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RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

Understanding the Climate-Conflict-Migration Nexus: Immigration from Climate-Conflict Zones to Turkey

İklim-Çatışma-Göç Bağını Anlamak: İklim-Çatışma Bölgelerinden Türkiye'ye Göç

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Abstract
Regardless of the level of development, all countries are affected by the negative consequences of climate change, and economic, environmental, and social consequences emerge accordingly. Climate change is now being considered as a development and security problem. The main reason for this is that climate-related extreme weather events cause disasters, and that climate change is a threat multiplier for conflicts as it increases the struggle for scarce natural resources. This paper attempts to explain migration to Turkey from Afghanistan, Pakistan, and Bangladesh based on climate-induced internal displacement data using the Foresight Model. The study focuses on whether it is possible to predict migration from these countries by using the Foresight Model based on the comparison of the limited data with the IDMC data. Immigration was examined in three countries, Afghanistan, Pakistan, and Bangladesh, with the exception of India, which was compatible with disaster-induced internal displacement IDMC data, by comparing DGMM data on illegal migrants apprehended with YÖK data on international students. It is concluded that a minimalist approach is more appropriate to explain climate induced migration to Turkey, and the micro and meso factors should also be considered based on the Foresight Model. IDMC, DGMM and YÖK data are compatible with each other, and there is a need for comprehensive data, including these data in climate-induced migration forecasts.

Keywords
Climate change, Migration and conflict, South Asia, Vulnerability, Security

Öz
Gelişmişlik düzeyinden bağımsız olarak tüm ülkeler iklim değişikliğinin olumsuz sonuçlarından etkilenmektedir ve bu doğrultuda ekonomik, çevresel ve toplumsal sonuçlar ortaya çıkmaktadır. İklim değişikliği artık bir kalkınma ve güvenlik sorunu olarak ele alınmaya başlanmıştır. Bunun temel sebebi iklim ile ilişkili aşırı hava olaylarının afetlere yol açması yanında, iklim değişikliğinin kıt doğal kaynaklar için mücadeleyi arttırmasıyla çatışmalar için bir tehdit çarpanı konumunda olmasıdır. Bu makale Afganistan, Pakistan ve Bangladeş'ten Türkiye'ye göçü iklim kaynaklı yerinden edilme verilerine dayanarak Foresight Modelini kullanarak açıklamaya çalışmaktadır. Bu çalışma, Foresight Modelini kullanarak mevcut sınırlı veri ile IDMC verisinin karşılaştırılmasına dayanarak bu ülkelerden göçün tahmin edilmesinin mümkün olup olmadığına odaklanmaktadır. Afganistan, Pakistan ve Bangladeş olmak üzere Hindistan hariç söz konusu üç ülkeden göç, IDMC ülke içinde yerinden edilmelere ilişkin verisinin Göç İdaresi'nin yakalanan düzensiz göçmen verisi ve YÖK uluslararası öğrenci verisi ile uyumludur. Minimalist yaklaşımın Türkiye'ye iklim kaynaklı göçü açıklama da daha uygun olduğu ve Foresight Modelindeki mikro ve mezo faktörlerin de dikkate alınması gerektiği sonucuna ulaşılmıştır. IDMC, Göç İdaresi ve YÖK verisi birbiri ile uyumlu olup, iklim kaynaklı göçü tahmin etmek için bu veriler dahil kapsamlı verilere ihtiyaç bulunmaktadır.

Anahtar Kelimeler
İklim değişikliği, Göç ve çatışma, Savunmasızlık, Güney Asya, Güvenlik

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Introduction

Climate change and its consequences have been one of the most pressing issues on the international agenda since the last quarter of the twentieth century. The global average temperature has already risen by around 1.1°C in the last 150 years when compared to the pre-industrial period (EEA, 2019). The Climate Change Report, published by the Working Group 1 of the Intergovernmental Panel on Climate Change (IPCC) in August 2021 within the scope of the 6th Assessment Report (AR6), reveals that not only the global average temperatures, but also the negative effects caused by extreme weather events related to climate change will increase in terms of area and speed (IPCC, 2021). Significant security risks emerge as a result of this issue at the global, national, regional, and local levels. Due to the level reached by the results of the changes in the climate system, natural resources are damaged. For this reason, besides the inability to provide water and food security, especially scarce natural resources are adversely affected, and conflicts arise.

