

CLIMATE CHANGE MIGRATIONS – SECURITY AND LEGAL ASPECTS

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Abstract: Climate change has been undoubtedly profiled as a very significant factor in migratory movements in recent times. This is conditioned with the gradual but continuous aggravation of climatic circumstances, which has occurred especially since the 1950s, when significant changes in average weather conditions were observed, such as continuous growth in global temperature, more frequent and intense droughts, storms and warm periods, rise of the sea levels etc. In the early 1990s, the Intergovernmental Panel on Climate Change (IPCC) indicated that the greatest particular impact of climate change could be human migration, with all subsequent consecutive reports from relevant international institutions insisting that environmental degradation, and especially climate change, have tendency to become the leading trigger for population displacement in the future. Given the all above mentioned, authors intend to examine the security aspects of migration caused by climate change, as well as the thesis that climate change is a 'threat multiplier', especially in the countries of the Global South. The authors also consider the need to review the international and national legal framework, which is necessary due to noticeably inadequate treatment and protection of people forced to leave their home due to hostile climate change.

Keywords: climate change, migration, resource scarcity, conflict, internally displaced persons, climate migrant/climate refugee, threat.

Introduction

The paper discusses climate change migrations from a security and legal perspective. With the aim of a comprehensive overview of this phenomenon, initially a brief insight into to the history of climate change migrations was made, with special emphasis on the period from the second half of 20th century, when a trend of their intensification was observed due to intensified climate change and their impact on individual drivers of human mobility, such as increasingly frequent sudden climate disasters, periodic droughts, sea level rise, land degradation, water shortages, desertification and more.

Based on everything previously said, trends of migrations caused by climate change in the last few decades were analysed, which indicate that they are particularly pronounced in the countries of the Global South, as the most affected by climate change and the manifestation of their multidimensional impacts.

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Climate factors, which are predisposed to become an increasing generator of migration movements in the future, impose the need for a more adequate positioning of persons who are forced to (e)migrate due to the negative impacts of climate change, in national and international legal frameworks. Until today, they do not have adequate legal protection, which is also the subject of consideration in this paper, with the identification of the key reasons why they are not recognized as a separate category of migrants, as well as why they are denied the rights guaranteed to conventional refugees.

The last part of the paper is devoted to problematizing climate change as a particular generator of uncertainty and instability, which is embodied in the thesis that climate change is a kind of 'threat multiplier'. The aforementioned thesis was specially analysed from the perspective of the countries of the Global South, whose security reality is determined by numerous political, economic and social insecurities, which in symbiosis with climate change, can favour the emergence of conflicts and large human migration movements.

1. MIGRATION CAUSED BY CLIMATE CHANGE - OLD VS NEW PHENOMENON

Determination of modern times by migratory movements is historically unprecedented. This axiomatic statement is based on the insight into the data of the International Agency for Migration (IOM), which indicate that 20th century, especially its second half, was characterized by mass migration movements, given the evident progressive growth of the migration population, which in the 1970s amounted to 84,460,125 million, in 1990 153,111,473 million (McAuliffe et al., 2019: 21) and in 2020 the number of migrants in the world reached 281 million (McAuliffe et al., 2021: 4).

These migration processes, supported by revolutionary developments in communications, transport and human rights (Martin, 2013: 3, 4), are the result of multifold, interconnected factors of an economic, social, political and demographic nature. These factors had somewhat of a primacy in the scientific and political perspective in illuminating the etiological dimensions of migration. Previously stated is also corroborated by the fact that despite the historical importance of environmental factors (such as climate changes and natural disasters) in migration dynamics, they were clearly marginalized until the end of the 1980s and the beginning of the 1990s, which consequently formed an untenable belief that climate motivated migration is a relatively new phenomenon.⁶⁷

⁶⁷ Migrations caused by climate change are not a recent phenomenon. There are numerous examples from history that affirm this deduction. Eurasian migrations of the Huns, Turks and Mongols from the first millennium B.C. to the 13th century AD were associated with general trend of warming. The permanent settlement of Europe and America is associated with the end of the last glacial period and the creation of a land bridge across the Bering Strait (Marshall, 2015: 97). Moreover, droughts were the main cause of the downfall of the Anasazi Empire in Central America around 1200-1300 BC when entire regions and villages were abandoned. Other regions also experienced major demographic changes due to environmental disturbances – Ireland's population was reduced by around a quarter due to the Great Famine in 1845-1852 and more than 2 million people left the country. Many settled in the United States of America. Further examples of migrations caused by climate change are the Dust Bowl migrations in Colorado, Kansas, New Mexico, Texas and Oklahoma during the 1930s, which were caused by severe droughts and poor farming techniques that impoverished arable land, leaving farmers with no alternative but to move west. It was the most massive population movement in the United States of America, involving 2.5 million migrants (Ionesco et al., 2017: 4, 5).

The outlines of the scientific contemplation on ecologically motivated migrations can be found in the early systematic theories on migrations at the end of the 19th century. In this context, it is essential to mention Ernest G. Ravenstein, one of the more prominent figures in studies on migrations in the phase of their conception. This author, without minimizing the importance of other instigators of migration, such as repressive regulations, detrimental social environment, coercion and economic motivation, attempted to point out the primordial importance of the natural environment for the movement of the population. Basing his reflections on observations of internal migration in the United Kingdom as well as on international migrations between nineteen countries around the world, Ravenstein came to realization of the impact that unfavourable climate has on migration flows (Piguët, 2013: 149).

However, Ravenstein was not alone in emphasizing the influence of climatic factors on migration processes. Namely, the American geographer Ellen C. Semple pointed out in 1911 that the search for more fertile land, a milder climate and better living conditions drives many people towards an environment with opposite characteristics from their original habitat (Pecoud *et al.*, 2011: 3). A similar emphasis on the influence of the natural environment on human migration can also be found in the works of the most famous representative of ecological determinism in geography, Ellsworth Huntington. This author, while studying the Lop area in eastern China, noticed that this area faced serious drought during the period from 1830 to 1840, which implied that the lack of water resulted with abandonment of certain villages in the Lop basin and the establishment of new villages downstream. The movements during this time period were undoubtedly the consequences of climate changes (Piguët, 2013: 150).

Regardless of above-mentioned pioneering steps in theoretical consideration of the climate factors' influence on migration processes, referencing them was omitted from migration studies throughout the most of the 20th century. Authors Piguët, Pecoud and Gustchteneire, relying on several scientifically relevant articles and studies, identify the following four dominant trends that have contributed to the aforementioned scientific and political abstinence in regard to climate-motivated migrations: *first*, strong (but evidently utopian) western-centric idea that technological progress could reduce the impact of nature on people's lives. One of the proponents of this idea, Petersen, considers migrations motivated by environmental factors as a 'primitive' form of migrations, which are predisposed to lose intensity due to the gradual increase in human control over environment; *second*, explanations of migration based on environmental factors were rejected due to their alleged deterministic nature, but in favour of socio-cultural approaches or a Marxist/economic perspective; the *third* reason is reflected in the rise of the economic paradigm in migration theories; and the *fourth* reason arises from the fact that studies on forced migration were developed on a strong political paradigm according to which states produce refugees (Pecoud *et al.*, 2011: 4).

The question of the impact of climate change on migration movements and on security in general, was actualized again in the late 1980s and early 1990s. Popularization of climate factors in the recent scientific and political discussions resulted from the understanding of the undeniable impact of climate change on the intensification of human movement, and through its obvious impact on land degradation, multiplication and intensification of sudden natural disasters, shortages of (drinking) water, desertification, periodic droughts, sea level rise, coastal erosion etc.

