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From The Global Warming to Global Chaos

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Abstract
Risk of conflict between states in the international relations does not arise only from the struggle for power and sovereignty. Obstacle of access to vital resources and natural disasters also create potential cause of conflict. It is undeniable fact that while prosperity and wealth bring peace and tranquility to societies, poverty and famine paves the way for conflict.
Climate changes which cause major problems we face now are also seen as a result of global warming. The most basic needs and life conditions for people are being threatened by drought, wildfires, hurricanes and floods caused by the global warming in these days. It is not possible for any country to solve the problems caused by global warming alone therefore full international cooperation is required in this regard.
However many governments do not still believe everything explained by scientists about the global warming is real or too much important. On the other hand, the economic and political competitions among states make them be reluctant in order to take necessary steps for the common goal. Scientists has insistently warning that an increase in temperature 1,5° C above the pre industrial level would cause irreversible dramatic changes on earth. Moreover, situation would get worse when the feedback effect of existing greenhouse gases in the atmosphere is amplified and we will experience more and more bad effects of the global warming.
Considering this dangerous situation, under the leadership of the UN, international initiatives continue to stop global warming since 1992. However, these efforts seem too far from successful yet. The clear acceptance of this failure was made by the UN Secretary General Antonio Guterres at the COP27 conference held in Egypt on 6 November 2022. As the Secretary General said that "we are in the fight of our lives and we are losing". It is not a realistic attitude to place all hopes on the success of an absolute international cooperation and sit back in fighting against the global warming. It is necessary that governments have to take all their own measures with this regard in advance.
Considering climate anomalies which we are currently experiencing will get worse and unpreventable, states have to manage to adapt to climate challenges and must increase their resilience to cope with this reality. Otherwise, global warming may turn into a global chaos that cannot be overcomed and controlled.
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1. Introduction

"We have a choice: Collective action or collective suicide" (António Guterres)

Climate change is not only an atmospheric event, but also the destiny of humanity. Events in recent years have revealed a prevailing danger called the global warming that threats all human civilization. The problem we face today stem from the result of the capitalist production relationship that has been carried out since the industrial revolution. The effects of climate change caused by global warming are becoming more and more evident as the frequency and intensity of disasters increases therefore a number of people have to migrate from their home due to drought and water scarcity increasing year by year. 225 million people are expected to displace in Asia and Pacific due to disasters, as an impact of climate change[1].

The main factor of global warming is the carbon emissions we emit into the atmosphere as a result of the fossil fuels that we have used abundantly since the industrial revolution. This carbon condensation which we call greenhouse gas in the atmosphere causes the sun's rays to be absorbed more and the air warms up. This increase temperature in the atmosphere accelerates the melting of ice on earth that means less sunlight is reflected back to

[1] https://www.adb.org/news/225-million-displacements-asia-and-pacific-due-disasters-impact-climate-change-deepens#:~:text=A%20report%20by%20the%20Asian,hazards%20from%202010%20to%202021

space due to the shrinking icy areas on the earth's surface so the planet get warm faster. More warming atmosphere means more melting ice and more greenhouse gases and this goes on as a feedback amplifier. This process has caused the temperature in the earth's atmosphere to increase by 0.6°C since the industrial revolution. Even this relatively small increase temperature in atmosphere has caused many disasters we have encountered. Although for many people, global warming and its frightening consequences are considered as a prediction that will never come true but these are undeniable scientific facts unfortunately (Wallace-Wells, 2020: 4). It is understandable for a person being indifferent to some risks that are unlikely to be encountered in his or her lifetime. Because it is normal to give priority to urgent problems would be faced and imminent dangers that need to be taken care of in life. However, the human civilization must be aware of the impending danger coming from global warming and take all necessary precautions in time. Scientists agree that our world has experienced at least five mass extinctions due to global warming and climate changes, and during these periods 75-80% of living things and plants in the earth had been destroyed. The main reason for these extinctions is the warming of the earth over 5°C due to the increase in carbon dioxide (CO_2) gas in the atmosphere (Brannen, 2017:72). We are coming to face a similar danger today. Today, we are seriously concerned about the global warming and its negative consequences that caused by increase in CO_2 in the atmosphere. Even the 0.6^0 C temperature increase in the atmosphere is strong enough to causes great climatic changes and anomalies which we are facing today. In fact, the continuity of life on earth is based on extremely delicate balances. A small deviation in these values will cause the balance to be disturbed and the existence of all living species in the world to be endangered.

