4)

Social drivers: This driver includes access to family, social, or other networks that facilitate migration, while limited family and other ties also explain a lack of migration by others. The tendency to migrate is established in families and communities since, in some specific cultures, migration is often celebrated through symbols and status, hence the 'culture of migration' in many populations. Migration is, for some, a rite of passage: movement is a crucial stage in an individual's progress to becoming an adult or gaining acceptance. Access to education generally increases the ability and aspiration to migrate, and significant numbers of people migrate specifically to pursue education. However, there are also cases in which the pursuit of education is negatively correlated with migratory aspirations. Migratory aspirations may shift as knowledge and information circulate between the 'sending' and 'receiving' ends of 'transnational communities' (Foresight 2011)

Political drivers: Political drivers have the potential to influence migration through multiple pathways. The breakdown of government structures may produce more human displacement when there are violent conflict scenarios; in these cases, the migration process is often to the next safe place, which can be within a state or across an international border.

However, there is no simple and causal relationship between conflict and migration; in some circumstances, the people who are more vulnerable and exposed to conflict may lack the resources to move; in these cases, conflict and political repression can prevent people from leaving and remain exposed to danger in their home towns and villages. A range of political factors, from discrimination to marginalization, can also interact with other drivers to create conditions where political tensions, poverty, environmental hazards, and a relatively young population contribute to migration and displacement (Black et al., 2011, p. 6).

Demographic drivers: For a long time, the idea that "population pressure" was a significant determinant of human movement was a constant in migration theories. This line of thought was based on a Malthusian perspective that indicates that as a population grows, there is pressure on natural and agricultural resources, creating the necessity for migration. In outlining the influence of this driver, however, it is important to avoid demographic determinism. Rather than a direct driver of migration, demographic pressures are more likely to influence migration in interaction with other drivers, particularly economic ones. In this line, we can indicate that "it is not the presence of large numbers of people in a region per se that will trigger outmigration, but rather the presence of large numbers without, for example, access to employment or livelihood opportunities" (Black et al., 2011).

Furthermore, the scale and directionality of movement are not always straightforward, with most migration related to demographic pressures occurring internally and many migrants moving from relatively low population densities to relatively higher population densities. Population age structures are also important; young populations tend to be a source of migrants, whereas aging populations in many European (and even Asian) countries may create a demand for migration.

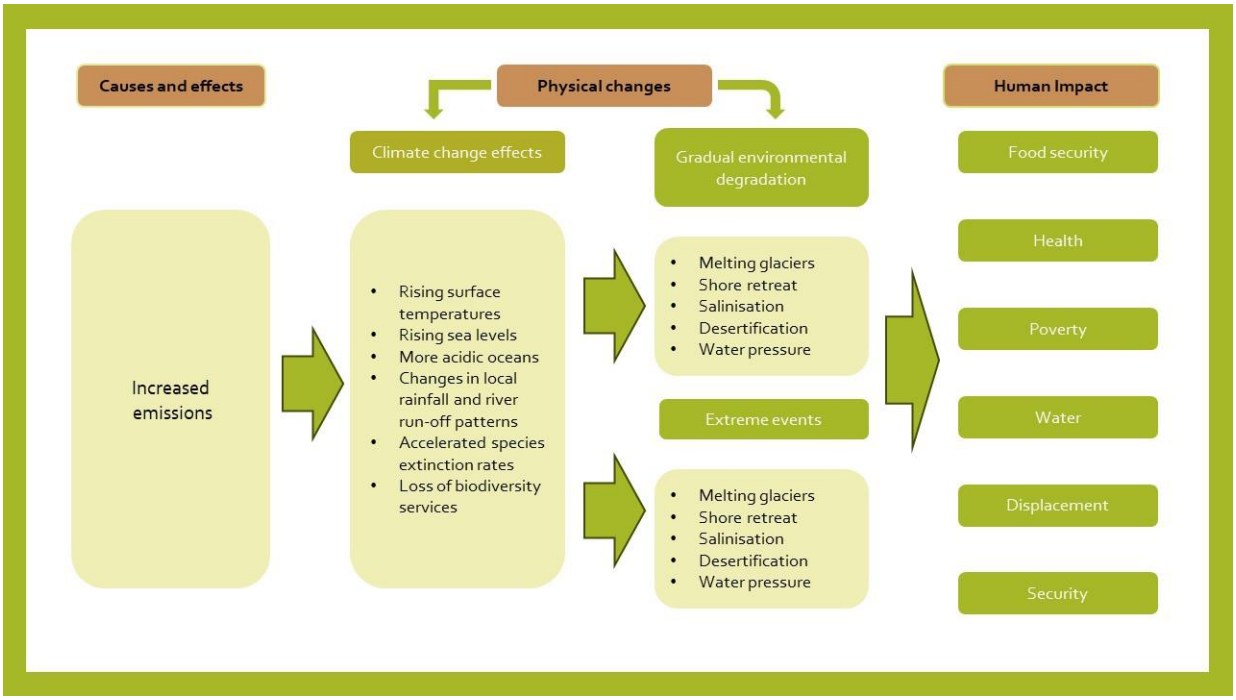
Environmental drivers: The environment affects well-being through the availability and stability of, and access to, ecosystem services, which are "those elements of the environment and ecosystems that are utilized to produce human well-being through the functions of provisioning (e.g., providing food and water), regulating (e.g., erosion protection) and cultural services (e.g., having emotional or spiritual value)" (Black et al., 2011, p. 8), and through the occurrence of hazardous events. The availability of provisioning ecosystem services is particularly acute for economies dependent on agriculture, fisheries, and forestry, which are predominant in rural parts of the developing world; in this logic, changes in ecosystem services directly affect well-being and the demand for migration. In addition, when we take into account rapid-onset and slow-onset events, it is possible to acknowledge that environmental dynamics can lead to migration, the dynamics of the response regarding who migrates and where and when to migrate is usually determined by the socioeconomic contexts and the patterns of vulnerability generated by this context.