The inevitability of climate changes and increasingly evident manifestation of their effects must be seen as the product of the modern way of life, principally, economic model that emerged from the industrial revolution at the end of the 19th century. Namely, anthropogenic emissions of carbon dioxide (CO₂) and greenhouse gases have increased since the pre-industrial era, driven by economic and demographic growth. This has led to concentrations of carbon dioxide, methane and nitrous oxide in the atmosphere without historical precedent in the last, at least 800,000 years. Their effects, in symbiosis with the effects of other anthropogenic drivers, have been detected throughout the entire climate system and are the dominant cause of detected warming, since the second half of the 20th century (IPCC, 2014: 4),⁶⁸ i.e. cause of intensified climate change that is believed to result with mass displacement of people in the future. The greatest responsibility for the aforementioned is attributed to Western industrialized countries, whose high standard of living is conditioned by the amount of fossil fuel burning (Nawrotzki, 2014: 69), while the burden of the consequences originating from climate change is carried the most by underdeveloped and developing countries of the Global South, which contribute the least to climate change.⁶⁹

Based on everything previously said, it shouldn't be surprised by efforts to 'revitalize' the relationship between climate factors and migrations that occurred in the period between 1985 and 1990 when three key adopted reports gave a strong impetus to the popularization of the mentioned problem in the political and media discourse.

The first report was the United Nations Environment Program (UNEP), written by El Hinnawi in 1985, in which attention was for the first time drawn to the concept of 'environmental refugees', which has been since then contested and unharmonized at the level of the international community. Second report was authored by Jodi Jacobson of the World Watch Institute in 1988 and it's the first document to imply the number of 10 million

⁶⁸ In the period between 1970 and 2010 an alarming trend of an increase in total greenhouse gas emissions by about 78% was observed. Approximately same percentage increased only in the period from 2000 to 2010 despite intensified political activities focused on mitigation of climate change (IPCC, 2014: 5). At the same time a trend of growth in the rate of warming has been observed, which has more than doubled since 1981 and is 0.18°C per decade, compared to the increase in the Earth's average temperature of 0.08° C per decade since 1880. Global warming as a serious threat is confirmed by the fact that the last nine years were ranked among the warmest years in human history (Lindsey, Dahlman, 2022). Furthermore, direct implication of the increased emission of greenhouse gases is 23 cm rise in sea level since 1880, while in the last 25 years the rise in sea level amounted to over 8.6 cm (on an annual basis, the sea level is rising by 3.2 mm). The latest research published in February 2022 by the National Oceanic and Atmospheric Agency (NOAA) shows that rise of sea level is accelerating, with forecasts that it will increase by 2050 by foot (Nunez & National Geographic Staff, 2022).

⁶⁹ Between 1880 and 1990, the Global North produced 84% of the planet's emission of carbon dioxide on the basis of fossil fuels and 75% of deforestation-related carbon dioxide emissions. These emissions can remain in the air for more than two hundred years, affecting the climate for future generations. Although China is currently the largest emitter of carbon dioxide in the world, in which it participates with about 30%, the historical emission of the Global North and the emission per capita of the Northern countries exceeds the countries of the Global South (Mickelson & Duncan according to Gonzales, 2019: 374, 375). In order to illustrate this it is necessary to mention data published in the World Bank report from 2018, according to which the United States and Europe participate in the total global emission of greenhouse gases with 26% and 22%, respectively, while the African continent participates with only 3.8% (World Bank, 2018).

environmental refugees. The third significant report is the one produced in the early 1990s under the aegis of the Intergovernmental Panel on Climate Change (IPCC), in which it was indicated that the single greatest impact of climate change could be the migration of millions of people, which could eventually lead to serious disruptions of settlement patterns and social instability in certain areas (Klepp, 2017: 7; Ionesco *et al.*, 2017: 12; Brown, 2008: 9, Myers, 2005).

Since then, all subsequent reports of competent international institutions have been based on the claim that environmental degradation and especially climate change are predisposed to be described as one of the main drivers of population displacement, which could be considered to be somewhat of a suggestion of a 'crisis in the making'.

Thus, during the 21st century such not very optimistic estimates of the approximate number of "environmental/climate refugees/displaced persons"⁷⁰ persisted. However, very pessimistic forecasts of professors Myers and Kent attracted the most attention. Originally presented in the article "Ecological exodus: the coming crisis in the global arena" from 1995 and repeated at the 13th Economic Forum in Prague in May 2005, forecasts that number of 200 million of people could be forced to emigrate for a long time from the affected areas due to the direct impact of climate change, is believed to be quite realistic (Myers, 2005).

The World Bank Group for Climate Change did not present a more optimistic forecast in its two reports. In the first Report from 2018, it was stated that climate change is becoming more visible originator of migration, forcing individuals, families and even entire communities to seek more sustainable and less risky places to live. Basing its estimates on the gradual climate changes, referred to in the literature also as a slow-onset climate effects, processes and events,⁷¹ the Report states that the number of 'internal climate migrants' in Sub-Saharan Africa, South Asia and Latin America could reach 143 million if no concrete actions are taken to mitigate climate changes, primarily through reducing greenhouse gas emissions, and if there is no far-sighted development strategy (Rigaud *et al.*, 2018). Three years later, a second, slightly more comprehensive Report of the World Bank Group was published, which, in addition to the regions covered by the first report, focused its projections on regions - Eastern Europe and Central Asia, North Africa, and East Asia and the Pacific, stating how these regions by 2050 could be faced with 216 million people forced to emigrate due to water shortages, less crop productivity, sea level rise and storm surges, but also heat shocks, extreme events (disasters) and land loss (Clement *et al.*, 2021).

The previously presented projections, undoubtedly embody the vision of the thesis that has recently been increasingly expressed in public discourse that *'migration caused by climate change is the human face of climate change.'* Even though they are often considered exaggerated, unfounded and simplified these forecasts must also be understood as a kind of an appeal to the conscience of all those who can contribute to the reduction of climate

⁷⁰ All these terms are used interchangeably when referring to this problem, which is an indication of the lack of consensus regarding the terminological determination of persons who, due to climate change, are forced to leave their homes, and emigrate within their country or across the border.

⁷¹ Robert McLeman divides climate factors that can instigate migration into two basic categories – climate processes and climate events. Climate processes are referred to as gradual changes, such as sea level rise, salinization of agricultural land, desertification, increasing water shortages and food insecurity, while on the other hand, climate events are sudden and dramatic hazards, such as (monsoon) floods, storms, hurricanes, typhoons (Cited according to Brown, 2008: 17, 18).

change, thus tracing the path to a more certain future of humanity, but also to the affirmation of the principles of humanism.

2. OVERVIEW OF DIFFERENT APPROACHES TO MIGRATIONS CAUSED BY CLIMATE CHANGE AND THEIR IMPLICATIONS

2.1. Alarming (maximalist) perspective

On the basis of what has been presented so far, it is evident that considerations about migration caused by climate change were determined by two opposing perspectives, which have understandably generated different, almost irreconcilable approaches to this phenomenon.

The first perspective was described as 'alarmist' or 'maximalist' and based on the perception of climate change as a direct cause of migration. Representatives of this perspective, principally environmental protection scientists and members of numerous non-governmental organizations, consider migration to be an inevitable by-product of climate change, a humanitarian disaster in the making (Ionesco *et al.*, 2017: 6; Klepp, 2017: 8; Flavell *et al.*, 2020: 26).

Namely, it is an approach founded on a strategy of raising awareness and sensitizing various subjects - citizens, political actors and the media about a problem which, if concrete activities to mitigate climate change are not undertaken, could not only escalate, but also make the future of humanity uncertain, given the irreversibility of climate change.⁷²

Even though the maximalist perspective can be attributed tendency to simplify the phenomenon of migration, given the observation of migration causes based, primarily or exclusively, on climate change, their warnings should not be ignored in any case.