Since achieving a successful result on a global scale requires the cooperation of all countries, efforts to keep carbon emissions at a certain limit are continued under the leadership of the UN. However, the measures to be taken necessitate the change of production and consumption habits that are both very costly and not very attractive. Most of the politicians do not want to endanger their political careers with such unpleasant practices in their tenures, and they are not sincere in taking steps to implement the necessary measures. Many states do not believe that global warming is real or they think it has made too much exaggerated (Nordhaus, 2013: 34). In addition, many states consider that limiting fossil fuels for energy needs will cause a regression in the economic development race and it will not be in the interests of countries. Considering these approaches, it will not be realistic to expect full international cooperation for success in solving the problem. However if we could not stop adding greenhouse gases to the atmosphere results will be catastrophic for all countries and human being. (Gates, 2021:5).
The truth is, the world needs more energy to keep developing. However, in order to stop global warming, this energy must be obtained from clean sources which do not emit carbon into the atmosphere. Finding sufficient new energy resources, technological transformations for their production and use, and radical changes in our consumption habits on an individual basis are among the things must be done. This is not easy to achieve all these restrictions on a global scale and nobody expect to see them in the near future. For this reason, all countries have to be prepared for inevitable negative effects of the global warming, while supporting the coordinated international efforts to cope with this formidable problem.

It is a fact that a more warmed world means abnormal climate changes, ecological problems, drought, and food crises. Drought and famine will cause millions of climate refugees which causes many social and economic turmoils on a global basis that unable to overcome. This will turn into serious security problems for all states. The problems will not only be limited to the country in which they occurred but spill over entire region and take on a global character. Although this situation necessitates close cooperation and helping each other among states for a solution, it will be unlikely to achieve mutual assistance such a global chaos environment. This study aims to analyze security environment created by the global warming and to reveal measures that states can take with their own means. In this regard, most of the states continue the necessary preparations in advance to enhance their resilience against possible climate challenges. For example, US President Barack Obama signed the Executive Order in 2013 called "Preparing the US for the impacts of Climate Change".

In the preparation of this article analysis of data obtained from literature review was applied, in addition scientific reports and observed climate events were taken into account. In the first part of the article, international initiatives and expectations for the prevention of global warming are discussed. The scope and implementation results of the international agreements such as the Kyoto Protocol and the Paris Agreement are also evaluated in the same chapter. In the second part, the problem of extreme heat and drought as a result of global warming are examined. In this section, problems caused by lack of clean drinking and potable water at homes, as well as matter of famine created by water shortage that needed in agriculture be addressed. As a result of climate changes havoc and bad effects of excessive precipitation and floods in settlements is reviewed in the third section. In the fourth chapter, wildfires caused by extreme heat and their consequences are evaluated. The conclusion section contains the summary and the measures to be taken.

2. International Efforts On The Global Warming

Current scientific data show that if global warming cannot be stopped at a certain limit, all human beings and living things in earth will face great disasters. It is essential that all states must act in full cooperation and implement the measures completely to be taken in order to avoid catastrophic results that will affect all countries without exception.

The increase in CO_2 which causes warming in the atmosphere is stem from the increasing economic development in the world since the industrial revolution. The use of coal and fossil fuels in industrial production has brought states in Europe to a superior position against the eastern empires. The energy dependence of civilization has followed a pattern that states need more and more energy in parallel with their development and growth. Meeting the energy need with relatively easy to find and cheaper fossil fuels such as wood-coal-petroleum caused more carbon emissions into the atmosphere. It is imperative to be broken this destructive cycle between development and the need for fossil-based energy.
Since development and progress cannot be given up, there is only one option left; while abandoning the use of fossil fuel to stop carbon emissions into the atmosphere, finding new clean energy resources. If we fail to achieve this, it is expected that the global warming will exceed over 4°C by 2100 according to projection models, and large part of the world will become uninhabitable due to warming, desertification and floods (Vince, 2009).

At this point, the UN and other scientific organizations agree that environmental damage on earth caused by industrialization triggers irreversible disasters. The scientific fact is that the main cause of the global warming is high concentration of the greenhouse gases in the atmosphere, and the only solution is to stop releasing of these gases into the atmosphere completely on a global basis. In order to secure the international common interests and to prevent climate problems experienced on a global basis a full cooperation among states is necessary. Upon the indisputable scientific evidences between the global warming and carbon emissions released into the atmosphere an international effort for solution has been initiated. The United Nations Framework Convention on Climate Change (UNFCCC) was adopted in 1992 to form the basis of the global response to the problem of climate change. The convention entered into force in 1994 with the participation of 194 countries. The ultimate goal of the convention is to stop the accumulation of greenhouse gases in the atmosphere at a certain level by preventing harmful human-based impact on the climate system.