4.3 Environmental change and its effect on migration drivers

As indicated in the previous section, climate change is a global problem that affects migration decisions directly and indirectly since we must also consider the economic, social, political, and demographic drivers of migration decisions. While the impact of disasters such as degradation of land, coastal, and marine ecosystems may appear to be more immediate, their impact is similarly mediated by socioeconomic factors shaping individuals' and communities' vulnerability to being adversely affected by environmental shocks (Kraler et al., 2020) as well as their resilience in the face of these. Disasters may also affect other drivers of migration, such as employment prospects or market accessibility and, therefore, the ability to stay in an area.

> Global climate change driven by increases in the concentration of greenhouse gases in the atmosphere primarily manifests itself in changes to weather patterns at a place and an increase in sea level due to the thermal expansion of seawater and inputs from melting land ice (Black et al., 2011, p. 8)

Figure 11: Links from increased emissions to human impact



Source: Elaborated by the author based on the Human Impact Report: Climate Change - The Anatomy of a Silent Crisis (2009)

According to the Foresight report (2011) and (Black et al., 2011), we can indicate five dimensions of climate that potentially affect migration drivers; it is essential to highlight that these effects will vary between places and socioeconomic contexts.

First, increases in temperature lead to high-temperature extremes, which havedirectly impacts land productivity and food security in warmer areas. Indeed, the increase in temperature has a different effect on the urban and rural areas; in these last ones, the losses can be more evident in the impact on agriculture and forests as well as increasing the possibility of wildfires. On the other hand, increases in temperature can lead to an increased risk of glacial outbursts in glaciated mountain areas and enhanced melting of glaciers due to higher temperatures. The melting of mountain glaciers would increase the risk of flooding caused by glacial lake outburst floods, which would endanger settlements in certain mountain regions by increasing their exposure to hazards. It would also increase the risk of rock avalanches as glacier melt destabilizes slopes. In the long term, river flows would decrease as glaciers retreat, radically altering mountain ecosystems and affecting water, agricultural productivity, and energy security.

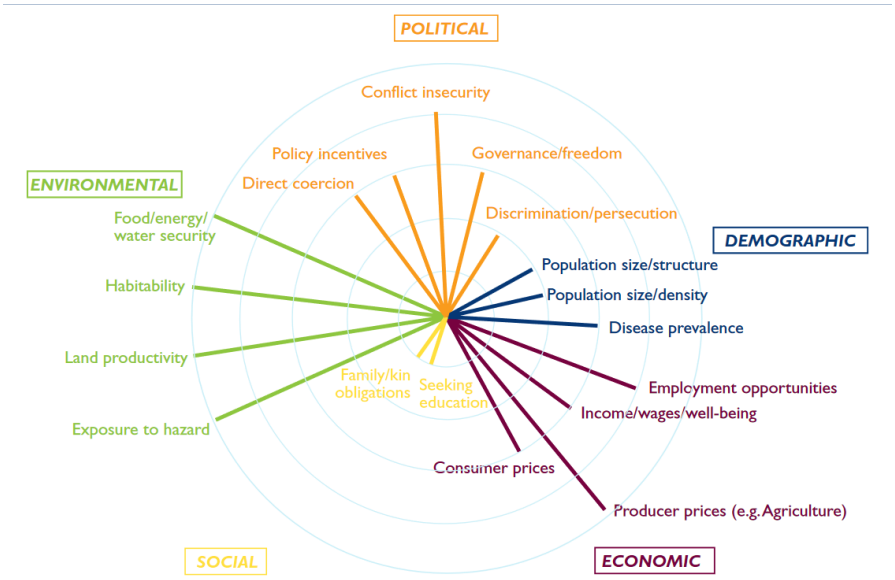
Second, a change in the frequency or intensity of tropical storms and cyclones may increase exposure to hazards and damage in coastal settlements. In contrast, the intensity of cyclones, hurricanes, and typhoons in tropical areas may increase, generating more displacement.