Unquestionably the impacts of climate change manifest themselves at different pace, depending on whether it is about climate processes or climate events. Contrasting to the latter that have immediate and obvious impact lasting a few hours or days, climate change can also generate effects through a gradual transformation of the environment, which can last several decades, which certainly makes it difficult to accurately estimate the number of people who will be forced to emigrate in the future.

From the previously stated stems logical conclusion that the dynamics of manifestation of the climate change impacts reflects on the dynamics of migration processes. Sudden climatic events can result in temporary, sometimes long-term, displacement. In contrast to that, climate processes often lead to permanent migration or displacement due to the longer duration of the climate change impacts or their irreversible impact on the environment, which can ultimately make the living area uninhabitable (Office of the United Nations High Commissioner for Human Rights [OHCHR, 2018: 5]).

⁷² A 2014 Report by the Intergovernmental Panel on Climate Change (IPCC) predicted that, even with strict scenarios for mitigating carbon dioxide and greenhouse gas emissions, global temperatures would rise. If there are no strict restrictions, the IPCC predicts that by the end of the century the temperature will rise by more than 1.5°C. Without any emission reduction interventions, the global temperature is likely to rise by 2°C (IPCC, 2014: 9). Similar predictions have been made when it comes to sea level rise. Namely, the administrator of the National Oceanic and Atmospheric Agency (NOAA), Rick Spinrad, warned that the predicted rise in sea levels will occur even in the case of a drastic reduction in carbon dioxide emissions (according to Nunez & National Geographic Staff, 2022).

When it comes to sudden climatic events, their immediate impact on human mobility can be determined and, to some extent, quantified. According to research conducted by the Internal Displacement Monitoring Centre (IDMC), significantly more people are displaced today due to disasters than in the 1970s. As stated in the Report of this body from 2014: "It is estimated that the risk of displacement due to climate-related disasters has more than doubled" (IDMC, 2014: 8), which is certainly in favour of theorists who are inclined to a maximalist perspective.

The aforementioned undoubtedly coincides with the intensification of climate change and their effects, previously discussed, in an indispensable combination with the enormous growth of the world's population, which in the 1970s amounted to about 3.7 billion inhabitants, while today it is slightly less than 8 billion (Statistics Times, 2021), to which should be added the growth of the urban population for about 187% in the respective period (IDMC, 2014: 9).

In 2009, the IDMC in cooperation with the United Nations Office for the Coordination of Humanitarian Affairs (OCHA), produced the first global assessment of the displacement extent caused by extreme natural hazards. This Report specified a number of 36.5 million of internally displaced persons for 2008, of which 20.3 million were forced to leave their homes due to climate disasters, primarily floods and storms, while 15.8 million people were forced to emigrate due to geophysical disasters - volcanic eruptions, earthquakes and tsunamis (IDMC, 2011: 4). In the following two years, the aforesaid ratio changed in favour of climate-related disasters, thus in 2009 the number of displaced persons due to floods and storms was 15.2 million compared to 1.5 million persons displaced due to geophysical disasters, while in 2010 the ratio was 38.3 million vs 4 million (IDMC; 2011: 4) and this trend continued in the following decade.

Since 2009 IDMC provides an estimate of the number of internally displaced persons for each year. Through examination of data presented in the annual reports of the IDMC, it can be determined that the cumulative number of internally displaced persons due to natural disasters in the period from 2008 to 2021 amounted to about 342.9 million, an average of 24.5 million per year, whereby the largest number of internally displaced persons is produced by climate-related disasters, with a percentage that often exceeds 90%.⁷³

The IDMC, given its global scope of research, also offers the possibility of insight into the proportion in which a certain continent or region participates in the production of internally displaced persons due to sudden climate disasters, which indirectly allows the possibility to determine which parts of the world are the most exposed to their manifestation.

For the ten-year period, from 2011 to 2020, it can be concluded without dilemma that the Asian continent leads in terms of the number of internally displaced persons due to natural disasters - East Asia and the Pacific with 112.2 million, South Asia with 60.3 million. Sub-Saharan Africa follows with 23.9 million and the American continent with 22 million, while Europe and Central Asia participated in the smallest proportion in the indicated period, with a total of 1,306 internally displaced persons (IDMC, 2021: 25-67).

A very similar situation was also 'diagnosed' in the reports from 2008-2010. In the indicated three-year period, Asia was correspondingly the most affected continent in terms of displacement of people due to sudden climate disasters (between 78% and 87%). America

⁷³ The specified number has been reached through analysis of all the reports that were published for the indicated period i.e., for each year individually (IDMC, 2009-2022).

and Africa were positioned in second and third place, while Europe and Oceania participated in almost negligible production of internally displaced persons (IDMC, 2011: 16).

This trend was also recorded in 2021, given the fact that out of a total of 23.7 million internally displaced persons due to natural disasters, 13,696,000 were registered in East Asia and the Pacific, 5,250,000 in South Asia, 2,554,000 in Sub-Saharan Africa, 1,659,000 in Central America, East and North Africa 233,000 and Europe and Central Asia 276,000 (IDMC, 2022: 12).

The previously presented data for a period of fourteen years indicate areas in the world, which are predisposed to be particularly affected by the prolonged impacts of intensified climate changes (climate processes) in the future, in regard to which the representatives of the so-called maximalist perspectives appealed in their deliberations. Even though no continent or region in the world has been spared of the impact of climate change, it is likely that the previously mentioned effects will be far more evident in the countries of the Global South, as indicated by the previously presented data of the Centre for Monitoring Internal Displacement. Namely, if we compare the most affected parts of the world in terms of sudden climatic events, we will see that they largely correspond with the parts of the world for which so-called alarmists present very pessimistic forecasts when it comes to the expected manifestation of gradual climate changes in the future and their (in) direct impact on mass migration movements. As the authors Karacasulu and Karakir very argumentatively observe, climate-induced migration mostly occurs in the poorest parts of the world, and in developing countries, where people depend on ecosystem services, in order to ensure the basic conditions for life and even survival (2021: 112).

The aforementioned projections of the "alarmists" are based on the current trends in the manifestation of the effects of climate change in the form of sudden climate events (catastrophes), their intensified effect, which will be even more noticeable in the coming decades, as well as on estimates of the potential number of future "climate migrants/refugees/internally displaced persons", relying primarily on areas that are particularly vulnerable to the long-term (gradual) impacts of climate change.

As pointed out in the last Report of the International Organization for Migration (IOM), during the last decade the scientific treatment of the relationship between climate change and migration has been intensified, and on the basis of a recent meta-analysis of the available literature, it was concluded that it is likely that climate change of gradual manifestation, especially high temperatures and droughts, will contribute to increased migration compared to migration caused by sudden climatic events (McAuliffe et al., 2021: 234).

Based on what has been presented so far, it is quite clear that the Asian and African continents have been profiled as 'focal areas' in the aforementioned sense. Numerically and geographically, it may be expected that just as before South and East Asia will be particularly sensitive to large-scale forced migration. The reasons for the aforementioned should be sought in the fact that sea level rise, as one of the most dramatic manifestations of climate change, will have a disproportionate effect on their population living in low-altitude coastal areas (Brown, 2008: 31), due to which, given the irreversibility of the phenomenon, emigration will become a very likely option in the future for the population affected by rising water levels, higher tides or storm surges.