UNFCCC defines general rules, principles and obligations as a framework agreement. The convention recognizes that the global climate system is a common entity, affected by carbon dioxide and greenhouse gas emissions from industry and other sectors. However, the convention accepted that it would not be realistic to stop the use of fossil fuels abruptly in order to reduce carbon emissions. They have flexed the implementation process with the provision that "such a level must be reached within a period of time that will allow ecosystems to adapt naturally to climate change that will not threaten food production and allow economic development to continue in a sustainable manner".Therefore it can be said that the UNFCCC has constituted a fundamental step forward in the struggle against climate change. Despite these efforts, as the greenhouse gas emissions continue to increase on a global scale and negative effects of the climate change are becoming more and more noticeable, the Kyoto Protocol (KP) started to be negotiate among parties to the convention for undertaking binding obligations. After two and a half years of negotiations, the protocol was accepted at the conference held in Kyoto in 1997 and entered into force in 2005.

In the first commitment period between 2008 and 2012 for carbon emission reduction, the protocol targetted a reduction of 5% below the 1990 level. Although conferences were held in 2007 and 2009 in order to implement the protocol and determine climate policies and commitments for the following period, no consensus could be reached. Because most of the countries did not want to give up easy and abundant fossil resources from which they meet their energy needs. A consensus was reached at the conference held in Doha/Qatar in 2012, and it was decided that the parties would reduce their carbon emissions by at least 18% before 2020 compared to 1990, unlike the first commitment period. The "Doha Amendment", which had to be ratified by 144 signatory states in order to enter into force, could go into effect only after eight years. However, all the commitments by the parties remained as a lip service and no decrease in the carbon emission was achieved, on the contrary the amount increased by 1.4% from the amount in 2017. (Wallace-Wells, 2020:49).

Another important initiative against destructive effects of the global warming is the Paris Agreement. The Paris Agreement which was accepted with the approval of 195 countries at the United Nations Convention Climate

Change Conference (UNFCCC) in December 2015 and entered into force in 2016, is the first multinational agreement on the climate change.

The agreement sets out a global action plan to be implemented in dealing with the climate problem. The long-term goal of the agreement is to keep global warming well below 2°C compared to pre-industrial revolution and even limiting it to 1.5°C. The agreement sends a clear message to all parties, investors, businesses, non-governmental organizations and statesmen that the global transition to clean energy is indispensable. The agreement is not limited to good wishes and commitments, but also set forth a dynamic mechanism aimed at monitoring and assessing the situation. It is planned that starting from 2023, the parties will meet at the "global situation assessment" summits every five years to evaluate the progress in emission reduction, compliance and support provided. Parties have legal obligations aimed at fulfilling their contributions (Intended Nationally Determined Contribution-INDC). The agreement introduces a serious accountability framework including bi-annual monitoring of greenhouse gas inventories and national developments. The agreement offer a solidarity package to address the needs of climate finance and damages caused by negative effects of climate change. Adaptation with the Paris Agreement has become a global target for the first time including capacity building, resilience to climate change and reducing vulnerability against effects of global warming.Transition to an economy where low-carbon resources are used efficiently requires radical changes in technology, energy and economy. The transition to a low-carbon economy has been expected to have renewable energies in the countries, and to revive investments and innovations in this field. However the mechanisms to stop carbon intensity which established by international agreements are far from being realistic because they are not properly meet development concerns of nations.

Despite all the optimistic expectations, only a reduction in carbon emissions is not sufficient to keep the warming in the world's atmosphere below 2°C. Even if we fully stop the emission of the carbon gases now we will continue to experience the effects of warming because greenhouse gases stay in the atmosphere for a long time. At the same time, technologies called the carbon capture and storage which create negative carbon emissions are needed to reduce excess carbon in the air. However, this technology is still in infancy and need to be funded by governments. Although developed countries have been benefiting from the advantages of abundant use of fossil fuels for centuries, they have worse score than others in fulfilling international commitments to reduce the carbon emission. Governments are far from pursuing consistent policies on avoiding the global warming. However, when rich countries call for decarbonization, poor countries also ask for funding being able to do so. In addition, successor governments are likely to follow a new programme contrary to the previous governments' policies on the global warming. Trump, who considered the Paris Climate Agreement signed by his predecessor President Obama, as a betrayal declared that his country was withdrawing from the agreement shortly after he took office. However, one of the first actions of the new President Biden administration was to get the United States back to the Paris agreement.

