Van Yüzüncü Yıl Üniversitesi
Sosyal Bilimler Enstitüsü Dergisi
Van Yüzüncü Yıl University
The Journal of Social Sciences Institute
Yıl / Year: 2022 - Sayı / Issue: 58
Sayfa/Page: 40 - 52
e-ISSN: 2822 - 3136

An Evaluation of Climate Change as a Security Problem Through the Structure of the International System

Bir Güvenlik Problemi Olarak İklim Değişikliğinin Uluslararası Sistemin Yapısı Üzerinden Değerlendirilmesi

İlhan SAĞSEN

***** Assist. Prof, Bolu Abant İzzet Baysal University, Faculty of Economics and Administrative Sciences, the Department of International Relations, Bolu/Türkiye.
Dr. Öğr. Üyesi, Bolu Abant İzzet Baysal Üniversitesi, İktisadi ve İdari Bilimler Fakültesi, Uluslararası İlişkiler Bölümü, Bolu/Türkiye

ilhansagsen@ibu.edu.tr
ORCID: 0000-0001-6207-7183

Makale Bilgisi | Article Information
Makale Türü / Article Type:
Research Article/Araştırma Makalesi
Geliş Tarihi / Date Received: 05/11/2022
Kabul Tarihi / Date Accepted: 23/11/2022
Yayın Tarihi / Date Published: 31/12/2022

Citation: Sağsen, İ. (2022). An evaluation of climate change as a security problem through the structure of the international system. *Van Yüzüncü Yıl University the Journal of Social Sciences Institute*, 58, 40 - 52

Atıf: Sağsen, İ. (2022). Bir güvenlik problemi olarak iklim değişikliğinin uluslararası sistemin yapısı üzerinden değerlendirilmesi. *Van Yüzüncü Yıl Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 58, 40 – 52

Abstract

Climate change is an international problem that adversely affects human life in many ways. Especially in the last 40 years, the increase in the frequency and severity of natural disasters in the world has brought climate change to the international agenda. With the redefinition of security threats by the end of the Cold War, climate change was considered a security concern and became the subject of an international negotiation that started to reduce its negative effects. As a security problem, climate change brings many problems with significant environmental impacts. At this point, when considering the climate change-security connection, a multidimensional perspective is required beyond the security perceptions of states, in other words, beyond national security. The climate change-security link requires assessing this issue through migration, energy, and the covid pandemic. Within this context, the main purpose of this article is to discuss how the structure of the international system affects the emergence of climate change, which is a multidimensional issue. The main argument of this study is that climate change, which has started to be considered a security problem, especially in the post-Cold War period, is not only an environmental problem but also has a multidimensional, multi-layered character.

Keywords: Climate change, security, migration, energy, pandemic.

Öz

İklim değişikliği birçok açıdan insan yaşamını olumsuz etkileyen bir uluslararası problemdir. Özellikle son 40 yıldır dünyada yaşanan doğal afetlerin sıklığı ve şiddetinin artması iklim değişikliğini uluslararası gündeme getirmiştir. Soğuk Savaşın bitimiyle beraber uluslararası sistemdeki yaşanan kırılma sonucu güvenlik tehditlerinin yeniden tanımlanmasıyla birlikte iklim değişikliği bir güvenlik kaygısı olarak değerlendirilmiş ve olumsuz etkilerinin azaltılması amacıyla başlayan bir uluslararası müzakerenin konusu haline gelmiştir. Bir güvenlik problemi olarak iklim değişikliği önemli çevresel etkileriyle birçok problemi beraberinde getirmektedir. Bu noktada, iklim değişikliği-güvenlik bağlantısı düşünüldüğünde, devletlerin güvenlik algıları ötesinde, başka bir deyişle, ulusal güvenliğin ötesinde çok boyutlu bir bakış açısı gerekmektedir. Bu nedenle, iklim değişikliği-güvenlik bağlantısı, bu konunun göç, enerji ve covid pandemisi üzerinden değerlendirilmesini gerektirmektedir. Bu bağlamda bu makalenin temel amacı, uluslararası sistemin yapısının çok boyutlu bir konu olan iklim değişikliğinin ortaya çıkmasını nasıl etkilediğini tartışmaktır. Çalışmanın temel argümanı özellikle Soğuk Savaş sonrası dönemde bir güvenlik sorunu olarak ele alınmaya başlanan iklim değişikliğinin sadece bir çevre sorunu değil, aynı zamanda çok boyutlu, çok katmanlı bir karakteri olduğudur.

Anahtar Kelimeler: İklim değişikliği, güvenlik, göç, enerji, pandemic.

Introduction

Climate change is a multidimensional international problem with a multiplier effect that seriously affects humanity negatively. With the increase in the frequency and severity of natural disasters, climate change has been occupying both states and the international public opinion especially for the last 40 years. Scientific studies show that climate change, or in other words, global warming, is the result of man-made actions. Since carbon dioxide is one of the main components of greenhouse gases, the increase in carbon emissions as a result of human actions is seen as the direct cause of climate change. The United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) in its report "*Climate Change 2021: The Basis of Physical Science*" published on 6 August 2021 emphasizes that the boiling greenhouse gas emissions from human activities are responsible for global warming of approximately 1.1 °C since 1850-1900 (IPCC(a), 2021).

In order to understand the reality that human activities cause climate change, it is necessary to first look at the issue systemically. While the increasing population, the desire to maintain high living standards, industrialization, intensive use of scarce resources is seen as the main factors accelerating climate change, the economic model based on conventional fuels and the production/consumption relationship that emerged starting from the industrial revolution is the main cause of human-made climate change. In other words, the capitalist economic system prefers growth to sustainability. For this reason, the increasing pressure on the fertile soil of the globe to forests, from energy sources to minerals in order to ensure this economic growth confronts the world with an ecological crisis.