Third, the rise in sea level is leading to an increased risk of flooding in coastal areas, increased erosion of coastal lands and ecosystems, and increased salinization of agricultural lands. Salinization of agricultural land, aggravated by groundwater extraction, reduces the productivity of agricultural land and decreases freshwater security, problems that are likely to be progressively exacerbated by the rise in sea level. According to this logic, rising sea levels could eventually lead to the loss of agricultural land through permanent inundation and changes in marine and freshwater ecosystems that would impact fish stocks and livelihoods dependent on fisheries.

Fourth, Changes in rainfall patterns would increase exposure to flood and fire hazards and affect the safety and quality of water for domestic, municipal, industrial, and agricultural uses. Likewise, they would also lead to changes in land productivity in all parts of the world. Soil erosion and flooding associated with heavy rainfall could affect agricultural income and welfare by damaging crops and increasing the frequency of failures. Finally, the loss of agricultural productivity due to reduced rainfall could reduce rural wages and impact crop prices.

Fifth, crop productivity would result from the combination of changes in atmospheric chemistry with changes in precipitation and temperature to affect crop productivity. These changes would also affect ocean chemistry and, thus, the productivity of coastal and marine ecosystems.

Figure 12: Influence of environmental change on the driver



Length of line represents influence of environmental change on the driver; the longer the line, the greater the influence

Source: Human Impact Report: Climate Change - The Anatomy of a Silent Crisis (2009)

In addition to the five dimensions indicated above, it is necessary to point out two dimensions that are not strictly related to climate environmental change, such as land degradation, which, through a combination of agricultural practices, extreme weather events, and climate change, leads to the deterioration of soil quality and land productivity, impacting crops, food security, and agriculture. In addition, the decrease in vegetation cover could lead to an increased risk of flooding in catchment areas, thus exposing populations to hazards that trigger displacement.

On the other hand, we find that the degradation of coastal and marine ecosystems has led to the loss of aquatic species and habitats and the elimination of physical features and ecosystems that protect against coastal storms. These factors alter the exposure of coastal communities to hazards and impact the provision of ecosystem services and the productivity of fisheries that nourish much of the world's population.

4.4 The debate regarding voluntary and forced migration: between environmental migrants and climate refugees

The experience of leaving home and embarking on a migration process is profoundly marked by the degree to which migrants act as free and autonomous individuals, with the capacity to decide where and when they leave and how long they decide to stay in the new place of arrival. There is a vast literature on migration that shows that the forms and the reasons for migrating are many and varied and has tried to define typologies or archetypes of migration based on the level of freedom there is at the moment of embarking on a migratory path, as we will observe in this section, "the attempts to draw boundaries between forced and voluntary migration produce somewhat arbitrary and inconsistent outcomes" (Bakewell, 2021, p. 2).

On the one hand, we can find cases of wealthy people with a highly skilled educational background who migrate in a more "privileged" way, which is, in turn, connected to networks that can facilitate their access to the labor market or pursue additional academic specialization. In these scenarios, a voluntary migration occurs, in which individuals have decided to undertake a migratory journey to a freely chosen destination. On the other hand, we find the case of people who - living in situations of violence or imminent danger in their hometowns - are forced to leave their homes in search of asylum elsewhere. In these scenarios, these people are subjected to a forced migration, where the freedom to choose where to go and how long to leave does not exist. However, instead, they need clarification in search of temporary or permanent settlement.

Even if, in both cases, the distinction between one and the other seems clear, a deep analysis can show us that migrants' experiences are not that easy to match with a voluntary or forced migration archetype since the boundaries between both are blurred. Nevertheless, these definitions play a fundamental role in the migration discourse, shaping policies and lives.

When we ask ourselves why a person would like to migrate, This is a question that the social sciences have tried to answer from different areas, whether geography, sociology, anthropology, or economics. Each of these schools of thought has proposed different answers that, when reviewed as a whole, certainly help us understand the migration phenomenon holistically. They allow us to observe a coherent picture of this phenomenon considering different factors, mechanisms, and dynamics that are at play concerning migration.

In this line and following Piguet (2018), among the most known theories regarding migration, we can indicate the example of a) the neoclassical school, b) the demographic approach, c) the human capital approach, d) the

new economics of labor migration e) theories rooted in social psychology and f) the network approach.

In the case of the neoclassical school, which points to economic factors as the most critical factor in migration decisions, the expectation of higher wages and work opportunities indeed leads people to migrate. In this regard, we can indicate the example of Ravenstein's "Laws on migration," where he remarks on the dominance of the economic motive at the moment to migrate.

> Harmful or oppressive laws, heavy taxation, an unattractive climate, uncongenial social surroundings, and even compulsion (enslaved person, trade, transportation) all have produced and are still producing currents of migration, but none of these currents can compare in volume with that which arises from the desire inherent in most men to "better" themselves in material aspects. (Lee 1966:47)

As part of the neoclassical theories of migration, we can also mention Everett Lee's famous push-pull model, which states that economic factors are not the predominant ones when deciding to embark on a migratory process, but rather demographic, economic and political factors in the areas of departure and destination, together with opportunities and obstacles that intervene, as factors that interact to produce migration.