After the beginning of Russia-Ukraine war in February 2022, Russia reduced gas supply which caused a major energy crisis in Europe. Upon this development most of the EU countries are preparing to put coal-fired power plants for electricity into operation instead of natural gas-fired power plants. This completely eliminates the chances of success of the Paris agreement. Despite the well-intended international attempts to prevent global warming, the structural problems of the capitalist system and competition over the global power prevent this success. Although political leaders put a special emphasis on the issue of global warming in their public statements, they do not produce any result but words. Economic development and competition between states compel countries to keep using cheaper and easier fossil fuels for their energy needs. It is not possible to disregard efforts of the UN and other organizations to struggle for the global warming. However, it would be unrealistic to attribute success in the struggle against the global warming only to the results of international efforts and wait doing nothing. Such international initiatives are far from expected results as they could not provide incentives for motivation to participating countries. It is understood that it is too difficult to achieve expected results on the issue with the international efforts that have been going on for more than 20 years. The clear acceptance of this failure was admitted by the UN Secretary General Antonio Guterres at the COP27 conference held in Egypt on 6 November 2022. The reality is that the goal of keeping global warming below 1.5 degrees has already become impossible. Considering failure of the international efforts, states must try to increase their resilience by taking necessary measures with their own means for upcoming challenges of the global warming.

3. Extreme Heat, Drought and Famine

One of the first and important consequences of the global warming is extreme heat we face. Human being is the

only living species that can survive in all kinds of extreme weather conditions in the world through clothing and technological means. However, if the necessary precautions are not taken in temperature 5^0-10^0 C above the seasonal normals can be fatal for all living species including people. There have been some instances of how serious the consequences of heat weather could be. The heat wave in Europe in the summer of 2003 killed 70,000 people (Robine, Cheung, Le Roy, Van Oyen, Griffiths, Michel, Herrmann, 2008:171-178).It was reported that a total of 55,000 people died in the extreme heat of the summer of 2010 in Moscow (Wallace-Wells, 2020:45).

In the summer of 2018, heat waves raised thermometers to 42°C in Los Angeles and 50°C in Pakistan to 53°C in Algeria. In July and August 2021, it was reported that the air temperature in Iraq and Tunisia exceeded 50 °C [1]. In June 2022, Iraq had to struggle with temperatures exceeding 50^0C [2]. Unusual heat waves scorched Europe in July and August in 2022 therefore temperature soared to above 40^0 C in Spain, France and the United Kingdom. Extreme heat wave killed more than 300 people in Spain and Portugal, while thousands of people were evacuated from their homes due to the wildfires[3].

People living the Middle East, Africa and South Asia where located in the hottest region of the planet, and also constitute the belt of poor states, could not benefit from comfort of air conditioning in hottest days in the summer. Most of the world's population still lives in cities. The UN estimates that 2/3 of the global population will inhabit in cities by 2050.

High concrete buildings and asphalt absorb and store heat from ambient during day time, releasing of this heat make temperature risen at night. Cities that form a closed space make life difficult with the effect of "heat island" and provoke an increase in deaths caused by heat.

Even in the case of full implementation of international measures, unfortunately, extreme temperatures and climate anomalies will continue to keep its negative effects. Governments should take special precautions to protect children and elderly people who are vulnerable and weak against extreme heatwave. It would be necessary to exempt people in a certain age group from the obligation to go to school and ofice, and provide some conveniences to ensure that they are in comfortable environments as much as possible. During months of extreme heat, school and working hours should be regulated, and time spent outdoors must be reduced especially during periods of intense sunshine. In big cities where the population is overcrowded, the green areas and parks that the public can benefit from should be enlarged and multiplied. City planning should be revised accordingly. It is important to carry out training and awareness programs through social media on how to protect the public from extremely hot weather.