Beyond the evaluation of the system as the cause of the climate crisis, another dimension of the issue is that natural disasters, the frequency and severity of which have increased especially in the last 40 years, have entered climate change into the state agendas as a security problem. At this point, when considering the climate change-security connection, a multidimensional perspective is required beyond the security perceptions of states, in other words, beyond national security. The climate change-security link requires assessing this issue through migration, energy and the covid pandemic.

In this context, the main purpose of this article is to discuss how the structure of the international system affects the emergence of climate change, which is a multidimensional issue. The main argument of this study is that climate change, which is considered as a security problem especially in the post-Cold War period, is not only an environmental problem, but also a multidimensional, multi-layered character. So, in the first part of the article, especially after the industrial revolution, how the systemic preferences revealed climate change will be emphasized. Then, climate change, which is now considered a security problem, will be addressed in a multidimensional way.

1. Climate Change as a Systemic Problem

Climate change, one of the most controversial issues of the 21st century, is an international problem with a multidimensional and multiplier effect from economy to security, from migration to food. The two most fundamental debates about climate change are within the framework of the question of whether this issue has reality and what its source is. Although it has decreased today due to the influence of scientific studies and reports, these two debates are still important in order to understand the systemic dimension of the subject.

In this context, when the issue of the reality of climate change, which constitutes the basic dimension of the discussions, is mentioned, it is seen that two groups come to the forefront. One of these groups is climate rejectionists or climate skeptics, while the second group is institutions and scientists who study climate change or the reality of global warming. The main arguments of climate skeptics or those who deny the existence of climate change are based on the thesis that the world has experienced periods of warming and cooling in the historical process, and that the process called global warming today originates from this warming period. Beyond that, according to this view, it is claimed that the climate is changing all the time, and this process is described as 'climate change that occurs by natural means'. Natural impacts on climate can include changes in solar energy, naturally occurring water vapor and CO2 in the atmosphere, emissions of volcanic aerosols and greenhouse gases, and cyclical emissions in the oceans. These factors affect the climate by affecting the amount of

solar radiation that reaches the earth's surface, modulating how much heat is held in the atmosphere, or changing the ocean and atmospheric temperature circulation (Leggett, 2018, p. 3).

According to Washington and Cook, there are 4 main arguments for those who deny the existence of climate change or doubt its reality. These are conspiracy theories; fake specialists; impossible expectations; misrepresentations and logical errors. First, climate skeptics claim that the so-called "climategate" event in 2009 proves that climate change is a conspiracy theory. In November 2009, the servers of the University of East Anglia in the UK were hacked, and some emails claimed that global warming was a conspiracy theory. This is one of the reasons why climate change rejectionists claim that the process is a conspiracy theory. Second, another claim of the skeptics is based on a document published specifically by the Oregon Institute of Science and Medicine in 2008 that contained 31,000 self-identified scientists. These people oppose the idea that climate change is human-caused. For this reason, the objectors argue that there is no scientific consensus on the existence and human-caused nature of climate change. However, it is worth noting that only about 0.1% of these 31,000 people are climate scientists, while the others are people in unrelated fields such as computer engineering and medicine. Third, climate change deniers claim that climate models are also unreliable, and they even have an argument such as 'how can scientists predict the climate for years to come when they can't even predict the weather next week?' Fourth, and finally, the skeptics' argument is based on the thesis that climate change occurs naturally. At this point, the claim is that the climate has changed naturally in the past, so current climate change must be natural (Washington & Cook, 2011, p. 43-51).

These skeptical or rejectionist ideas about the reality and source of climate change have decreased considerably today, and scientific studies carried out since the 19th century have proven that climate change exists and that it is also realized by human activities. It was Svante Arrhenius in the late 19th century who first put forward the view that fossil fuels used by humanity could heat the globe and that human activities could cause climate change. In the 20th century, it was Guy Stewart Callender who brought up the issue of human causing global warming in the 1930s (Dessler, 2012, p. 213). In the 1950s, the idea that human actions could change nature and create environmental degradation began to gain acceptance. At this point, an example that affects the international public opinion and shows that the excessive use of fossil fuels will adversely affect both human health and the environment is the London Fog incident that took place in London in 1952. Between 5 and 9 December 1952, a serious air pollution affected London due to the high use of coal. With the effect of windless weather conditions, a dense layer of smoke accumulated over the city (Met Office, The Great Smog of 1952). The negative effects of the incident, which lasted about 5 days, continued for a long time and by the end of the year there were approximately 4000 deaths in connection with this event (Wilkins, 1954, p. 1). In the 1970s and 1980s, with the appearance of acid rain and the detection of deterioration in the ozone layer, the issue of environmental degradation and climate change began to seriously occupy the international agenda (Dessler, 2012, p. 213). In 1976, a special report was published by the World Meteorological Organization (WMO). In this report, the importance of short-term climate change and the natural and man-made causes of change were highlighted. In 1979, the WMO's First World Climate Conference was held in Geneva. At this conference, it was emphasized that the increase in carbon dioxide in the atmosphere can cause the lower atmosphere to gradually warm up (Pittock, 2009, p. 278). The Intergovernmental Panel on Climate Change (IPCC), established in 1988 by the United Nations Environment Programme and the World Meteorological Organization, reveals scientific information on different dimensions of climate change through various scientific studies and reports. In the first IPCC Assessment Report published in 1990, it was revealed that global warming is a serious threat to the world. Apart from this, the report highlighted the role of man as the cause of climate change (Dessler, 2012, p. 207-208).