Even though low-altitude areas make up only 2.2% of dry land, they are currently home to slightly more than 10% of the world's population, of which two-thirds live in Asia and one-third in the world's poorest countries (Cattaneo *et al.*, 2019: 5; Warner *et al.*, 2010: 696).⁷⁴

In the context of consideration of the effect of sea level rise, small island states in the Pacific, such as Kiribati, Tuvalu and Vanuatu must be mentioned. They are particularly exposed to danger considering that they are only a few centimetres above sea level, along with the Maldives in the Indian Ocean, and Bangladesh, the South Asian country that suffers the most from the effects of climate change, including floods, cyclones and river bank erosion, soil salinity and coastal erosion. These climatic phenomena cause internal and external displacement of a significant number of Bangladeshis every year (Karacasulu & Karakir, 2021: 108).

Countries such as Bangladesh or small developing island states, which are threatened even with disappearance, have become a symbol of climate change and migration (Ionesco *et al.*, 2017: 10), and the localization of the consequences of sea level rise, as stated in the working document of the European of the Institute for Economy and the Environment from 2019, is a relatively easy task, given that the configuration of the coasts, their altitude and the number of inhabitants are known - therefore it is possible to calculate the approximate number of people who are exposed to risk, which can figure as significant factor when making the decision to leave their homes due to the influence of climate factors (Cattaneo *et al.*, 2019: 5).

Millions of people are at risk from climate change in Africa as well, especially in the Nile Delta⁷⁵ and along the west coast of Africa. Altered rainfall patterns could have particularly serious consequences for food security in Sub-Saharan Africa⁷⁶ (Brown, 2008: 31), so desertification, inherent to this part of the world, is certainly a significant factor that contributes and will continue to contribute to gradual (slow) migrations in this desert region. This was also stated in the research conducted by Barrios and Strobl, based on the use of data for 78 countries for a period longer than three decades, establishing how the drought on the Sub-Saharan African continent increased the exodus from rural areas, giving a strong impetus to urbanization in Africa (2006: 375-371).

⁷⁴ It would be pretentious to expect that a tenth of the world's population from areas sensitive to sea level rise will have the status of 'climate migrants' in the future, but as noted by the authors of the working document of the European Institute for Economics and the Environment, based on the projection of sea level rise between 0.3- 0.8 m, it seems reasonable to consider the figure of 150 million people living at an altitude of less than one meter above sea level as being directly at risk during the next century (Cattaneo *et al.*, 2019: 5).

⁷⁵ In Egypt, sea level rise and desertification affect the Nile Delta, as the most productive area in Egypt, which comprises only 3% of the total land area, and which supports about 40% of the country's population, which indicates the extent of the problem that this country is facing. Desertification and land degradation affect large areas of the eastern and western Nile Delta today, which may render them uncultivable. Also, rising sea levels could threaten about 16% of Egypt's population, so desertification and land degradation are forcing Egyptians to migrate internally in search of better living conditions (Warner *et al.*, 2010: 703, 704).

⁷⁶ The seriousness of this problem is further emphasized by the fact that Sub-Saharan Africa, where about 10% of the world's population lives, primarily depends on agricultural production, in which 70% of the population is employed.

Cases of massive population movements were also recorded in South America (Brazil, Argentina), the Middle East (Syria, Iran), Central and East Asia (Pecoud *et al.*, 2011: 9) in addition to cases attributed to droughts in Africa (the Sahel region and Ethiopia).

Understandably, longer periods of drought have strong repercussions on access to (drinking) water. According to the World Resources Institute (WRI), nearly a third of the world's population, about 2.6 billion people, live in countries at high risk of future water scarcity. This includes 1.7 billion people from 17 countries, including the countries of the Middle East that are in the least privileged position when it comes to water shortages, as well as India, Pakistan, Eritrea, Turkmenistan and Botswana (BBC, 2019).

As it can be concluded on the basis of what has been presented so far, the number of people who are forced to migrate, mainly within their own country, due to sudden climate changes, has been acceptably documented by competent international institutions, which is not the case when it comes to migration movements caused by climate processes, whose manifestation is, understandably, conditioned by the gradual, primarily anthropogenic, degradation of the environment. Therefore, it would be too ambitious an undertaking to determine exactly the number of people in the future who will be forced to (e)migrate due to gradually occurring climate changes and consequences that will gradual environmental degradation have on access to basic life resources, such as food and water. However, what can be determined is the approximate number of people who are exposed, directly or indirectly, to the emphasized risk of the effects of such climate changes, which makes the idea of the outlines of the elaborated problem more approximate - such as the previously presented data, as well as the data from the International Database on disasters (EM-DAT), which suggest a figure of 686 million people across Africa and Asia in the period 2008-2018 that were affected by drought (Flavell, 2020: 34, 35).⁷⁷ The aforementioned provides the possibility of insight into how climate change affects drought, water shortages, food security, endangering hundreds of millions of people around the world, and which can ultimately result in large migration movements, which, due to the aggravation of the basic conditions for life, are fully expected in the future.

The aforementioned has made us decide to look at the maximalist perspective based on very disturbing indicators and forecasts, which seem to leave little room for us to give this perspective a characterization as speculative and oversized, because it is inevitable that climate change, particularly or in symbiosis with other factors, will contribute to migrations in the future.

2.2. A minimalist (sceptical) perspective and its bearing on ambiguity of the legal status of people who migrate due to the impact of climate change

The second perspective, which has a very prominent place in discussions about the relationship between climate change and migration, is known as the minimalist, i.e., sceptical perspective, and it is articulated primarily by migration theorists, who approach the subject of migration from a political and socio-economic angle. It is an approach that denies the role of

⁷⁷ As Pecoud and co-authors state, citing the Leighton study, the periodic droughts and desertification faced by north-eastern Brazil contributed to the emigration of 3.4 million people between 1960 and 1980. (Pecoud *et al.*, 2011: 9). When it comes to the American continent in general, a correlation has been observed between emigrations to the United States from drought-stricken Mexico (*Ibidem*).

climate change as a particular cause of human mobility, calling into question even potential direct causal link between climate change and migration.

The backbone of the 'minimalist approach' is the theory that migration is a complex, multi-causal phenomenon and that environmental degradation in itself is not a significant cause of migration (Suhre according to Klepp, 2017: 8). As some of the representatives of this perspective point out (for example: Castles, Black and McGregor), the decision to (e) migrate is far more complex and there are no indications that climate changes are the only cause of migration (*Ibidem*).

It is quite clear that migration dynamics, in most cases, is determined by multiple factors. Nevertheless, the fact that migration has always been a potential strategy for dealing with changes in the environment in the form of sudden (climate) disasters, climate processes or cyclical climate conditions cannot be disputed. History is rich with many examples of human movement from one climate zone to another, in search of a natural environment that will support both human survival as well as aspirations towards a more certain existence (Warner *et al.*, 2010: 691).

Different and mutually opposing approaches to the relationship between climate change and migration, embodied primarily in a sceptical and alarmist perspectives, have implied different attempts to frame and conceptualize the phenomenon of migration caused by climate change, i.e. unharmonized (legal) terminology referring to persons who, forcibly or voluntarily, leave their homes due to the impact natural and climatic factors, as well as their unregulated and undefined status in international law until the present day.

The aforementioned, in addition to the previously nominated, was also induced by the absence of political will, evident scientific abstinence regarding the consideration of climate change as a potential cause of migration movements until the end of the 20th century, but also by the specific efforts of the so-called minimalist to not recognize climate factors as potential generators of migration, which consequently resulted without recognition of 'climate migrants' as a separate category of migrants or give status of 'climate refugees'. As Mukuki observes: "The climate migrant is a concept that critics have often addressed as 'mythical', rather than as a reflection of reality (...) This approach is an expression of scepticism regarding the seriousness of the situation faced by people displaced by climate change " (2019: 90).