Unsteady precipitation and seasonal changes caused by global warming lead to considerable decrease in clean water resources in the world. Although 71% of our world is covered with water, only 1% of it is potable and usable (Wallace-Wells, 2020:95). Most of the usable clean water on earth is fed by streams and rivers from snow and glaciers as a result of seasonal melting. The fresh water resources on earth are disappearing more and more because of the climate changes. Data show that by 2100, more than 40% of the glaciers in the Himalayas and 70% of the snow cover in the Alps will melt[4]. These developments are clear evidence that water scarcity will get worse in coming years. Actually, according to estimation by the National Geographic, even small amount of this clean water resources (0.007%) is sufficient for the world population up to 7-9 billion people. However, the basis of the water scarcity lies in the fact that this amount is not evenly distributed all over the countries. While some countries and regions have abundant water resources, some are not as lucky as others. The Middle East, Asia and some African countries are among the places with the most water scarcity in the world. People in many African countries have to live with 20 liters of water per day[5]. It is estimated that the number of people suffering from water scarcity in Asia will reach over one billion by 2050.
Undoubtedly, all burden of water shortage would be put on to low-income people in these countries. In addition, the inadequacy of the water distribution system, water leaks, pollution of water resources, irregular urbanization

[1] https://www.trthaber.com/haber/dunya/tunusta-hava-sicakligi-50-dereceyi-asti-601535.html#:~:text=D%C3%BCnyan%C4%B1n%202'nci%20en%20s%C4%B1cak%20noktas%C4%B1&text=Tunus'un%20g%C3%BCney%20s%C4%B1n%C4%B1r%C4%B1%20yak%C4%B1nlar%C4%B1ndaki,i%C3%A7in%20%22rekor%22%20say%C4%B1ld%C4%B1%C4%9F%C4%B1%20
https://www.ntv.com.tr/galeri/dunya/irakta-sicaklik-golgede-50-dereceyi-asti-buz-talebi-patladi,13FPYYs3ZEywogk0jL7owg
[2] https://www.cumhuriyet.com.tr/haber/irakta-hava-sicakligi-50-dereceyi-asti-1017621
[3] https://www.bbc.com/news/world-europe-62.163.070
[4] https://www.theguardian.com/environment/2019/apr/09/two-thirds-glaciers-alps-alpine-doomed-climate-change-ice
[5] https://water-for-africa.org/en/fields-of-activity.html?month=202004?month=202001?month=202005

policy are other factors that increase water scarcity. In some cities more water is lost than is given to the houses due to water leaks in the infrastructure. While the rate of water leakage is 16% in the USA, this rate rises up to 40% in Brazil. It is highly possible according to the World Bank data that, possibility of access to fresh water in all cities may decrease by 2/3 in 2050. It is highly possible according to the World Bank data that access to fresh water in all cities may decrease by 2/3 in 2050[1]. When we compare to other freshwater resources we see that underground water and lakes are in a worse condition. In the last century, many of the world's great lakes (Aral, Mead, Poopo, Chad and others) have shrinked by 80-90% due to evaporation and water withdrawal for land irrigation. The careless use of underground water resources for a long time brought them to the point of exhaustion. For the underground waters, which used to be extracted from a depth of 100 meters, now it is necessary to go two or three times deeper. Although we feel the water shortage more at our daily needs at home, individual consumption is not the main reason of this scarcity. Since private water consumption accounts for a very small proportion of water scarcity, it is wrong to seek the solution of the problem by restricting individual water consumption. For example, the amount of water required to meet the needs of 9 million people in South Africa is equal 1/3 amount of water used in grape fields for wine production. The entire public water consumption is only 10% of the total water usage in California[2]. Most of the fresh water resources in earth are used in food production, industry and agriculture. Considering 71% of current fresh water resources are used for agricultural irrigation, governments should make the plans to end traditional irrigated agriculture ways and turn them into the contemporary methods. Otherwise, we will face a danger of not being able to find clean water at homes and industry. In order to save water in agricultural usage, while improving drought-resistant plants and seeds farmers should be encouraged to cultivate these kinds of plants. In spite of the fact that 2,5 tons of water is used just for a hamburger and, 1,85 tons water for a half-pound steak, trying to restrict daily use of water in homes to deal with water scarcity is nothing but a deluding. Restriction of individual water usage creates a more favorable environment for many epidemics due to the poor hygiene conditions rather than saving water thus posing a great threat to public health.