In addition to this process, in order to mitigate the negative effects of climate change, states adopted UN General Assembly resolution 45/212 in 1990 on the creation of an Intergovernmental Negotiating Committee for a framework convention on climate change (United Nations, 1990), and within the framework of this decision, the World Conference held in Rio de Janeiro in 1992 and today it has launched the negotiation process, which is now entering its 20th year. While it is an opportunity for states to produce solutions with the aim of adapting, it is also an important process to raise

awareness of the international public opinion to change the human impact related to climate change. All these institutionalization activities, international negotiations and scientific studies have played an extremely important role in revealing the reality of climate change, and as a result, approximately 95% of the publications have reached a consensus on the reality of climate change and its human cause. An interesting study on this subject was published by John Cook and his colleagues. Cook et al. in their article "Consensus on consensus: a synthesis of consensus estimates on human-caused global warming", they examined the existing studies. They concluded that the consensus finding of 97% on human-caused climate change in published climate studies is robust and consistent with other surveys of climate scientists and peer-reviewed studies (Cook v.d., 2016, p. 1). Another example of supporting the fact that this global problem is caused by human actions is the IPCC's 2600-page report, which includes a detailed review of published scientific studies. The IPCC has stated that this report has resolved the scientific uncertainty about climate change. In addition, this report predicts that by the year 2100, the temperature will increase by 1.4 ° C to 5.8 ° C and the seawaters will rise between 20 cm and 88 cm due to global warming as a result of human activities (Maslin, 2011, p. 9-10). The IPCC report published in 2021 on the same subject can be shown as an important study. Accordingly, the United Nations (UN) Intergovernmental Panel on Climate Change (IPCC) in its report titled "Climate Change 2021: The Basis of Physical Science" published on 6 August 2021 emphasizes that greenhouse gas emissions from human activities are responsible for global warming of approximately 1.1 °C since 1850-1900. The report, also called the red-coded report, stressed that the climate crisis is worsening in ways that have never been seen everywhere (IPCC(b), 2021).

As can be seen, at the point reached in the debate on the reality of climate change, there is clearly a consensus that the existence of such a problem is real and that this global problem is the result of human activities. In this consensus, the increase in the frequency and severity of natural disasters caused by climate change also has a great share in contributing to the materialization of the problem and the awareness of the international community.

This consensus raises a second debate. If climate change is caused by human actions and preferences, then the question of when and how this impact began is important for understanding the international system connection of the issue. This constitutes the second dimension of discussion of the issue. To answer these questions, it is necessary to look at the connection between climate change and capitalism and the industrial revolution. In this context, the general opinion is that the climate change started with the industrial revolution and then the chosen economic model fueled this problem. Mechanization that started with the industrial revolution, the emergence of an understanding based on production and consumption, population growth and urbanization have intensively increased the need for energy. This increasing need has been met intensively from fossil fuels. The increased use of fossil fuels has caused environmental destruction and deterioration in the structure of the atmosphere. In this regard, while the CO2 rate was 280 ppm before the industrial revolution, it is seen that this rate has exceeded 400 ppm according to 2014 data. Therefore, in general, evaluations in scientific studies are made in the form of comparison before and after the industrial revolution (Başoğlu, 2014, p. 177). One of these studies is the "2019 Global Climate Situation Declaration" published by the World Meteorological Organization in 2019. According to the report, 2019 was the second warmest year ever set, with the temperature level rising by an average of 1.1°C in 2019 compared to before the industrial revolution. Not only the World Meteorological Organization but also the IPCC reports reveal the reference point as the industrial revolution (WMO, 2020, p. 6). IPCC's Special Report on Global Warming of 1.5 °C also emphasized the connection between global warming and human movements and identified the industrial revolution as a reference point. According to the report, human actions have caused approximately 1 °C of warming compared to the pre-industrial period, and if emissions continue to increase at this rate, it is predicted that 1.5 °C will be reached between 2030 and 2052 (IPCC, 2018). In addition, the Global Climate Report published in 2020 by NOAA-National Centers for Environmental Information, which also conducted a periodic study, revealed that the global annual temperature increased by 0.08 ° C every 10 years between 1880 and 1980, and that this increase has more than doubled since 1981, that is, an increase of 0.18 ° C (NOAA, 2020).

These studies show that the systemic change that took place with the Industrial Revolution had an impact on both people's lifestyle and the accepted mode of production (capitalism). In fact, it is