Temperature increases will lower product yields, agricultural output will decline, and those working in the agricultural sector will lose their jobs, resulting in food shortages. A vast number of people throughout the world still lack access to safe drinking water, and rising temperatures and decreasing annual precipitation will further reduce drinking water availability. Food and water supply issues, on the other hand, will result in a rise in poverty and pandemic illnesses. All of these issues will result in the emergence of new migrant movements known as climate refugees or climate migration.

Today, the world is increasingly faced with mass migrations, wars and violence due to climate-related disasters. Disasters are severe disruptions with far-reaching human, material, economic, or environmental consequences that the affected community cannot handle on its own (UNHCR, 2021). Sudden-onset disasters are linked to "meteorological hazards including tropical cyclones, typhoons, hurricanes, tornadoes, blizzards; hydrological hazards including coastal floods, mudflows; or geophysical hazards including earthquakes, tsunamis, volcanic eruptions" (UNHCR, 2021). Furthermore, the Cancun Agreement defines slow-onset events, which include desertification, biodiversity loss, land and ecosystem degradation, ocean acidification, and sea level rise (United Nations, 2010, p. 6).

In the studies carried out by the World Bank and the United Nations (UN) Office for Disaster Risk Reduction (UNDRR) in 2020, it was emphasized that disasters due to climate change, the COVID-19 (Coronavirus) pandemic and conflicts between countries have led to the loss of decades of gains (UNDRR, 2020, p. 2; World Bank, 2020, p. xi). This issue has important consequences in the environmental, economic and social context.

Although no country or region is protected against the aforementioned effects of climate change, the people in developing countries that do not have sufficient capacity to adapt to these effects are more vulnerable because the livelihoods of these countries are more sensitive to natural disasters such as drought and flood. Extreme weather events have had the greatest impact on Mozambique, Zimbabwe, and the Bahamas in 2019, as well as Puerto Rico, Myanmar, and Haiti between 2000 and 2019. Between 2000 and

2019, it is estimated that 475,000 people died as a result of climate change, with a global loss of 2.56 trillion dollars (Eckstein et al., 2021, p. 5). Droughts in Africa and Brazil have been exacerbated by rising temperatures, as have severe heat waves in India, fires in Australia, Greece, and Turkey, as well as floods and storms in Bangladesh, China, Turkey, and Germany.

In the 5th Assessment Report (AR5) prepared by the IPCC, it is stated that inequality will grow in both developed and developing countries. In the IPCC's Special Report on Global Warming of 1.5 Degrees, it was stated that these communities, whose economic activities are based on agriculture, had to migrate from their rural areas due to the increase in temperature and water stress (IPCC AR5/WGII SPM, 2014; IPCC SR1.5, 2018). Net migrant countries are typically low-income African and Asian nations such as Syria, Bangladesh, Sudan, Yemen, and Afghanistan. Climate change, however, is not just a problem in the South or in specific countries; people in North America and Europe are also damaged and forced to migrate as a result of climate change. It should be noted, however, that climate change will have a substantial impact on developing countries, which have limited capacity to deal with the consequences. Furthermore, climate change will have a significant impact on more vulnerable groups, such as children, women, immigrants, the disabled, youth, and the elderly who have lower resilience. As a result, when the effects of climate change become more severe, it is more likely that immigration from these countries will increase.

Climate change's negative effects, as well as the security and migration issues they cause, are high on the agenda in Turkey and other countries. Turkey, as part of Mediterranean Europe's southern belt, is vulnerable to climate change, with rising temperatures and decreasing precipitation. This situation has a negative impact on water resources, food production, rural development, and exacerbates regional disparities (7th National Communication of Turkey, 2018). Furthermore, due to its geographical and socio-cultural characteristics, Turkey is notably vulnerable to human mobility, affecting both the population and the economy directly and indirectly affecting neighbouring countries. In addition to this, some of the climate-vulnerable countries may be important in Turkey's foreign policy due to humanitarian considerations, historical affinities, or being Ottoman subjects namely Turkic Republics and Balkan states.