All living things need water to survive so lack of access to adequate clean water for people would bring about the use of contaminated and uncontrolled water sources that increase risk of epidemic diseases which may paralyze the public health system. In order to save water more for increasing human needs in growing cities, governments should abandon irrigated farming methods and take necessary measures for preventing leaks in the infrastructure of water distribution system. As a strategic resource water is also considered by states one of the main security concerns which cause conflicts and wars. Long-water scarcity caused by reduced water resources or increased demand for water can easily lead individuals or governments to conflict. Water scarcity and disputes over the access to clean water especially over the shared river system, are among the main reason to conflicts between states (Klare, 2019:112). For example, Israel does not hesitate to use military force for years against neighboring Arab countries due to disputes arising from water problems. The water shortage and drought in Syria was one of the leading factors that sparked beginning of the civil war. The "Hedasi" dam built by Ethiopia on the Nile River caused a great reaction by Egypt and Sudan. When the cooperation efforts for sharing of water collected by the Hedasi Dam do not yield results, Egypt and Sudan begin to threat of use force against Ethiopia.
One of the primary tasks to be done by governments regarding water which will be one of the urgent problems in the future, should be to protect and develop existing water basins. Moreover, diligent and careful water policies need to be developed.Green vegetation will help keep water easier in the basins and will reduce water loss by preventing evaporation. Having contamination of streams and rivers feeding lakes and dams with industrial wastes and agricultural fertilizer waste should be avoided. Especially in cities, water distribution infrastructure should be improved and water leaks should be prevented. Many coastal countries that lack fresh water resources meet most of their water needs by desalination of sea water. However, because of the desalination process is still very expensive, states must encourage technological developments in this area.

Another problem that the warming world will face is famine. The problem of famine stems from drought and the decrease in arable land suitable for agriculture, as well as the difficulties in meeting more demand due to the increased population. As highlighted in other chapters, famine threatens poor people in underdeveloped countries even more. As the world's population increase, more food sources will be needed. According to UN projections, by 2050 the world will need twice as much food as it does today. Grain products have held a very large proportion in human nutrition for centuries. However, 1°C increase in the warming of the planet causes 10% decrease in grain productivity. An increase of 4°C in 2050 will mean a 40% decrease in total grain production. In addition, 75 billion tons of fertile soil is losting every year in the world due to drought, storm and floods.

[1] https://www.worldbank.org/en/topic/water/publication/high-and-dry-climate-change-water-and-the-economy
[2] https://www.ppic.org/publication/water-use-in-california/

Some of the world's arable lands are rapidly becoming desert, and the agricultural belt suitable for grain production shifts toward the north, approximately 257 km every 10 years[1]. If warming reaches 2°C, the around the Mediterranean, Pakistan, most of India and Australia will turn into the drought zone. In a press conference held in 2017, UN Secretary-General Guterres warned of hunger for South Sudan and called for the international community to take immediate action for the 20 million people under threat of hunger in Somalia, Nigeria and Yemen[2]. Significant drop in grain production will lead conflict and turmoil, especially in countries whose economy is mainly depend on agriculture. The situation will be much worse in countries whose need for agricultural products depends on imports. Since scarcity of agricultural products will be a problem for all countries in the world, exporter countries would prefer to stock them for hard times rather than to sell their products abroad. Therefore countries will not be able to import these products even if they have money as in the past. The only way for governments is to develop their agricultural policies in order to reach a self-feeding potential.

Another problem created by drought and famine is climate refugees, which will reach enormous numbers. A large number of climate migrants from countries where hit by long-term drought, famine and floods would create many problems on both national and regional basis. It is expected that the number of climate migrants may reach one billion people by 2050 that is quite a huge amount to deal with it. (Pogue, 2021:103). However, it will not be possible to find a place that will embrace these people with compassion due to the widespread climate turmoil everywhere. This uncontrolled wave of immigration will cause many social and economic chaos wherever it goes.

In 2015, the "Climate Change Report" was prepared by the Pentagon. In the report, Pentagon stated that global warming is a priority national security issue for the United States. The report emphasizes that the United States have to be prepared for climate-related disasters and wars in advance. Pentagon also evaluates that there would be huge mass migration movements from the regions affected by drought, and "survival" wars would break out to protect water and energy resources (Onay, 2015: s.89-98).

Similarly, in the "climate migration report" (draft) prepared in the USA in 2021, it is stated that climate change not only weakens food and economic security, but also would cause conflicts due to the displacement of people, loss of livelihoods. The report also highlights that unbalance political structures and weak governments are exacerbating the problem more. Considering close relationship of the issue with national security, U.S. President Biden made the National Security Advisers prepare a report on climate change and its impact on migration[3].