Precisely, the absence of consensus at the international level regarding the terminological definition of persons who migrate due to natural and climatic factors can be nominated as the main source of confusion in discussions about the relationship between migration and climate change. These discussions are not exclusively terminological in nature. On the contrary, as very convincingly observes Brown: "The definition that becomes generally accepted will have real implications for the obligations of the international community under international law" (2008: 13).

The absence of a harmonized and internationally recognized legal term referring to people who emigrate due to the impact of climate change, paved the way for use of different terms in public and scientific discourse, such as 'climate/ecological migrants', 'climate/ecological refugees', 'internally displaced persons', 'forcefully displaced persons due to the influence of natural/climatic factors' etc.⁷⁸ These are terms that have no legal foundation

⁷⁸ In the literature, we most often came across the term 'internally displaced persons due to climate change'. It's believed that this category is the most represented in terms of percentage, given that

in international regulation, which inevitably lead to an institutional and normative vacuum (Pecoud *et al.*, 2011: 20).

And while members of the so-called maximalist perspectives advocate primarily for the use of the term 'climate refugees' by proposing certain modifications of international refugee law, with the intention of pointing out the urgency of the problem (Brown, 2008: 13), minimalists oppose to the introduction of a term that would indicate a monocausal relationship between natural and climatic factors and human mobility, considering it simplified and one-sided (Pecoud *et al.*, 2011: 17).

The unquestionable supremacy of the sceptical i.e., minimalist approach implied the absence of a legally binding international regime that would serve to protect this category of people. As the founder and director of the Centre for American Progress, John Podesta, observes: "The gradual worsening of climate patterns, that is, weather conditions, will encourage an increase in human mobility, and people who decide to take that step will do so with little legal protection. The current system of international law is not capable of protecting climate migrants, given that there are no legally binding agreements that would force states to support climate migrants" (Podesta, 2019: 4).

Even though most of the displacements related to climate change occurs within the borders of states, there are significant gaps in international frameworks, implementation at the national level and multilateral activities in the protection of internally displaced persons. The United Nations Guiding Principles on Internal Displacement provide, namely, a widely accepted definition of internally displaced persons,⁷⁹ identifying rights and guarantees relevant to the protection of persons from forced displacement, including protection and assistance during displacement, return, resettlement and reintegration. However, they do not constitute binding legal instrument (Guiding Principles on Internal Displacement, 2004) and their implementation is insufficient.

Migration movements caused by climate change can be based on forced decision as well as on voluntary decision of people, which leads to their logical differentiation into 'climate refugees' and 'climate migrants'. However, it is quite clear that this first categorization, in particular, has no chance of taking root, at least in the foreseeable future.

Namely, it is evident, that climate factors were not taken into consideration when migration laws were created and when international refugee law was formed in the period after the Second World War, despite the fact that they are an extremely old phenomenon. It seems that current migration policies are still primarily based on a binary understanding of migration, inherited from the post-war period - either migrants are forced to flee for political reasons, in which case they can seek international protection, or they emigrate voluntarily

people affected by climate change mostly migrate within their own country due to lack of economic and other resources. The term 'captive population' was introduced to describe those who are unable to emigrate even if they wanted to. Thus, poor people face a double risk given that they are unable to move away from climate threats and are simultaneously particularly vulnerable to their impacts (Cattaneo *et al.*, 2019: 6).

⁷⁹ Internally displaced persons are persons or groups of persons who are forced to flee or leave their homes or places of habitual residence, in particular as a result of or in order to avoid the consequences of armed conflict, situations of general violence, violations of human rights or natural or man-made disasters and who are not crossed an internationally recognized state border (Guiding Principles on Internal Displacement, 2004: 1).

for economic reasons, in which their acceptance is exclusively under the jurisdiction of states (Ionesco *et al.*, 2017: 2).

Climate changes and their influence on the intensification of migration movements are an unquestionable reality, confirmed by the data presented in the first part of this paper. The aforementioned will require a more determined confrontation with this multidimensional challenge. However, whether it is realistic to expect significant progress in the near future in reaching agreement on the terminological definition of persons who (e) migrate due to the influence of environmental and climatic factors represents a difficult question. This would be a necessary initial step that would pave the way for further formal positioning of this category of people within the framework of international and national law.

An appreciable step forward was made only in the 21st century in terms of the final acknowledgement of, up till then, disputed relationship between climate change and migration. Major natural disasters from the beginning of the 21st century contributed to the above, including Hurricane Katrina, which hit the southern coast of the United States of America at the end of August 2005, causing the temporary displacement of about 1.5 million people and the permanent displacement of about 500,000 of them (Warner *et al.*, 2010: 696), which indicated that the binary approach to the phenomenon of migration has been clearly surpassed.

The United Nations Framework Convention on Climate Change (UNFCCC) was the first to recognize the growing importance of migration related to climate change, with the adoption of the Cancun Adaptation Framework in 2010 (Karacasulu & Karakir, 2021: 100). In the 14 (f) paragraph of the Framework all signatory parties are invited to take measures to improve understanding, coordination and cooperation in relation to displacement caused by climate change, migration and planned relocation, where appropriate, at the national, regional and international levels (Cancun Agreement, 2010). Climate migrants are also the subject of consideration in the content of Paris Agreement from 2015, which stipulates that when states take measures to address climate change, they should respect, promote and consider their human rights obligations, including the rights of migrants (Paris Agreement, 2015).

Despite the unquestionable importance of the aforementioned agreements, which represent a kind of turning point in terms of pointing out the link between migration and climate change, there is no doubt that there is a very long way to go in the direction of finding comprehensive solutions to the multidimensional challenges that derive from migration caused by climate change, especially if there are they see that these documents are not legally binding, nor sufficiently developed to support climate migrants (United Nations Human Rights Office of the High Commissioner, 2017: 26; Karacasulu & Karakir, 2021: 111).

Even greater resistance is evident in regard to initiatives to reconceptualise international refugee law, which will be discussed further below.

2.3. The uncertainty of the qualification of people who migrate due to the impact of climate change as 'climate refugees'

Up to the present time, every attempt to reconsider forced migration in the light of climate change has been prevented. Initiatives focused for a long time on the fact that climate migrants should be covered by the existing international refugee law, and accordingly granted with the status of climate refugees, did not get results.

Climate change, as a peculiar reality, is recognized as a threat in the evolving nature of refugee exodus. As the United Nations High Commissioner for Refugees, Antonio Guterres, once said: "What we are currently witnessing is an increasing number of people who are forced to flee due to lack of water and food, extreme poverty, and many of these situations are further aggravated by climate change" (stated according to Mukuka, 2019: 87).

Despite the undisputed recognition of the impact that climate change has on increasing the intensity and frequency of evolutionary initiators of human displacement, such as droughts, floods and other extreme weather events (UNHCR, 2012), up to present day no political consensus has been reached to grant the status of conventional refugees to people forced to migrate due to climate change.

The aforementioned undoubtedly affirms the international community's commitment to the system established after the Second World War by the United Nations for the protection of civilians who are forced to flee their home countries due to political violence. According to the UN Convention on the Status of Refugees from 1951, the status of a refugee is held by any person who, due to a well-founded fear of persecution based on race, religion, nationality, or affiliation to a certain social group or political belief, is outside the country of his citizenship, and cannot or because of such fear does not want to avail himself of the protection of the home state (UN Geneva Convention on the Status of Refugees, 1951).