On the other hand, the demographic approach prioritizes the decision-making process for initiating migration as strongly influenced by a person's socio-demographic characteristics, such as age, family, and status. A precise analysis under this approach emphasizes that younger people who do not have children or are recently divorced may have more significant incentives to migrate and risk leaving their place of origin than other people in different situations. At the same time, it is also clear that the ability to move is broadly correlated with the level of capital (wealth), while "poorer

people are generally less able to migrate even if they wish to do so" (Black et al., 2013, p. 36). According to Bakewell (2021):

> There are very different attitudes towards those most voluntary migrants – the wealthy, well-educated elites who freely move around the world to take up 'high-skilled' jobs or establish businesses (Favell, 2008). While poor, unskilled migrants face increasing barriers to entry and widespread hostility, the 'best and brightest' are the subject of a global competition for their talents (Favell, 2008, p. 11)

In this logic, it is also important to highlight that people experiencing poverty are often left out of international institutional arrangements concerning migration. As a result, vulnerable people find themselves migrating with a lack of protection and rights at local or national levels, where women and children find themselves in the most vulnerable positions in front of contexts of violence and lack of opportunities.

The human capital approach highlights the importance of education and skills of the person at the moment of initiating a migratory path; many scholars use Bourdieu's social capital framework, stressing that "migration itself can bring a significant contribution to the accumulation of human capital by allowing the migrant to acquire valuable degrees and experience" (Piguet, 2018, p. 19).

Theories rooted in social psychology distinguish three types of motives for migration (preservation of the self and the quest for security, personal development, and materialism); these motivations interact with social and cultural norms and individual characteristics such as gender and personality.

> The propensity to take risks and the locus of control (the extent to which an individual believes himself or herself to be in control of events that affect his or her life) are often seen as central psychological dimensions in this regard; they interact with the level of satisfaction or dissatisfaction and shape migration intentions (Piguet, 2018, p. 19)

According to the social network perspective, migrant networks are significant assets that encourage migration. On the one hand, we can point out that the existence of relatives and friends in the place of destination increases the tendency to migrate; in the same way, a solid network facilitates the flow of information, which can facilitate decision-making and facilitate the process of adaptation to the new place. On the other hand, conversely, “if someone has relatively high status in their local community, this may be difficult to recreate in a new location where they are less well-known to others, so this can also affect the decision to migrate" (Templon et al., 2021, p. 5). Another vital issue is the “impact of new information and communication technologies on networks and how they can significantly facilitate migration and reduce distances, as well as further transform the aspirations of potential migrants through the circulation of norms and knowledge” (Dekker & Engbersen, 2014) [37].

As it was possible to observe, social sciences from different fields have tried to explain what are the most important reasons for an individual to consider migrating; in most of these approaches, the type of migration that mainly was studied was the one we could consider "volunteer," nevertheless if we ask ourselves what counts as voluntary migration? Moreover, how can we ensure that individuals who migrate do so autonomously and not as part of an economic or labor system that pushes them to move in the directions

[37] Piguet 2018 quoting (Dekker and Engbersen (2014) “How social media transform migrant networks and facilitate migration”)

that suit capital? Undoubtedly, these questions show us how complex it is to delimit or define a migrant experience as voluntary or forced. In this regard, Ottonelli & Torresi (2013) observe that the notion of voluntariness is under-defined, and the range of its meanings tends to work at two extremes of a spectrum, both of which raise significant difficulties:

> On the one hand, some political theorists are happy to define as voluntary any choice to migrate that is not obviously coerced and as long as migrants choose from a condition of "sufficiency" — situations where their basic rights, variously understood, are protected. (…) Conversely, other political theorists see migration almost always as non-voluntary because it is undertaken under non-ideal conditions determined by global injustices. (pag. 786)

For its part, the International Organization for Migration (IOM) indicates that migration is voluntary when people migrating are not coerced and they knowingly and willingly decide to leave their country and can enter another with the authorities' approval. These migrants generally meet the entry requirements established by the country of destination for admission.[38]. Nevertheless, it also recognizes that the dichotomy of voluntary/forced migration can be problematic and simplistic because "it assumes that one category of migrants enjoys total freedom and the other category has no choice or agency at all" (*World Migration Report*, 2018)

Based on the current debates around this point, the authors Ottonelli and Torresi (2013) made an outstanding contribution by proposing a series of criteria that can be useful when assessing whether a person's migration is voluntary. The first essential condition that a voluntary migration must meet is the *absence of physical or psychological coercion*, which means that

[38] In "The Essentials of Migration Management (EMM2.0)" https://emm.iom.int/explore-emm

migration cannot be the product of trafficking (at the internal or international level) or smuggling of people across borders. The second condition is sufficiency, which means that a migration project can be considered voluntarily only if the available alternatives at home are good enough for the migrant.

> People whose only alternatives to migration involve starvation, destitution, bodily injury, or incapacitating poverty cannot be said to migrate voluntarily. On the other hand, if the choice to migrate is made from a position in which the living conditions and opportunities are good enough, there might still be substantial advantages in the choice to migrate, making it very attractive, but such a choice is unnecessary. The fact that the chosen option is better than the alternatives cannot be counted as evidence that the choice is non-voluntary (Ottonelli & Torresi, 2013, p. 798).