It is known that famine and drought caused by global warming are a result of unusual atmospheric events. Today, however, preventable famine tragedy has being experienced, due to the mismanagement and confrontational policies in some African countries. Refugees, especially children, who had to leave their homes due to armed conflict and civil wars are under a great threat. In addition to the famine that has intensified in some countries such as Somalia, Congo, Chad, Central Africa, Syria, Yemen and Afghanistan with poor economic conditions, armed conflicts have completely paralyzed the production processes and left millions of people facing hunger. Dictatorial governments in these countries also hinders international initiatives for the ending of conflicts and bringing peace. In the civil war between the Houthis and the Yemeni government forces in Yemen since September 2014, the country has come to the brink of complete destruction, and millions of people who had to flee from their homes and villages. The survival of these people depends only on the food aid from international community. According to UN data in October 2022, 85,000 children have already died in the refugee camps because of malnutrition. 19 million Yemenis still need urgent humanitarian assistance but UN aids are far from below what required[4].

4. Excessive Rainfall and Floods

Another climate anomaly created by global warming is destructive floods caused by excessive and sudden precipitation. Although precipitation is commonly perceived as the solution of drought but it is meant here is a water disaster that creates unavoidable harms on people, properties, and vital infrastructures. Mainly hurricanes and unexpected heavy rainfall cause floods. Floods may easily turn into deadly natural disaster everywhere in the world. The increase in evaporation in parallel with global warming causes sudden and excessive precipitation.

[1] https://www.researchgate.net/publication/284.513.484
[2] https://www.etharrelief.org/yemen-crisis-emergency-appeal
[3] https://www.whitehouse.gov/wp-content/uploads/2021/10/Report-on-the-Impact-of-Climate-Change-on-Migration.pdf
[4] https://www.unicef.org/press-releases/yemen-acute-hunger-unprecedented-levels-funding-dries

Scientific data show that if warming increases by only 1.5° C, the damage caused by excessive precipitation and floods may increase by 160-240%. In July 2021, the death toll from floods in Germany/Bavaria exceeded 170[1]. In August of the same year, more than 70 people died due to heavy rains in the Western Black Sea Region of Turkey[2].

More than 480,000 people were evacuated due to floods and landslides in Bangladesh in May 2022[3]. In May 2022, 1.1 million people have been affected in India because of the heavy rains and floods. 418 people have died, 946 are injured and more than 450.000 people are evacuated. In Niger, between 3.6 and 4.4 million people may go hungry in 2022 due to no rain in the expected season[4].

The most recent example of heavy rain took place in Pakistan. Long lasting heavy rain in June 2022 result more than 1600 deaths, affected more than 33 million people and left 8 million people homeless. The floods have destroyed homes, roads, bridges and corps. These people, who had to leave their homes, need urgent drinking water and food supply. Since the floods covered all the lands and towns in the region, hunger and contagious disease broken out. The Pakistani government became incapable of tackling with such major problems and has needed a large amount of foreign aid.

It is estimated that floods, which are seen as a climate anomaly caused by global warming, will be experienced even more frequently and intensely in coming years. Although it is not possible to stop natural disasters but by taking some precautions to avoid its destructive effects is likely. It is vital that banning to settle in and near risky stream beds, and to evacuate previously built buildings in such places as fast as possible. In accordance with the topographic analyses, people living in flood risk areas must be evacuated and resettled to the safer regions. Undoubtedly, transportations, shelters and other kind of needs for these people have to be prepared in advance until their permanent locations are completed. Rehabilitation of river beds that frequently threaten settlements should be given priority. Stream beds, bridges and roads on them should be improved and strengthened regularly according to flood mitigation plans. Rivers running through urban areas could be diverted by canals to away from settlement areas. Floodwalls, floodgates and evacuation routes in urban areas are the main precautions must be taken against heavy floods. Undoubtedly, early warning systems are important to carry out rescue safely for the people living in risk areas.

5. Wildfires

Global warming also increases the number and severity of forest fires on the earth. A higher temperature will cause more destructive and more frequent wildfire. Because hotter air makes forests more combustible by absorbing moisture from plants. (Gate, 2021:33). With ignition of dryed brush and trees, wildfires easily are quick spreads and too difficult to control. Most of people prefer to make their homes near forests and live in rural areas where more quiet than city life. Increasing forest fires due to global warming pose a threat for people and their properties lived in rural areas, nearby forest.

The “Thomas Fire” that occurred in California in 2017 pushed 100,000 people have to evacuate their homes. The "Woolsey Fire" in Los Angeles and California in November 2018 caused 295,000 evacuations and 85 deaths. The wildfire occurred in California in 2018 was extremely devastating that destroyed 95% of the houses in the town of Paradise, 26,000 people from the town had to flee to safer areas (Pogue, 2021: 146). In the fire that broke out in Muğla/Turkey in August 2021, a total of more than 66,000 hectares of forest area was ash. The next year in June 2022, 3,500 hectares of forest area was destroyed by the wildfire that broke out at the Marmaris region in Turkey.