From the above definition, it is evident that ecological, i.e. climatic conditions do not represent the basis for international protection in international refugee law (see more in Brown, 2008: 13-15; Warner et al., 2010: 693-695),⁸⁰ despite their evident evolving to nature, especially since the second half of the 20th century, when climate factors were profiled as a significant generator of often forced migration movements, which was a reason for articulating the request that the term refugee should be expanded in order to include 'climate migrants'.⁸¹

Such requests have not yet received official support at the level of the international community. In order to confirm the abovementioned, we will also refer to the first judgment from 2013 on the legal status of ecologically displaced persons in accordance with international law, in the case of *Teitiota v. Executive Minister for Business, Innovation and Employment*.⁸² Namely,

⁸⁰ As noted by Warner and co-authors, there are four key elements of this definition: a) the person must be outside the country of origin (as we emphasized earlier, it is estimated that people affected by climate change in most cases move within their own country. The lack of comprehensive quantification probably contributes to this of those who emigrate due to climate change); b) the person must fear persecution; c) persecution must be based on one of the five grounds provided for by the Convention; d) fear must be justified (Warner et al., 2010: 694).

⁸¹ Some authors believe that without a clear definition of ecologically displaced persons, which would recognize the deep political nature of the challenges they represent, the international community will be faced with difficulties in ensuring the rights of this vulnerable group of migrants and the recognition they deserve (Marshall, 2015: 96; Mukuki, 2019: 74-98). François Gemenne, an expert in environmental geopolitics and migration management from the University of Liege in Belgium, points out similar, albeit slightly more radical views, who states that the depoliticization and devictimization of environmental migration has enabled the international community to view it as a 'commodity', which could be solved rather through environmental protection policy than as a political problem related to industrialized countries. Namely, Gemenne argues for the acceptance of the term 'climatic/ecological refugees' in order to politically frame the experience of displacement caused by environmental and climatic factors (Gemenne, 2015: 70-71).

⁸² Supreme Court of New Zealand [2015] NZSC 107.

Ioane Teitiota requested refugee status for himself and his family in New Zealand, with the explanation that his home, Kiribati, is not suitable for return due to rising sea levels and salinization. In his decision, Judge Priestly stated that the definition of a refugee is not limited to that offered in 1951, and that it can be expanded to include natural disasters as a cause of refugee-like displacement, but that he cannot be granted refugee status because he is not subjected to persecution, which is stipulated in the UN Convention on the Status of Refugees as a necessary factor for the legal status of a refugee (Marshall, 2015: 103, 104).⁸³

The aforementioned judgment is an indicator that the time has not yet come to grant refugee status to people who are forced to (e) migrate, as a result of climate factors, and accordingly denied protection under the auspices of the UNHCR, which is conditioned by the current political climate and the lack of economic and other resources necessary to meet their needs.

It is quite clear that there is a justified fear that this would potentially jeopardize the refugee protection system. As Pecoud and co-authors note, this could strengthen the already widespread fear of uncontrolled waves of poor refugees to developed countries, fuelling xenophobic reactions or serving as justification for a more restrictive asylum policy. This could, as they further note, blur the already fragile distinction between voluntary (economic) and forced (political) migration, which could lead to undermining the fundamental principles of asylum, as well as introducing some kind of 'natural' connotation to the asylum issue, which would be incompatible with the political nature of persecution, as foreseen by the relevant convention (Pecoud et al., 2011: 18).

Despite all the presented dilemmas and challenges, and depending on the likely and expected aggravation of this problem in the future, the international community will be forced to find adequate ways to protect this category of people - either through reconsidering the concept of refugee and its expansion to include "climate migrants/ refugees", either through introduction of a new legal category and the accompanying institutional framework that would provide for their protection (Podesta, 2019: 4).⁸⁴

3. SECURITY ASPECTS OF CLIMATE CHANGE AND THEIR POTENTIAL IMPACT ON MIGRATION

3.1. Actualizing the issue of climate change as a security phenomenon - a scientific perspective

In the last few decades, and especially in the 21st century, scientific and political discussions about the relationship between climate change and security have been intensified. The aforementioned coincides with the period of critical re-examination of the previously

⁸³ Based on this, as Mukuki observes, it is evident that climate change was not foreseen in the analysis of who could be the agents of persecution. The focus is more on state and non-state actors as agents of persecution, while climate change does not fall into either of these two categories (2019: 86).

⁸⁴ Unlike economic migrants who leave their country of origin and seek, by legal or illegal means, to find employment in another country, the reasons for the displacement of climate migrants include land degradation, drought, deforestation, natural disasters and other environmental changes that act destructively in conjunction with poverty and demographic pressure. Therefore, as noted by Crisp, Desseigne and Myers, it is necessary to distinguish climate migrants from economic ones (cited according to Mukuki, 2019: 83, 84).

dominant traditional security paradigm, which was imposed by the changed security environment in the post-Cold War era, when threats of an economic, societal and ecological nature, as well as unconventional ones, began to be increasingly asserted as equal to military and political ones.

Initial steps in the scientific problematization of climate change as a potential generator of security threats date back to the beginning of the 1970s. Richard Falk was one of the first authors to present the thesis on climate change as a security issue. In 1971, when climate change was only an 'emerging concern', he pointed out the importance of adaptation to climate change, saying that there is an inverse relationship between the time interval available for adaptive change and the likelihood and intensity of violent conflict, trauma and coercion. Which follows the process of adaptation – the faster the rate of change, the less time there is for adaptation and it is more likely that climate impacts will be more dangerous (cited in Barnett, 2001: 3).

Lester Brown is an author who in 1977 began researching the link between environmental degradation, including climate change, and security. This author devoted special attention to the problematization of the impact of the deterioration of the biophysical system on national security, identifying four systems that are most exposed to pressure: fisheries, green areas, forests and crops, from which it is evident that Brown focused his thoughts specifically on the issue of food security. This problem later attracted considerable attention of authors, such as Sanchez, Murdiyars, Wilkie and others, who tried to shed light on the effects of climate change on this type of security with their scientific reflections (*Ibidem*).

The study of the impact of climate change on security continued under the auspices of the Copenhagen School, created in the mid-1980s at the Institute for Peace Studies in Copenhagen. It's most prominent representatives, Buzan, Waever and de Wilde, dissatisfied with the reductionist, traditional approach to security, made a strong contribution to the expansion of the security agenda to three new security sectors – economic, social and ecological in addition to the political and military sectors. Within the latter, the study of security dimensions of environmental threats and climate change was inaugurated (see more in Buzan, Waever and de Wilde, 1998).

Another very significant step towards pointing out the connection between climate change and security was made with the adoption of the Report on Global Human Development of the UNDP in 1994, in which a new concept of security - human security - was articulated. This security concept embodied the vision of a multidimensional approach to security, positioning man and his daily exposure to various threats and disturbances that endanger him existentially, in the centre of scientific observations (UNDP, 1994). The essence of the human security paradigm is its focus on economic security, food security, health, environmental, personal, political security and community security (See more in UNDP, 1994: 25-33).

In the part of the Report that refers to ecological security, one can see the outlines of the theory about ecological, i.e., climate change as a 'threat multiplier', whose validity is confirmed particularly in some of the most unstable regions of the world, where people are most dependent on ecosystem services, and in which, as indicated by the data presented in the first part of the paper, the most evident impact of climate change.

The Report ascertained the impact of ecological and climatic threats on the water shortage, where world supplies per capita, as indicated, in the mid-1990s amounted to only

a third of the water supplies from the 1970s, whereby the water shortage was identified as a factor that is predisposed to contribute to more and more ethnic conflicts and political tensions (*Ibidem*: 29). Similarly, the UNDP Report pointed out the impact of climate change on deforestation, which is expressed in the fact that between 8 and 10 million hectares of forest area is lost on an annual basis, where deforestation in combination with excessive grazing equates to desertification. In Sub-Saharan Africa alone, as stated in the Report, since the mid-1940s, 65 million hectares of productive land have been turned into desert (*Ibidem*). This indicates unfathomable consequences for this region, especially if one takes into account the fact that agricultural activity in Sub-Saharan Africa is of crucial importance considering that 60% of its population (small farmers) are employed in it, whereby agricultural activity contributes with 23% to the GDP of Sub-Saharan Africa (Goedde *et al.*, 2019).⁸⁵

This particular region was the point of reference for conflict researcher, Thomas Homer-Dixon, who in the 1990s sought to demonstrate correlation between the impact of demographic growth in Sub-Saharan Africa and the reduced availability of natural resources associated with environmental degradation with increased migration and conflicts (Flavell *et al.*, 2020: 27). In this context, Robert Kaplan's article entitled "The Coming Anarchy" from 1994 was also very influential, in which author identifies climate change as a factor contributing to conflicts in Africa (cited according to Nigelgen, 2018: 11).