known that in the pre-capitalist period, all kinds of human activities have negative effects on nature. However, when it is considered that the main goal with capitalism is to invest continuously and accumulate capital, it is seen that economic and environmental crises are frequently experienced. The continuous consumption and continuous production cycle caused by the economic system reveals systemic and environmental deterioration such as negative effects on soil, air and water resources, deterioration of the ecological system with chemicals, destruction of large forest areas, continuous increase in pressure on non-renewable resources (conventional fuels), the extinction problem of many living species, population growth and food security being in serious danger (Magdoff, 2017, p. 9-11). In support of this, the connection between the structure of the capitalist system and environmental degradation and ecological crises is important. According to Bookchin, "one might expect that the crisis produced by capitalism's imperative to 'grow or die' will plunge society into a destructive contradiction with the natural world. Capital, in fact, will *have* to simplify all the ecosystems on which the evolution of complexity depends. With its competitive relations and competition, capitalism will have to turn the land into sand, the atmosphere and the planet's waterways into sewage, and heat the planet to a point where the entire climate integrity of the world will radically change due to the greenhouse effect. In short, precisely because capitalism is a competitive and commodity-based economy, it will have to simplify the complex and give birth to a planet that is environmentally incompatible with advanced life forms (Bookchin, 2002, p. 6-11). In other words, the prioritization of capital accumulation in the form of capitalist production both disrupts the natural balance over time and threatens humanity, which constitutes one of the basic parts of nature. In addition to Bookchin, John Bellamy Foster has established the connection between capitalism and climate change or ecological crisis in his book "Vulnerable Planet" and has determined that the main difference between the pre-capitalist period and the capitalist period in terms of the deterioration of nature is that such a destruction has shifted from the regional level to the global level. Also according to Foster, with the advent of the Capitalist world economy, the traditional balance between humanity and nature has changed irrevocably. The new system of production reduced society's dependence on nature and thus the threat of ecological collapse, while at the same time paving the way for extensive environmental destruction (Foster, 1999, p. 40). Türkkaya Ataöv, who has put forward a similar idea, states that capitalism and the environment are two separate phenomena that are opposite to each other. According to Ataöv, as long as capitalism (the capitalist order) exists, even if some moves are made to improve the environment within the framework of this order, the world will become an uninhabitable place in the near future. In this regard, Ataöv said that when the process from the industrial revolution to the present day is examined, the rate of carbon dioxide in the atmosphere has increased by 30%, man releases more nitrogen to nature than all sources and consumes more than half of the fresh, usable water resources. In parallel, the melting of the polar ice caps and global warming will both adversely affect food security on the one hand and the geography will change concretely with the rise of the waters (Ataöv, 2009, p. 12, 21-25). Again, in the book Environmental Policy written by Hamamcı, Keleş and Çoban, capitalism is not only defined as a consumption-based system that damages the environment in this way, but also emphasizes that the contrasts between labor and capital within the framework of capitalist production relations are the main responsible for the deterioration in the ecosystem (Keleş vd., 2012, p. 248).

In this context, while the debate on the reality of climate change and the connection to capitalism continues, on the other hand, both the cyclical change in the international system and the increase in the frequency and severity of natural disasters have raised environment-based security concerns, which is another dimension of climate change. In this respect, climate change has become a multidimensional issue that threatens international security and is added to the security agendas of states.

2. Climate Change as a Security Problem

The end of the Cold War was a serious break in the international system. While this rupture reduces the level of the system from the state to the individual, at the same time all concepts, including security, have been redefined. The climate change-security link is one of the new security concerns that have emerged in this context. Today, security perception of climate change has serious implications for world peace and security. The security effects of climate change include serious risks

related to ecosystems, economy, infrastructure, health, migration and society, starting from human security (Thinktech, 2020, p. 4).

When looking at the relationship between climate change and the concept of security, the main question to be asked is "why has climate change been perceived as a security issue, especially after the Cold War, while in previous periods climate change was seen as a low politics issue discussed under the concept of sustainable development?" In the post-Cold War period, it is seen that security perceptions in the international sense have begun to change. In addition to the concept of national security that was dominant after the Second World War, new security concepts such as individual security, environmental security, energy security, food security were added in the post-1989 period. Thus, beyond the assurances of the security of states and military threats, which are now accepted under the hegemony of realist theory, new questions such as "whose security" and "security against what" have come to the agenda. Now, in the international system, apart from the state, the security of the individual, the society consisting of ethnic identities and the nation has begun to be taken as a basis. As mentioned above, new security issues have been raised in the discussions on the question of security against what. What is meant to be said here is that after the Cold War, the concept of security, whether on the basis of an individual, state or international system, began to be evaluated not only within the framework of political and military threats, but also as an economic, social and environmental phenomenon. In other words, security could not be only defined on the basis of military threats. New security challenges and risks, from migration to international terrorism, from energy security to climate change, started to gain importance in international system (Karaaslan, 2020, s.169). Richard Falk is the first researcher to systematically use the concept of environmental problems and security together. According to Falk, environmental change is a safety issue (Falk, 1971, p. 353). Apart from Richard Falk, the scope of the concept of security has been developed by some authors such as L.R. Brown (1977), R. H. Ullman (1983), N. Meyers (1996) and the concept of environmental security has been grounded (Karakoç & Kovancı, 2019, p. 345). Although environmental problems gradually began to be seen as a security problem during this period, the establishment of an environment-security relationship remained at a marginal level until the end of the Cold War. At the 1988 Toronto Conference titled "The Changing Atmosphere: Implications for Global Security," the effects of climate change on international security began to be recognized. The conference concluded with the conviction that humanity is in an experience that will affect the whole world, not designed and controlled, that will have the most serious consequences after a global nuclear war (de Ville, 2008, p. 176). The climate change-security relationship is shaped in the Human Development Report of the United Nations Development Programme (1994 UNDP). This report has put forward 7 basic security concepts that are interrelated and together constitute individual security. These can be counted as economic security, food security, health security, environmental security, personal security, social security, political security (UNDP, 1994, p. 24-25). In March 2007, two U.S. Senators, Richard J. Dublin and Chuck Hagel, proposed legislation assessing whether and how climate change could be a national security threat. In April 2007, the United Nations Security Council met for the first time to discuss the potential impacts of climate change on peace and security (Busby, 2007, p. 2). In addition, climate change was evaluated within the scope of the 2010 United States Four-Year Defense Planning. According to this document, climate change is causing significant geopolitical impacts such as poverty, environmental degradation and the weakening of future governments worldwide. In addition, climate change will increase food and water scarcity, which will lead to the spread of diseases and increased mass migration. According to this report, while climate change alone does not lead to a conflict, it can have an impact that accelerates instabilities and conflicts. As a result of these situations, extreme weather conditions may lead to an increase in the demand for defense support to civilian governments in the areas of humanitarian aid and disaster response (Mazo, 2010, p. 129-130). The Global Challenges Foundation's 2017 Global Disasters Report focused on many security threats, including climate change, and stated that global warming could spell the end of humanity (Srivastava, 2017, p. 28). Again, in the World Economic Forum's 2019 Global Risk Report, climate change concerns are listed among the global issues. The report also assessed natural disasters of increasing impact and frequency, addressing inadequate measures against climate change and unusual weather conditions (World Economic Forum, 2019). Likewise, world leaders meeting in Davos in 2020

discussed climate-based security concerns. In doing so, the rising temperatures in Australia, the resulting drought and the fires spread by the winds were discussed (Thinktech, 2020, p. 4).