Scientists explain that if the warming will be above 4°C, the fire season will be four times worse. When trees burn, they release their carbon into the atmosphere which increase the carbon level in the air and make the situation worse. Causes of forest fires can be natural events or can also be human-caused. Statistics show that four out of every five forest fires are caused by careless human behavior. Smoking or incompletely extinguished campfire cause of many forest fires each year. Considering this situation, it is necessary to take measures to

[1] https://www.aa.com.tr/tr/dunya/almanyada-sellerde-olenlerin-sayisi-171-e-yukseldi/2310268
[2] https://www.amerikaninsesi.com/a/sel-olenlerin-sayisi-70-e-cikti-47-kayip-araniyor/6004141.html
[3] https://reliefweb.int/disaster/fl-2022-000217-bgd
[4] https://reliefweb.int/disaster/dr-2022-000210-ner

minimize the risk of forest fire. These measures could be grouped under the heading activities of protective, preventive and extinguishing. The best way to fight forest fire is to prevent starting of fire. Fire risk assessments should be made according to the features of forest areas and precautions should be taken for each forest area according to their characteristics. In addition to forest maintenance, establishing fire safety roads and lanes are among the best measures to prevent fire from spreading and take it under control easily. It might be necessary to apply some restrictions for picnics and camping, especially during the summer seasons when forest fires are intense. To be prepare better for fire fighting, personnel, tools and equipment must be ready every times at a sufficient level. Last but not least, using immediately fire-fighting aircraft and helicopters is the best way to prevent forest fires from getting out of control and spread. Because it is almost impossible to intervene in a forest fires immediately from land which start in remote areas.

6. Conclusion

Global warming is a scientific fact that threatens all life on earth. There is no option to ignore or disregard it. The main cause of global warming is increasing greenhouse gases in the atmosphere. The main source of greenhouse gases is fossil fuels, which we have been using increasingly since the industrial revolution. However, due to the indispensable relationship between development and energy dependence, it is not easy to give up on easy and abundant fossil resources. Feature of being globality of the problem necessitates full international cooperation for a solution. Despite the international efforts continuing since 1992, no concrete progress has been achieved for 20 years on the measures against climate change. The clear acceptance of this failure was made by the UN Secretary General Antonio Guterres at the COP27 conference held in Egypt on 6 November 2022. The Secretary General said that "we are in the fight of our lives and we are losing". It is likely that the struggle to keep global warming below $1,5^0$ C has failed.

As scientists warn that global the warming above $1,5^0$ C would bring about irreversible changes in the world's ecological system. The gases from the fossil fuels initiate devastating climate impacts. Abnormal climate events we face today are giving us a warning that we insist going to wrong direction which ending to absolute climate disaster. However, the UN still emphasizes that it is necessary to be persistent for this struggle. Despite all these failures so far it is worth continuing the struggle to avoid the planet from worse climate results. However, it would not be wise to wait for achievement only from international efforts on the global warming. States taking into account dangers arising from the global warming, have to put some measures into practice with their own means in advance. These measures help to enhance resilience of states against the upcoming climate disasters and prevent events from getting out of control which also increase the chances of success by international efforts. Some of the measures outlined under the headings in this article are as follows. First of all, new way of searching for meeting energy needs from renewable clean energy sources must be implemented rather than fossil fuel sources. Encouraging technological innovations to stop the greenhouse gas emissions at every stage of production and consumption should be achieved. The most obvious effects of global warming is extreme heats, drought and famine. In order to save water especially in agriculture, modern farming methods should be used instead of traditional irrigated agriculture. Incentives in agriculture should be given to drought-resistant plants rather than exportable products. The existing water resources and basins should be protected, and more effective water distribution methods should be implemented in cities. Population movements should be restrained by providing food and other social assistance for people living in areas affected by long lasting drought. "Early warning" systems should be established and improved for natural disasters such as excessive precipitation, floods and storms. Governments should make evacuation and rescue plans for natural disasters and have personnel and materials ready to use at any time. Private and public buildings especially in stream and river beds where there is a flood risk must be removed. The most important rule in fight against wildfires is to prevent the fire from starting. Public education and awareness about prevention of wildfires is very important. It is also essential to use firefighting aircraft and helicopters in order to intervene and control the fire early.

The fact is that there is no possibility of stopping the global warming easily and returning planet back to its normal state, despite all international efforts. Considering this fact, it is essential for states to prepare and adapt themselves for new climate challenges as soon as possible.

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