Even though validity of the thesis that climate change and the scarcity of natural resources cause violent conflicts has not been sufficiently empirically investigated or confirmed, there is no doubt that climate change in symbiosis with already existing political, economic and social instability can incite unrest and lead to violent conflicts.

This conclusion was also presented in the Report on the Impact of Climate Change of the White House in which it was stated that: "The climate crisis is reshaping our world, since climate change on Earth is occurring faster than at any time in the history of modern civilization (...) Combined with political, social, economic and environmental vulnerabilities, climate change can undermine food, water and economic security", with the claim that the secondary effect of climate change can also be in the form of political instability and conflict (The White House Washington, 2021: 4).

The previously indicated realization that climate change has gained special intensity in recent times was also reflected in the fact that discussions about climate change as a security issue accelerated in the mid-2000s, reaching the epicentre of high politics. 2007 Report by the US Centre for Naval Analysis (CNA), titled "National Security and the Threat of Climate Change" articulated for the first time the thesis that climate change acts as a "threat multiplier" in some of the most unstable regions of the world, causing political wider scale instability (CNA, 2007: 7). Seven years later, this thesis has been modified, which is evident from a new document published by this Centre, which states that climate change will be more than a 'threat multiplier', and that it will act as a catalyst for instability and conflicts, noting that in Africa, Asia and the Middle East, we are already witnessing this scenario, which

⁸⁵ Such trends are economically undermining this region, making it the poorest region in the world. As data from the World Bank indicate, in the last few decades there has been an enormous increase in the number of people living in conditions of extreme poverty in Sub-Saharan Africa, from 278 million in 1990 to 413 million in 2015 and 27 countries in this region are positioned among the poorest countries in the world, with a poverty rate of 30% (World Bank Group, 2018: 1-2).

represents an exceptional security challenge for the governments of these regions (CNA, 2014: 2).

Discussions on the relationship between climate change and security were also brought up to date within the United Nations, for the first time in April 2007 at the meeting of the Security Council. At that time, this international organization officially recognized the connection between climate change and security, which was also pointed out in the coming years, with the United Nations accepting the qualification of climate change as a 'threat multiplier', given its multidimensional impact on security (UN News, 2019).

The European Union is on the same path. In its document from March 2008 the issue of the relationship between climate change and security was problematized for the first time (High Representative & The European Commission, 2008). It was pointed out that climate change should be viewed as a 'threat multiplier' that worsens existing trends, contributes to tensions and instability, with the main challenge stemming from the fact that the countries and regions that are most burdened by climate change are already fragile and prone to conflicts (*Ibidem*, 2008: 3).

The previously stated points to the conclusion that climate change must also be viewed as a particular generator of uncertainty and instability. This indicates that climate changes, especially in the 21st century, are subject to securitization processes, and that such trends coincide with the growing awareness of their multidimensional impact on security. In this way, climate change, both independently and in cooperation with other political, economic and social factors, which it often favours, is profiled as a significant generator of migrations, with forecasts of the intensification of those of a cross-border nature. As pointed out in the White House Report on Climate Change, although currently the majority of people affected by the impacts of climate change remain within their country of origin, it is to be expected that cross-border migration will also intensify, especially where climate change interacts with conflicts and violence (The White House Washington, 2021: 4).

3.2. Climate change as a 'threat multiplier' from the perspective of the countries of the Global South

It is quite clear that the previously presented claims refer, primarily, to countries located in the southern hemisphere and bear the designation of the countries of the Global South, whose security specificities were one of the reasons for re-examining the concept and content of security in the post-Cold War era.

The countries of the Global South, which were previously referred to as the countries of the Third World, became a noticeable international factor immediately after the Second World War, when the processes of decolonization entered the phase of culmination with the recognition of independence of India and Pakistan in 1947 by Great Britain. This was followed by the emergence of a large number of independent states whose security reality, as observed by Amitav Acharya, was determined from the very beginning by the scarcity of resources, demographic explosion, under development and environmental degradation (1997: 304), as well as their predisposition to conflicts of an intrastate character, which since 1945 become the dominant form of manifestation of political violence.

Without questioning the omnipresent impact of climate change, from which obviously no part of the world is spared, and based on what has been presented in the paper so far,

it is evident that the countries of the Global South are reference point in observation of the climate change and its multidimensional impact on security. The aforementioned results from the fact that these countries, as indicated by the referred empirical data, are the most exposed to climate changes, which in symbiosis with political, social and economic insecurities inherent in this part of the world, contribute to the additional complication of the security reality. Therefore, it is not pretentious to conclude that the claim that climate change is a 'threat multiplier' in some of the most unstable regions of the world, located in Africa and Asia, including Middle East, has the strength of an axiom.

Namely, there is a strong correlation between countries and regions that are most vulnerable to climate change and those that are fragile and/or experiencing conflict or violence. Climate impacts can further burden vulnerable communities, increasing the risk of conflict and displacement in the absence of effective prevention efforts, with this risk being more acute in regions with weak government and weak dispute resolution infrastructure (The White House Washington, 2021: 7).

Previously stated is confirmed by data from the Internal Displacement Monitoring Centre (IDMC) from 2014, which indicate that in the period between 2008 and 2012, in 33 out of 36 countries affected by armed conflict, simultaneously recorded displacement caused by natural disasters (IDMC, 2014: 44). Approximately the same trend was maintained in the years that followed, so that in 2020, around 95% of new displacements, caused by conflicts around the world, was recorded in countries that are (extremely) vulnerable to climate change (IDMC, 2021: 96, 97).

Another assumption that authors often point out when problematizing the security aspects of climate change is that climate change will lead to new or more intense scarcity of resources, which due to increased competition for the same can generate conflicts (Huntjens, Nachbar, 2015: 2), and conflicts consequently can generate exodus.

In many parts of the world, due to the impact of climate change, we are witnessing a decrease in arable land, an increasing shortage of (drinking) water, a reduction in food and fish stocks, the destruction of biodiversity, intensified floods and prolonged periods of drought. Bearing in mind the irreversibility of climate change and the inertia in taking sufficient measures to reduce carbon dioxide emissions, we can expect a worsening of all the aforementioned trends, with a very certain disruption of food and water security.

Such trends were precisely the reason for inclusion of the impact of climate change on the scarcity of resources in contemporary consideration of the etiological dimensions of the conflicts. The war in Darfur (Sudan) from 2003 to 2005 and the war in Syria since 2011 were cited as a paradigm of conflicts, characterized by certain Western political officials, international organizations and the non-governmental sector, as 'the first climate conflicts'.

In the case of Darfur, the claim has been articulated that the conflict in this Sudanese region began as an environmental crisis, partly stemming from climate change, with droughts in Sudan identified as one of the main causes of this tragedy (Ningelgen, 2018: 5; Selby *et al.*, 2017: 233).