In the context of these recommendations, opinions and reports, the security dimension of climate change has gained importance on the international ground. Since the beginning of the 21st century, many disasters such as droughts, floods, famines and fires in various parts of the world have increased the impact of climate change on the practices and perceptions of international security. In parallel, states have begun to build the bridge between their national security and climate change.

In parallel with these developments, the European Union has also seen and accepted climate change as a security issue and included it in its common foreign and security policy. Because climate change has been seen by the European Union as a multifaceted and spreading threat (Threat Multiplier) exacerbating existing trends, tensions and instabilities. Internationally, the risks from climate change are already real and the effects are being felt. A 2008 report to the Council of Europe, by the European Commission and the High Representative, focused on the effects of climate change on international security, the implications of global warming for Europe's own security, the international security implications and how the European Union would take a stance on this issue. This report reveals the types of problems caused by climate change that occur in various parts of the world and the forms of some of the threats. According to the aforementioned report, these sources of conflict are economic damage; the risk faced by coastal cities and their infrastructure; dispute over sources; territorial losses and boundary disputes; environmental-based migration; situations of fragility and radicalization; tensions over the supply of energy; and pressures on international governance. Within the framework of these forms of climate change-induced conflicts, the High Representative and the European Commission argue that the impact of climate change on international security is not a problem for the future, but that the effects are already experienced in different regions of the world on different scales (European Commission, 2008, p. 8-16).

In this context, the change in the scope and definitions of security after the Cold War has also changed the perception of climate change. As a result of the debates that started especially in the United States of America and spread to the world, climate change has been tried to be "securitized" in this process. The point that needs to be discussed here is whether securitizing the issue, that is, moving from low politics to high politics, will contribute to the solution of climate change. There is a situation that is important in addressing a problem from a security point of view. Is the problem being treated as a military-based security policy or is it being treated as a cooperation-based security policy? If there is talk of collaborative securitization, this will be positive in terms of reducing the effects of climate change and ensuring human security. In the same way, in an environment where states perceive climate change as a matter of national security, a cooperative policy will also contribute to national interests. However, especially at the Copenhagen Summit held in December 2009, it is seen that states are experiencing serious deficiencies in terms of political intentions and implementation. It is seen that there is no serious emission reduction that has been implemented and that an agreement on this issue will not be reached in the near future. In this context, the securitization of climate change will not go beyond providing a basis for the solution of the problem to be discussed only in a different field than creating a ground to contribute to the solution of the problem. It is not difficult to conclude that if the consequences of climate change are not tried to be reduced, it can lead to tensions within and between states. Because climate change will exacerbate the severity of issues such as interstate conflicts, impoverishment, civil wars, water scarcity, drought and food shortages (Sağsen, 2011, p. 10-12).

3. Security Problems Affecting the International System Linked to Climate Change

In this context, climate change as a security problem does not only have consequences on environment, but also it brings with many security problems in the international system. In this regard, climate change adversely affects the international system with its effects on migration, energy and pandemic.

3.1. Climate Change-Migration

Migration is a phenomenon that has taken place for different reasons throughout human history. However, in the international system, migration has begun to be considered as a security problem, starting from the period after September 11 and as a problem that has become widespread

after the Arab Spring. Migration creates a two-way security problem. On the one hand, migration creates negativities for people who have to relocate, and on the other hand, it creates economic, social and security-based problems that target countries face/will face. One of the most important reasons of migration that creates security concerns on humanity is climate change (Öner & Ihlamur-Öner, 2018, p. 1).

Climate-based migration takes place horizontally within the country due to situations such as the decrease in water resources, the destruction of agricultural lands, and the increase in salinity. It is possible to support this with some examples. One of them is sub-Saharan Africa, where farmers are forced to leave their land after being affected by hurricanes and floods (Robin, 2017). Examples of migration movements experienced with the increase in the frequency and severity of climate-based disasters are the displacements that occurred as a result of Hurricane Mitch in 1998, Hurricane Katrina in 2005, Hurricane Aila in 2009 and Typhoon Haitan in 2013 (Yılmaz & Navruz, 2019, p. 261). Another example of climate-based conflicts and the migrations they have created has been experienced in Darfur. There has been a significant crisis in Darfur, where there are water resources and agricultural land adversely affected by climate change. As a result of this crisis, 2.5 million people had to migrate, and 450 thousand people lost their lives (Sağsen & Karaaslan, 2015, p. 196-197).

But it will be climate-based vertical migrations that will affect real international law and international security. What is at stake here is the existence of countries where the habitats have disappeared or the migration of people who have lost their living spaces with the rise of the waters to other countries. One of the best examples to explain that climate-based migration can have vital consequences and create significant security problems is the V20 (Vulnerable-20) group. The V20 group, which emerged during the Paris Climate Agreement negotiations in 2015, consists of states that are at risk of losing their habitats. For these states, the goal of "keeping the temperature rise to 2 degrees Celsius by 2100" agreed during the climate change negotiations has not been sufficient. In this context, in order to reduce the risk of losing their countries, V20, with the support of the European Union, has added the target of "keeping the temperature increase between 2 and 1.5 degrees until 2100" to the agreement (Ekşi, 2016, p. 18).