The third condition is *Exit options*; while the previous condition was related to the hometown's migrant context, in this case, it refers to the available options in the place of arrival; this means that people who migrate must have options if they want to change the conditions of their displacement. This condition means that workers who find themselves unable to return home because they cannot afford it or migrants who are in conditions of labor exploitation with no salary would not be considered voluntary migrants.

The last condition is *information*; this condition refers to the adequate information people must have before the journey on which they embark, "they should not be moving at the behest of traffickers who may promise them jobs and then sell them into slavery; neither should they be beguiled by the distorted stories of successful migration that create unrealistic expectations" (Bakewell, 2021, p. 7)

As stated above, despite the critical contributions to the attempt to clearly define what voluntary migration means, we will now develop some essential ideas related to forced migration so that we can see that although the line that divides one from the other is increasingly blurred, when it comes to policies and practices, a clear distinction seems to be required because the category in which a migrant finds himself/herself has significant implications both for the life of the migrant and for his/her family. In this regard and Following (Aidani, 2010), we see that categories have come to be used in a general sociological manner to order individuals, communities, and actions based on 'attributes' as well as patterned similarities of relations among actors. Bureaucratic institutions create categories of social groups based on specific characteristics and delineate boundaries of belonging to particular categories.

In a context of danger, violence, and emergency, people are forced to leave their homes and move toward the first safe place they find; these scenarios are what social sciences would define as refugees, an important category when referring to forced migration.

> Under certain conditions, the decision to move may be made after due consideration of all relevant information, rationally calculated to maximize net advantage, including both material and symbolic rewards. At the other extreme, the decision to move may be made in a state of panic, facing a crisis that leaves few alternatives but escape from intolerable threats (Richmond, 1988, p. 17)[39]

As mentioned previously, to understand the dichotomy of voluntary and forced migration, we must refer back to one of the great migratory eras of the 19th century, when there were massive movements of people around the

[39] Piguet (2018), quoting Richmond's "Sociological Theories of International Migration: The Case of Refugees."

world moving from the Global North to the Global South in search of fortune (in particular from Europe towards the Americas across the Asia-Pacific and Central Asia regions) or fleeing situations of violence against minority groups or people escaping situations of exploitation. "All were seen as migrants, differentiated by race, nationality, and class rather than by the level of coercion surrounding their mobility"(Bakewell, 2021, p. 5).

Later, as a product of the Russian Revolution and the First World War in the first half of the 20th century, thousands of people found themselves in contexts of intense political instability, thus producing the search for a home in new territories. In this scenario, the mobility of these people became a concern for the international community, and the first refugee commission was created in 1921. Thanks to this commission, the Nansen passport was created, which allowed refugees to move to other countries where they could meet their relatives or seek employment for their livelihood. In other words, refugees were helped to become migrants, and exile and destitution could be solved through continuous movement.

The response to the refugee situation changed after World War II, producing millions of refugees again. These refugees were offered three solutions, all focused on the settlement: voluntary repatriation, settlement in the first country of asylum, or resettlement in a third country. Refugees were now marked with a particular category:

> Article 1 of the 1951 Convention defines a refugee as someone who "owing to well-founded fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group or political opinion, is outside the country of [their] nationality and is unable or, owing to such fear, is unwilling to avail [themself] of the protection of that country; or who, not having a nationality and being outside

> the country of [their] former habitual residence, is unable or, owing to such fear, is unwilling to return to it."[40]

Another historical milestone fundamental to understanding forced migration and the refugee category is the Cold War (Bakewell, 2021),(Castles, 2003), which produced millions of refugees as a product of the conflicts between East and West in the West, where refugees from the East were welcomed as allies against the Soviet threat.

> To complicate the picture even more, the upsurge in forced migration coincided with the end of the long boom (marked by the Oil Crisis of 1973) and the beginning of processes of economic restructuring, deindustrialization, privatization, and deregulation resulting from globalization. In this situation, immigrants, refugees, and asylum seekers appeared as the physical embodiment of the external threat to jobs, living standards, and welfare. The result was a politicization of migration and asylum, marked by heated public debates and competition between the political parties to be most challenging on 'illegals' (Castles, 2003, p. 8)

An interesting idea to add to the politicization of migration is the role of nation-states as a forced migration push factor, in this line, war contexts and the creation of new states brought with it violence, revolution, or annexation, but also a process of exclusion which aims at creating a national identity, the creation of new states could become a refugee-generating process (Piguet, 2018). For the nation to come into being, the population must be transformed into individuals who visibly share a common nationality: the process entails an actualization of the myth that they are quite literally "born together" (ibid p.23).