Analogous to the conflict in Darfur, climate change has been attributed a significant role in the emergence of the civil war in Syria.⁸⁶ Extended drought period from 2006 to

⁸⁶ According to many Western politicians, the Syrian civil war is partly caused by climate change. Former US President Barack Obama claimed that droughts linked to climate change helped fuel the early unrest in Syria, which turned into a civil war. The former Secretary of State, John Kerry, pointed

2011, which preceded the outbreak of the conflict, caused the greatest food shortage. As stated in the UN report from 2011, the drought forced two to three million people to live in extreme poverty (Huntjens, Nachbar, 2015: 2, 3), encouraging mass migration of farmers to urban Syrian centres, already burdened with numerous pressures, which was perceived as a significant contributing factor to political instability in this country (Flavell *et al.*, 2019: 27).

Everything previously said should be kept in mind when considering the factors that contributed to the eruption of protests against the Syrian government, as a kind of prelude to the civil war which produced the largest refugee population in recent time. However, it would be pretentious to attribute the role of a crucial generator of the civil war in this country to the droughts in Syria, especially due to the lack of adequate empirical research that would confirm it.

The case of Syria undoubtedly illustrates how droughts caused by climate change, which have jeopardized access to basic livelihoods, in interaction with other factors of a political, economic and social nature, can contribute to unrest and protests with a tendency to escalate into conflict, but it is very difficult to assess what is the ratio of individual contribution of climate change.

What, however, can be concluded without hesitation is that these conflicts have inaugurated a new era, in which climate change and its impact on the scarcity of resources will be indispensable when problematizing the causes of conflicts as a kind of trigger for (forced) migration, especially in fragile countries of the Global South that are already faced with a lack of resources, poverty and economic insecurity.⁸⁷

The African continent is a glaring example. North Africa and the Sahel are particularly affected by climate change, given that increasing drought, water shortages and overexploitation of land will contribute to soil degradation, which could cause the loss of up to 75% of arable land (High Representative & The European Commission, 2008: 9). Such forecasts are extremely worrying, if one takes into account the fact that agricultural activity is a sector of primary importance for this continent.

In this context, we will refer to the example of the Sahel, where climate hazards are a real concern, since 80% of its population depends on natural resources for their livelihood, which accordingly play a key role in preserving peace and security. The situation is similar in West Africa, whose economy relies primarily on agriculture and natural resources, therefore the struggle for access and control over these resources is a very probable problem which, as pointed out in the UN Environmental Program, is at the root of the constant conflicts that they threaten peace and slow down development (United Nations Environment Programme, 2011: 5).

Southern Africa is not immune to these trends either, where droughts contribute to poor harvests, endangering food security, with forecast that millions of people will face food

out that it was no mere coincidence that just before the civil war in Syria, the country faced the worst drought in history (Selby *et al.*, 2017: 232). The World Bank Report also claims that climate change and drought are a key factor in the Syrian conflict (Ningelgen, 2018: 5).

⁸⁷ There is a correlation between food insecurity and political conflict, in part because both are symptoms of low development. The link between (climate) disaster and conflict is stronger in countries with a high degree of inequality and slow economic growth – food insecurity and resource scarcity are among the most likely explanations for this correlation (Brinkman, Hendrix, 2011: 6).

shortages, which will encourage migration in this region, but also from other regions, via North Africa to Europe (High Representative & The European Commission, 2008: 9).

The Middle East, together with North Africa (MENA region), is the region facing the greatest water scarcity in the world. Twelve of the seventeen countries that are most affected by the scarcity of this resource are located in the MENA region, where 60% of the population faces water shortages (The White House, 2021: 15). Furthermore, it is a region that in the last few decades was profiled as a very prominent stage of international and domestic conflicts, which have caused large refugee exodus.

Asia is no exception, which is faced with the enormous consequences of sea level rise, which directly threatens about 40% of the population living within 60 kilometres of the coast. Water shortages and disruption of agricultural production combined with high demographic growth represent major challenges facing this continent, with forecasts that conflicts over remaining resources and uncontrolled migration will intensify already existing instabilities in this part of the world (High Representative & The European Commission, 2008: 10; United Nations Human Rights Office of the High Commissioner, 2017: 28-32).

The presented paradigmatic synopsis indicates all the complexity of the relationship between climate change, migration and conflict, as well as the difficulties of establishing a direct connection between these variables. Nevertheless, it is not premature to conclude that climate changes that threaten the integrity of the ecosystem, in symbiosis with large demographic growth, will contribute to intensifying the fight over natural resources, which will represent a significant factor in the emergence of conflicts and large migration movements.

Conclusion

Migrations caused by climate change are not a recent phenomenon. Without questioning their centuries-old history, based on what was presented in the paper, we can conclude that they have intensified especially since the second half of the 20th century, along with the gradual, but continuous deterioration of climatic conditions, the causes of which should be sought in the new economic model, inaugurated by the industrial revolution at the end of the 19th century.

The above contributed to the affirmation of ecological and climatic factors as significant generators of (mass) displacement of people around the world. Although the trends of intensification of human mobility due to climate change have become global, they are more pronounced in the countries of the Global South, as indicated by the referred empirical data. This is due to the fact that people in these countries primarily depend on ecosystem services in order to ensure the basic conditions for life and even survival, as well as due to the very weak adaptive abilities of these countries, with fragile political structures, to climate changes and their impacts.

Taking into account the unprivileged position of this part of the world in political, economic and security terms, it is clear that internal displacement, as the dominant form of human mobility caused by climate change, represent an additional security risk for the countries of the southern hemisphere.

Increasing awareness of the impact of climate change on migratory movements, contributed to actualization of their scientific contemplation. In this context, it's important to mention two opposing perspectives, which have generated different, almost irreconcilable

approaches to this phenomenon – alarming and sceptical perspective. The last one, unlike the first perspective, denies the role of climate change as a (particular) cause of human mobility. The unquestionable supremacy of the sceptical perspective, as well as the absence of political will, resulted without recognition of ‘climate migrants’ as a separate category of migrants or give status of ‘climate refugees’. Expectations that they will be granted the status of climate refugees are even less certain. This would provide them the protection under the auspices of the UNHCR. Therefore, people who due to the gradual worsening of climate patterns, decide to move, will do so with little legal protection.

Without questioning the omnipresent impact of climate change, from which obviously no part of the world is spared, and based on what has been presented in the paper so far, it is evident that the countries of the Global South are reference point in observation of the securitization of climate change. The validity of the claim that climate change is a ‘threat multiplier’ and, that will act as a catalyst for instability and conflicts, is confirmed particularly in some of the most unstable regions in Africa, Asia and the Middle East, which are burdened with political, social and economic insecurities.

This confirms the strong correlation between countries and regions that are most vulnerable to climate change and those that are fragile and/or experiencing conflict or violence. The mentioned correlation is also supported by significant empirical research presented in the paper. Also, within the claim that climate change is a ‘threat multiplier’, another important reflection was profiled – that climate change will lead to new or more intense scarcity of resources, which due to increased competition for the same can generate conflicts, which consequently can generate migrations. The war in Darfur (Sudan) from 2003-2005 and the war in Syria since 2011 were cited as a paradigm of this kind of conflict, named as ‘the first climate conflicts’ in the history.

Even it would be pretentious to attribute the role of exclusive cause of the wars in these countries to the droughts and other climate change, what, however can be concluded without hesitation is that these conflicts have inaugurated a new era, in which climate change and its impact on the scarcity of resources will be indispensable when problematizing the causes of conflicts as a kind of trigger for (forced) migration, especially in fragile countries of the Global South that are already faced with a lack of resources, poverty and economic insecurity.

Although it is difficult to determine the role of climate change in making the decision to migrate, it is certain that in the time ahead, they will participate in the migration dynamics as an equal factor to those of a political and economic character, which have been responsible for the positioning of the countries of the Global South among the traditional countries of emigration since the end of Second World War.

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