There are three basic situations for people who will have to relocate as a result of losing their habitat. The first is that the legal status to be given to these people remains unclear, that is, the problem of naming the people who will have to migrate of this type. Although there is no consensus on climate-based migrants, the terms "climate refugees", "environmental refugees" or "climate migrants" are used for climate-based migrants, while the migration movement is defined as "climate-based migration". The second is that the issue of what kind of status they will have in the country where they will take refuge or how they will be granted citizenship status because they will no longer be able to return to their country remains a question mark. The third issue is that there is not yet an inclusive agreement or legal text on climate-based migrants in the global sense. All these negativities show that it is inevitable that migrations that will take place as a result of increasing natural disasters due to climate change will create problems and legal dilemmas that will affect international security (Ekşi, 2016, p. 18; Sağsen, 2020, p. 306-307).

3.2. Climate Change-Energy

It is possible to say that climate change and energy are in a two-way interaction. The first interaction is that one of the most important factors leading to the occurrence of climate change is the preferred types of energy, that is, the use of widely used conventional (fossil) fuels (Oil, natural gas, coal). In this regard, considering that energy consumption increased by 40% between 1990 and 2008 and 80% of this energy was met from fossil fuels (World Wildlife Foundation- WWF, İklim Değişikliği ve Enerji) and at the same time the use of fossil fuels increased the amount of CO2 in the atmosphere by 116% in the last 150 years, it can be easily said that the use of fossil resources in energy is the main cause of climate change (Akova, 2003, p. 55). This relationship between climate change and energy affects the international system in a multidimensional way. On the one hand, energy-induced climate change has been the subject of a global struggle within the UN to ensure the continuity of life on the planet. On the other hand, it would not be wrong to say that the states acted in line with their national interests in the negotiation process and took a position not to lose their place in

economic competition. In this context, the most typical example is the attitude of the US and China in the climate change negotiations and their attitudes towards each other. In addition, in the energy transformation and transition to renewable energy, which are shown as one of the solutions to climate change, states do not produce efficient policies to reduce the effects of climate change because they do not want to bear the costs of energy transformation. This contradiction between global requirements and national priorities causes security concerns in many aspects of the international system, from migration to the economy, from health to dependencies.

The second interaction between climate change and energy is that renewable energy sources, which constitute one of the basic elements of the fight against climate change, emerge as an important phenomenon in the foreign dependence of countries in energy and at the same time in ensuring the energy security of actors. In other words, one of the most important problems today is the issue of ensuring the energy security of the actors in the international system. Ensuring energy security is one of the biggest problems faced by states in the 21st century. At this point, while climate change has brought renewable energy to the agenda as a solution, on the other hand, it has been the main resource used by states to ensure energy security, in other words, to reduce their dependence on foreign countries. Because foreign dependence on energy is not only an economic or current account deficit issue. At the same time, the state's dependence on foreign countries in general and foreign dependence on energy in particular narrows the actors' field of action in foreign policy and at the same time emerges as a security issue (Sağsen, 2020).

In short, climate change and energy/energy security are seen as mutually influencing phenomena. While fossil fuels cause climate change, the existence of climate change affects the foreign policy preferences of states as a fundamental converter affecting energy security of states and their position in the international system.

This two-way interaction between climate change and energy shows that climate change, renewable energy and energy security of states constitute a tripod with a multiplier effect that concerns the security of the international system. Another impact of these pillars that needs to be discussed in terms of international security is the relationship of renewable energy with capitalism, which is seen as an important solution to combat climate change. It is possible to say that the main feature of capitalism is that although it often enters into crises, it finds a way out of these crises itself. At this point, the first crisis was the so-called 'Long Depression', which lasted from 1873 to 1896. The Economic Crisis of 1929 (defined as the greatest crisis faced by capitalism), the Oil Crisis of 1973, the East Asian Economic Crisis of 1997, the Crisis of 2008 are the main ones. It would not be wrong to say that capitalism enters into crisis when it cannot find new markets that can increase capital and property revenues and expand its productive capacity (Aydın, 2003, p. 7). At this point, renewable energy, which is seen as the basic phenomenon in the fight against climate change, is in a sense the way out of the crisis that capitalism has entered. Renewable energy will unleash a new struggle for sharing, stimulate reproduction, and create a new market. This shows that renewable energy will become a new tool of international competition by states rather than a factor that will mitigate the impact of climate change. This will undoubtedly emerge as a new security concern for the future of the world.

3.3. Climate Change-Pandemic

One of the issues of international security directly or indirectly affected by climate change is health. While climate change threatens human security by adversely affecting rainfall patterns, temperatures, water resources and agricultural areas, it also triggers diseases, viruses and epidemics that the world has witnessed closely in the recent period. Many negative events such as melting glaciers, deterioration of ecosystems, forest fires due to the effect of climate change lead to the release of many viruses. For this reason, various environmental problems, especially climate change, will cause new possible epidemic diseases. For instance, in today's World, Humanity has to be faced the serious effects of Covid-19 pandemic. In this way, it can be said that the COVID-19 pandemic has created considerable threats and challenges to security of individuals, societies, states and international system (Karaaslan and Demirel, 2021, p. 126).

In this sense, various studies are being carried out to reveal the link between climate change and epidemic diseases. One of them was made by Carlson and his friends. In this study, it is claimed that climate change will trigger new viral transmission between species. According to Carlson et al., between 10,000 and 600,000 species of the virus found in wild mammals have the potential to spread to the human population. Many of these viruses have not yet been largely identified and are found in the wild. In other words, at least 10,000 types of viruses have the power to infect humans, but currently the vast majority are quietly roaming wild mammals. However, changing climate, land uses, and human intervention in nature are the basis for the spread of isolated viruses. This will inevitably make it easier to spread to people (Carlson vd., 2022, p. 555). The study by Lemieux et al. found that the risk of viral spread increased in Arctic Lake sediments due to the impact of climate change (Lemieux vd., 2021, p. 3). In another supporting study, Hao Huang argues that environmental changes caused by human actions within the framework of rapid urban development in Asia are related to the emergence of zoonotic viruses such as Covid-19, SARS, MERS and Ebola. Stating that the current pandemic is a result of human behavior, Huang points out in his study that one of the important factors for pandemics is climate change (Huang, 2020, p. 11).