[40] Bakewell (2021) quoting (UN, 1951)

For this thesis, it is essential to mention that other displaced persons outside the Cold War hotspots, such as those forced to move for other reasons, such as earthquakes, floods, droughts, or other natural disasters, did not (and do not) enjoy similar protection under international law. Similarly, people forced to move by conflict or repression but who did not cross international borders - internally displaced persons (IDPs) – were (are) outside the scope of the refugee regime. Critiquing these considerations is fundamental for migration studies and politics since, in the eyes of international law, the representation of the refugee category over the migrant category brings a series of implications that promote the hierarchization between one and the other (Bakewell, 2021).

In this regard, (Crawley & Skleparis, 2018, p.4):

> Migration regimes, like all other ordering systems, create hierarchical systems of rights. Before 1951, 'refugees' were identified as specific nationalities no longer physically present in or politically protected by their state of origin. Once the Refugee Convention had been signed, the identity of the 'refugee' became clearly separated, in legal terms at least, from that of the 'migrant' in an effort to protect those fearing persecution.

The distinction between voluntary migrants and refugees undoubtedly makes visible a broad topic of debate among migration theories; this debate appears as an essential factor in the issue of agency, scholars such as (Aidani, 2010) (Crawley & Skleparis, 2018) (Bakewell, 2010) make influential critics to the fact that in many cases, refugees are considered as individuals deprived of agency, where the decision-making process is almost nonexistent, where it is possible to explore the social, political and economic factors that have forced a person to migrate. However, there is no need to

explain their arrival in the country of destination in terms of the exercise of agency.

This is a complex issue since, in many cases, attempting to recognize the agency of these people could compromise their refugee status. As previously mentioned, under international law, those with refugee status gain certain rights and support that allow them to settle as a legal and humanitarian response to their condition. At the same time, voluntary migrants may be seen as a threat to autochthonous citizens. They may face other barriers to entry into the destination country, only surmountable if they can demonstrate that they will bring a net "benefit" to their chosen destination.

Finally, while being recognized as a displaced person may elicit sympathy and acceptance in some contexts, in others, particularly in developing countries, it is associated with poverty. It may generate some discrimination depending on where these people come from, especially if they are from countries associated with violence and insecurity (Bakewell, 2021).

As social scientists, we know the importance of naming things. When we refer to the relationship between migration and climate change, the numerous literatures on the subject refer to different expressions such as climate refugees, environmentally induced migrants, and environmental migrants, among others.

It is important to deepen our understanding of the debates and challenges around naming the phenomenon of environment-related migration since each of these denominations has legal and political connotations that enrich our analysis of the problem.

Regarding the concept of climate refugees, we can start with the fact that this notion is constantly changing and is currently widely used to describe people who have been forced to leave their original habitat temporarily or

permanently due to environmental disruption. According to (Hinnawi, 1985, p. 4), There are three broad categories of environmental refugees. First, there is the case where people are temporarily displaced from their habitats due to environmental stress. The second category refers to those people who have been permanently displaced and re-settled in a new area. The third category consists of people or groups of people that embark on a temporary or permanent migration to a new area within their national boundaries or abroad. In all of these cases, the scope is the search for a better quality of life.

Despite the concept of climate refugees being vigorously debated in academia and the field of public policy, this concept is widely used by environmental activists and academics as well as the press, with the scope of emphasizing the seriousness of the situation of people seeking refuge from the impacts of climate change and to generate empathy with public opinion. They seek to give legitimacy and urgency of the problem (Elliott, 2012). For the supporters of this notion, other terminology would diminish the seriousness of these people's situation. In addition, the preference for the term climate refugee allows for differentiating the experience of this type of mobility from voluntary migration, which can be understood as a more comfortable migration. Depending on the concrete situation, for supporters of the notion of refugees, the term climate migrant can be understood in the same terms as an economic migrant in search of new opportunities and a better quality of life, thus de-emphasizing the climate crisis and its effect on migration.

The objection to this notion is based on the legal meaning of the term refugee as proposed by the convention relating to refugee status. Using the term "refugee" could cement and ossify an outdated term, as has occurred with the 1951 Refugee Convention, and unintentionally water down the already tenuous rights of existing refugees.

> Legally, using the term "refugee" implies rights and privileges under international law that do not exist - nearly all climate migrants will not qualify for traditional refugee status. Practically, since most displacement will remain internal, using the term "refugee" could unnecessarily confuse the matter. Finally, the multi-causal Nature of climate change disasters and individual migration decisions cautions against using the term "refugee" (Warren, 2016, p. 2112)

As we can see, the main criticism of the use of the notion of refugee in the cases of migration due to climate change comes from a legal ground, since at the moment, International Law has not included any rights and responsibilities for migrants driven by environmental factors, at least not in the same terms in which the legal status of refugee is expressed.

In addition to the complexity and debate surrounding the term climate refugee, we find that many academics have opted for the term "climate migrants" or "environmentally displaced persons," terms that refer to both internal displacement and displacement across borders driven by the climate crisis.