The recent discovery of 28 new virus species in thousand-year-old glaciers and the projection that this number will increase with the melting of the glaciers show that thousands of new viruses will spread to the world and pose a threat in the next 50 years due to the effect of human-induced climate change.

Conclusion

This article argues that climate change, which is considered a security problem especially in the post-Cold War period, is not only an environmental problem but also a multidimensional character. In doing so, in order to support the basic argument, first of all, the debates on the existence of climate change were emphasized, and then the source of climate change, which is caused by human actions, in other words, its relationship with capitalism, was revealed. In this context, it should be said that climate change is not only an issue that adversely affects rainfall patterns, water resources, agricultural areas, causes the melting of glaciers and increases the water level, but also a phenomenon that makes its presence felt with its multiplier effect in the international system. In this regard, in addition to its environmental dimension, climate change is a factor that directly affects international security such as migration, energy and pandemic.

In this sense, various conclusions and findings can be reached as a result of the research. As the first of these, it is possible to say that the issue of climate change has not yet been seriously addressed in terms of actors in the international system. This is evident from the debate on the reality of climate change, which is still going on to a lesser extent. This can be seen from the discourses and tweets of Donald Trump, the former President of the United States. The withdrawal of the United States, which is one of the two most polluting countries in the world along with China, from the Paris Climate Agreement during the Trump era is the most striking example of this lack of seriousness. Secondly, climate change has occupied the agenda as a problem that is caused by human preferences after the Industrial Revolution and that adversely affects all of humanity depending on the chosen economic model. However, apart from the last 40 years, climate change has been on the agenda of technical workers and scientists. The main reason for this is that during the Cold War, climate change was accepted as a low politics issue and did not come to the international agenda. Thirdly, climate change has entered the security agendas of states as a security problem in the international system with the increase in the severity and frequency of natural disasters. However, it is not possible to limit this security concern to the increase of environmental disasters. When climate change-security link is mentioned, a problem that will affect the international system in a multidimensional way with the multiplier effect should be understood. Within this framework, climate change should be evaluated with all its systemic consequences from economy to energy transformation, from energy security to dependencies, from migration to pandemic and civil wars, and it is necessary to develop a global perspective by considering all these factors together.

In this sense, it is necessary to operate global governance to combat such a security problem. While doing this, states should think locally and act globally. In order to reduce the negative effects of

climate change, international negotiations within the UN should be advanced with sincere measures. From the point of view of international law, it is urgently necessary to conclude a comprehensive agreement for the people who will be affected by climate change and to determine the necessary international status. The solution of climate change and similar global problems should be evaluated within the framework of the concepts of global benefit and risk sharing and sustainable development far beyond the interests of states. Only in this way *will it* be possible to protect against the security consequences of climate change to a certain extent.

Kaynakça

Akova, İ. (2003). Dünya enerji sorunu ve yenilenebilir enerji kaynaklarının kullanımı. *Coğrafya Dergisi*, 11, 47-73.

Ataöv, T. (2009). *Kapitalizm ve çevre*. İleri Yayıncılık.

Aydın, M. K. (2003). Kapitalizm ve kriz. *Kocaeli Üniversitesi Sosyal Bilimler Dergisi*, 6, 1-10.

Başoğlu, A. (2014). Küresel iklim değişikliğinin ekonomik etkileri. *Karadeniz Teknik Üniversitesi Sosyal Bilimler Enstitüsü Sosyal Bilimler Dergisi*, *7*, 175-196.

Bookchin, M. (2002). Reflections: An overview of the roots of social ecology. *Harbinger: A Journal of Social Ecology*, *3*(1), 6-11.

Busby, W. J. (2007). *Climate change and national security: An agenda for action* (CRS No.32). Council of Foreign Relations. https://www.cfr.org/sites/default/files/report_pdf/ClimateChange_CSR32%20%281%29.pdf

Carlson, C. J., Albery, G. F., Merow, C., Trisos, C. H., Zipfel, C. M., Eskew, E. A., Olival, K. J., Ross, N. & Bansal, S. (2022). Climate change increases cross-species viral transmission risk. *Nature*, 607, 555-562. https://doi.org/10.1038/s41586-022-04788-w

Cook, J. et al. (2016). Consensus on consensus: a synthesis of consensus estimates on human-caused global warming. *Environmental Research Letters, 11*(4), 048002.

de Ville, G. (2008). Climate change: bad news for environmental security. *Environmental Law Review*, *10*(3), 175–180. https://doi.org/10.1350/enlr.2008.10.3.020

Dessler, E. A. (2012). *Introduction to modern climate change*. Cambridge University Press.

Ekşi, N. (2016). İklim mültecileri. *Göç Araştırmaları Dergisi*, *2*(2), 10-58.

European Commission. (2008). *Climate change and international security*.

Falk, R. A. (1971). *This endangered planet: prospects and proposals for human survival*. Random House.

Foster, J. B. (1999). *The vulnerable planet: a short economic history of the environment*. Montly Review Press.

Huang, H. (2020). Covid-19 and the environment: reflections on the pandemic in asia. *EnviroLab Asia*, 4(1), Article 2. https://scholarship.claremont.edu/envirolabasia/vol4/iss1/2

IPCC(a)- The Intergovernmental Panel on Climate Change. (2021). Climate change widespread, rapid and intensifying. https://www.ipcc.ch/2021/08/09/ar6-wg1-20210809-pr/

IPCC(b)-The Intergovernmental Panel on Climate Change. (2021). *Climate change 2021: the physical science basis, Summary for Policymakers*.