The additional debate surrounding this terminology concerns the assumed causality between the climate crisis and migration since, assuming that migration is due to the interaction of multiple causes, it would be difficult to identify and quantify the people who are exclusively or primarily found in the climate crisis their main reason for migrating. As Mayer (2023) points out:

> Environmental changes may constitute a push to migrate, but very rarely are they a direct cause of one individual's decision to seek a new life elsewhere. Therefore, while (political) refugees are often contrasted with "voluntary"

> economic migrants, environmental change exacerbates economic migration rather than creating a distinctive form. Most "climate migrants" are, indeed, economic migrants: environmental factors exacerbate (economic) migration rather than directly cause it (p.33)

In this sense, considering migration is a multi-causal phenomenon, the search for a definition of migration linked exclusively to climate change or environmental factors is too narrow. However, global environmental change will affect the natural world, the variability in the supply of ecosystem services, and exposure to hazards while affecting calculations of risk involved in relocation and people's decisions to stay in or move away from their settlements.

Conclusions

Analyzing the phenomenon of the climate crisis and its relation to migration from an ecofeminist perspective leads us to emphasize the importance of the categories of race, class, and gender in understanding the progressive climate change and its impacts on human and non-human life in a context of inequality between the Global North and South.

As evidenced in chapter one, ecofeminism strongly critiques the modern concept of Nature, through which the exploitation of Nature was reinforced and legitimized under a discourse of development and progress inherent to the capitalist system. In this line, the relationship between man and Nature and the subsequent dichotomy between man and woman show an evident relationship of man's domination over Nature and consequently over women. Regarding the ecofeminist theories, we can mention two approaches: classical essentialist (cultural) and constructivism. The first one reinforced the idea of a woman as a life-giver, and the second was more focused on the socially constructed association among women (sex), femineity (gender), and Nature as a historical and dynamic construction.

Based on a constructive perspective, we saw that Crenshaw (2021) first used the term intersectionality to describe the experiences of black women; feminists and ecofeminists have used this theoretical tool to emphasize the interrelationships not only between race, gender, and class but also with categories such as sexuality, ethnicity, religion, age, and many others. In this way, making visible and emphasizing the importance of these interconnections helps understand the structures of domination in modern societies and focus on the existence of differences among women, which in turn can be a source of political empowerment and social reconstruction. Strictly related to the intersectional approach in the ecofeminist theories, we find the importance of decolonial thinking, which proposes to highlight the

current colonial power structures, where the epistemologies, social and political systems keep on reproducing colonial forms of race, class, and gender domination.

To meet the objectives of this thesis, in chapter two, it was fundamental to situate the theoretical analysis within the framework of the geological era of the Anthropocene, highly popularized and expanded not only in the field of the so-called natural sciences but also in the social and human sciences based on the narrative that emphasizes the action of the human species as a universal agent. In this sense, although it is widely used, many academics propose to be cautious with the concept of the Anthropocene and propose a series of helpful critiques for an interpretation of the climate crisis that takes into account the structures of exploitation at the social and environmental level such as colonialism, capitalism and patriarchy in a global context marked by relations of inequality between the Global South and the Global North.

In this sense, authors such as Parenti and Moore (2016) propose the Capitalocene to organize Nature. This geological era challenges the Anthropocene by answering specific questions that the latter cannot. First, the Capitalocene insists that the history of capitalism is a relationship of capital, power, and Nature as an organic whole. Second, the history of capitalism cannot be reduced to the burning of fossils, and third, the capitalocene challenges the Eurocentric view of capitalism that emerged in England during the 18th century. Such reflections allow us to emphasize the importance of reading about the climate crisis in terms of inequalities, development models, and neocolonial logic.

In chapter three, the starting point was the empirical evidence that led us to understand the environmental scenario in terms of the climate crisis. As indicated in the previous chapters, modernity marks the beginning of a

development model based on the increase of production as part of a plan of civilizing progress and large-scale ecological destruction, where the production of energy from water, wind, and forests plays a fundamental role. Later, with the onset of the Industrial Revolution, the production model of modern development incorporated fossil fuels in transportation, industry, communication, and people's mobility, thus becoming a factor that brought with it significant consequences.

According to the sixth report presented by the IPCC (2023), global greenhouse gas emissions have continued to increase during 2010-2019 (fig. 3, fig. 4), with uneven historical and current contributions from unsustainable energy use, land use, and land-use change, lifestyles, and consumption and production patterns between regions, between and within countries, and between individuals. Human activities, primarily through greenhouse gas emissions, have unequivocally caused global warming, with global surface temperature reaching 1.1 °C above 1850-1900 by 2011-2020. Climate change has caused widespread adverse effects on food and water security, human health, economies, and society and related losses and damages to Nature and people. Historically, Vulnerable communities have contributed the least to climate change and are disproportionately affected.

The information provided in the latest IPCC report shows how climate change is resulting in extreme weather and climate phenomena in all regions of the planet and can be evidenced at all planet latitudes. In this scenario, there is no room for skepticism when the evidence of the changes observed in extreme phenomena such as heat waves, droughts with heavy rainfall, and tropical cyclones are clearly visible, and it is also evident that they have intensified in recent years, as we can observe daily in numerous press reports.

Warm extremes have become more frequent and intense in all coastal regions since the 1950s, while cold extremes have become less frequent and less severe, with a high degree of confidence that man-made climate change is the primary driver of these changes.

Currently, greenhouse gas concentrations have increased dramatically, mainly due to the combustion of fossil fuels and changes in land use. The amount of heat retained in the atmosphere is much more significant, and, as a result, the earth's global temperature is rising. This warming is triggering climate change, resulting in a global alteration of precipitation patterns (amount of rainfall, distribution, catastrophic phenomena), the dynamics of marine waters (level, temperature, currents), the interactions that occur in ecosystems, as well as a different distribution of land and seas due to the rise in sea level. In this sense, a significant reduction of emissions in the wealthiest countries, which are the ones that emit the most and have the most significant historical responsibility, means a major change in the modes of production, rates of profit, consumption, trade, and mobility in these countries.

Following the discussion of the previous chapters, chapter 4 highlights the importance of interaction between economic and social factors resulting from the climate crisis when deciding to move from the place of origin. In this sense, the decision of many individuals to migrate is understood from the close and complex relationship between their social, economic, and environmental contexts, as well as their resilience when facing climate changes in their places of origin.

An analysis of international migrant population flows concerning mobility between the Global North and South shows that Europe is currently the largest destination of international migrants, with 87 million migrants (30.9% of the international migrant population), closely followed by the 86

million international migrants living in Asia (30.5%). North America is the destination of 59 million international migrants (20.9 percent), followed by Africa with 25 million migrants (9 percent). As mentioned by (Herrero, n/d), the deterioration of the territories inhabited for thousands of years by many indigenous peoples of the South and of their primary conditions of existence has driven people away, forcing unprecedented migratory movements. Many people have been dispossessed of their right to remain and are forced to follow the same route as the raw materials and the fruits of the monocultures that are extracted from the places where they used to live: the journey from the South to the North.

We know that we currently live in contexts with significant inequalities, and this is no exception when it comes to the climate crisis and its role in migration. As we indicated previously, it is widely accepted that the rich nations bear most of the historical responsibility for the current climate crisis. "Forty percent of the carbon emissions of today's richest 10% are associated with the consumption of individuals in North America and the EU, and about one-fifth with the consumption of individuals in China and India" (Khalfan et al., 2023). Moreover, there is considerable evidence that millions of people living in countries with high poverty rates will reside in areas of high environmental risk over the next five decades and will be the least able to protect themselves. Many of these people will need more financial, social, political, or even physical resources to migrate out of these environmentally hazardous areas. In contrast, those with more significant resources will continue to be more likely to do so.

In the same way that there is inequality in terms of carbon emissions and commodity dependence, we also find that migration processes also reflect inequalities when referring to those who are able to migrate voluntarily, those who have no choice but to stay in their places of origin in contexts of violence, danger, and climate crisis, and others who are forced to move

because life in their places of origin becomes unsustainable. In this logic, we observe a direct relationship between class, racial and gender inequalities, and the people to move.

As it was mentioned, ecofeminism has proved to be a beneficial body of theory for criticizing a dichotomous woman-nature vision, proposing, among its various approaches, the articulation between body and Nature, emphasizing interdependence, complementarity, and the role of care in the context of the current environmental crisis. On the other hand, ecofeminists have put on the public agenda the importance of women's reproductive work, which is invisible and unrecognized. This work of care, necessary for the sustainability of life, has traditionally been undervalued, as has sustaining Nature and maintaining its cycles, today threatened by the predatory dynamics of capital (Svampa, 2021). In this scenario, the role played by migrant women in care work is particularly notorious. A global care chain is created in which migrant women (mostly from impoverished countries) who take on childcare, care of the elderly and disabled, or cleaning, feeding, and companionship as precarious employment (mostly in wealthy countries), leave these same functions uncovered in their places of origin, where other women, grandmothers, sisters or daughters take them on as best they can.

As observed in this thesis, we are currently facing a climate crisis on a global scale that demands that the academic and political spheres promote inter- and transdisciplinary crossings that incorporate a gender perspective at the moment of understanding both the migration phenomenon and the climate crisis. In addition, it appears as a fundamental task to generate North-South dialogues that enrich the analysis of the climate crisis and its relationship with migration, as well as to contribute good practices of mitigation against the impacts of climate change and new forms of consumption and production that are less aggressive with the environment.

To conclude, from my position as a migrant woman living in Europe, I find that this work can contribute not only to the production of knowledge and promote the debate in relation to migration and the climate crisis but also can be a bridge of dialogue between knowledge from the South and the North where the significant contribution of ecofeminist theories and the intersectional perspective is emphasized. At the same time, I believe that this thesis can be useful for future research, public policies and promotion of good practices, specifically around: the incorporation of an intersectional and ecofeminist approach in European environmental and migration policies, where good practices proposed by ecofeminist movements that seek to mitigate the effects of climate change are socialized, the production of statistical information on the migratory phenomenon that incorporates the categories of race, gender and class for a better understanding of inequalities from an intersectional perspective and the deepening of the importance of the pressure of ecofeminist organizations and civil society organizations to ensure gender-transformative environmental policies.

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