Karaaslan, H. (2020). Uluslararası güvenliğe bir tehdit olarak başarısız devletler. H. Karaaslan ve M. Demirel (Ed.), *Güncel uluslararası güvenlik sorunları* (s. 167-206) içinde. Nobel Akademik Yayıncılık.

Karaaslan, H., Demirel, M. (2021). Bir uluslararası güvenlik sorunu olarak covid-19 ile mücadelede uluslararası iş birliği: güvenliğin bölünmezliği ilkesi kapsamında bir değerlendirme.

Güvenlik Bilimleri Dergisi, 2. Uluslararası Güvenlik Kongresi Özel Sayısı (İstihbarat ve Güvenlik), 115-138.

Karakoç, D. Y., Kovancı, E. (2019). Bir güvenlik tehditi olarak iklim değişikliği. *Assam Uluslararası Hakemli Dergi*, 344-357.

Keleş, R., Hamamcı, C. & Çoban, A. (2012). *Çevre politikası*. İmge Kitapevi.

Leggett, A. J. (2018). *Evolving asssessments of human and natural contributions to climate change*. CRS Report. https://sgp.fas.org/crs/misc/R45086.pdf

Lemieux, A., Colby, G. A., Poulain, A. J. & Aris-Brosou, S. (2021). Viral spillover risk increases with climate change in High Arctic lake sediments. *Proceedings of the Royal Society: Biological Science*, *289*, 1-11. http://doi.org/10.1098/rspb.2022.1073

Magdoff, F. (2017). Kapitalizmin ikiz krizleri: ekonomik ve çevresel krizler. H. Tanıtran (Ed.), *Enerji Emperyalizmi* içinde. Redakaiyon Kitap Yayıncılık.

Maslin, M. (2011). *Global warming*. Dost Kitapevi.

Mazo, J. (2010). *Climate change: how global warming threatens security and what to do about it*. Routledge.

Met Office. The great smog of 1952. https://www.metoffice.gov.uk/weather/learn-about/weather/case-studies/great-smog

National Centers for Environmental Information. (2020). *Annual 2020 global climate report*. https://www.ncei.noaa.gov/access/monitoring/monthly-report/global/202013

Öner, A. Ş. & Ihlamur-Öner, S. G. (Eds.). (2018). *Uluslararası ilişkilerde göç*. Der Yayınları.

Pittock, A. B. (2009). *Climate change: the science, impacts and solutions* (2nd ed.). Earthscan.

Robin, J. P. (2017, 14 September). Kritalina Georgieva: global warming can add 100 million poor people by 2030. World Bank. https://www.worldbank.org/en/news/opinion/2017/09/14/global-warming-can-add-100-million-poor-people-by-2030

Sağsen, İ. (2020). Bir uluslararası güvenlik meselesi olarak iklim temelli göç. H. Karaaslan ve M. Demirel (Ed.), *Güncel uluslararası güvenlik sorunları* (s. 289-310) içinde. Nobel Akademik Yayıncılık.

Sağsen, İ. (2020, 27 Ağustos). Enerjide dışa bağımlılık güvenlik ve dış politika meselesidir. Anadolu Ajansı. https://www.aa.com.tr/tr/analiz/enerjide-disa-bagimlilik-guvenlik-ve-dis-politika-meselesidir/1954717

Sağsen, İ. (2011). *İklim değişiminin güvenlik boyutu ve ortadoğu'ya etkileri*. ORSAM. https://www.orsam.org.tr//d_hbanaliz/Analiz_40_tr.pdf

Sağsen, İ. ve Karaaslan, H. (2015). İklim değişikliği fırat-dicle havzası'nda savaş sebebi olabilir mi?. *Akademik Ortadoğu*, *10*(1), 189-219.

Srivastava, L. (2017). *Catastrophic climate change in global catastrophic risks 2017*. Global Challenges Foundation.

Thinktech STM Technology Thought Center. (2020). *Climate crises and national security.*

The Intergovernmental Panel on Climate Change- IPCC. (2018). Global warning of 1.5°C. https://www.ipcc.ch/site/assets/uploads/sites/2/2022/06/SPM_version_report_LR.pdf

United Nations Development Program. (1994). *UNDP Human development report*.

United Nations. (1990). UN General Assembly Resolution 45/212. https://www.un.org/documents/ga/res/45/a45r212.htm

Washington, H. & Cook, J. (2011). *Climate change denial: heads in the sand*. Earthscan.

Wilkins, E. T. (1954). Air pollution and the London fog of december, 1952. *Journal of The Royal Sanitary Institute*, *74*(1), 1-21. doi:10.1177/146642405407400101

World Economic Forum. (2019). *The Global risks report 2019*.

World Meteorological Organization. (2020). *WHO statement on the state of the global climate in 2019* (WMO-No. 1248).

World Wildlife Foundation. İklim değişikliği ve enerji. https://www.wwf.org.tr/ne_yapiyoruz/iklim_degisikligi_ve_enerji/

Yılmaz, F. H. & Navruz, M. (2019). Küresel iklim değişikliği, iklim mültecileri ve güvenlik. *Assam Uluslararası Hakemli Dergi*, 255-270.

Araştırma ve Yayın Etiği Beyanı

Araştırmacı verilerin toplanmasında, analizinde ve raporlaştırılmasında her türlü etik ilke ve kurala özen gösterdiğini beyan eder.

Yazarların Makaleye Katkı Oranları

Makale tek yazarlı olarak hazırlanmıştır.

Çıkar Beyanı

Makalenin hazırlanmasında herhangi bir çıkar çatışması bulunmamaktadır.