There has been a considerable amount of literature published on climate change and Turkey. Climate models and climate-induced damage are generally the focus of these studies. Furthermore, some studies address the effects of climate change in Turkey such as impacts on health (Şeker et al., 2020), the resilience infrastructure of Turkey (The World Bank, 2019), vulnerabilities and resilience (Ulku, 2014), potential effects of climate change on energy, tourism, forests, water resources and living conditions (Sen et al., 2017; Şen, 2013), and societal perception (KONDA, 2019). To the best of our knowledge, there is no other study that tries to analyse the migration from climate-affected South Asian countries to Turkey based on limited data using the Foresight Model. Using the Foresight Model, this article tries to explain migration to Turkey from some South Asian countries based on climate-induced displacement.

This paper begins with the conceptual framework and the methodology on climate security, resilience and refugees. Climate change, conflict proximity, climate refugees,

minimalist and maximalist approach, and the Foresight Model are also covered in this section. Following that, international agreements are examined to cover the link between climate change and migration, and solutions. UN 2030 Agenda and Sustainable Development Goals, Paris Climate Agreement, Sendai Framework for Disaster Risk Reduction 2015-2030 and Global Compact for Migration are examined to understand the relation between climate change, migration, and climate security related issues. Based on the IDMC, Council of Higher Education (YÖK) and Directorate General of Migration Management (DGMM) data, the impact of climate change on migration from some South Asian countries to Turkey is examined using Foresight Model.

Conceptual Framework

The term "climate security" refers to the serious risks and threats posed by climate change, which directly or indirectly endanger people's lives, the continuity of ecosystems, and the welfare of countries, as well as actions and policies designed to reduce the level of vulnerability to the negative effects of climate change (Trombetta, 2008; Dellmuth vd., 2018: 3). Climate security related issues are negotiated under documents such as the UN 2030 Agenda and Sustainable Development Goals (SDGs), the Paris Climate Agreement, the Sendai Framework for Disaster Risk Reduction, and the Global Compact for Migration. (United Nations, 2015a, 2015b; UNFCCC, 2015; Global Compact for Migration, 2018).

The desire to increase resilience in the face of the growing threat of climate change is the primary reason for the issue's importance in the international arena, particularly at the UN. Resilience is a concept associated with humanitarian aid that denotes the ability to cope. The United Nations defines resilience as a systems or community's capacity to resist and absorb hazards while mitigating their consequences in a timely and accurate manner, and 'adaptation' as the process of mitigating the effects of actual or anticipated climate change or avoiding harm and increasing benefits (UNHCR, 2021). Extreme weather events, the number, frequency and severity of which increase due to climate change, and disasters such as droughts, floods, landslides and fires are increasing. For these reasons, economic development is adversely affected, urban infrastructures are damaged, water and food security are disappearing, and the struggle and conflict for scarce resources has increased, and many people have become climate refugees or climate migrants and have to leave their places of residence (IPCC AR5 WGII SPM, 2014).

Although migration is carried out for many different reasons mentioned above, these factors can be grouped as socioeconomic, political and environmental factors in general. While economic structure, income, and unemployment are important factors; political reasons, particularly the issue of security and freedom, can lead to conflicts. Environmental factors such as storms, droughts, and floods caused by excessive temperature increases, as well as weather-related factors, are also important reasons for migration. Today, environmental issues are increasingly being linked to migration and displacement, making the issue of climate change and migration more prevalent.

Immigration and environmental changes have been associated since the 1980s (Hinnawi, 1985). Climate change has an impact on international and internal migration, defined as the movement of people from their home country to settle permanently or

temporarily in another country, whether voluntary or forced (IOM, 2004, p. 33). Globalization, transportation, and technological advancement have all contributed to an increase in international migration. In the discussions of this topic, the usage of immigrant and refugee concepts are frequently used interchangeably. However, these are different concepts. According to UNHCR's approach, refugees are people fleeing the torture and conflicts they face due to religion, race, nationality, political opinion or membership in a particular social group, and they seek to reach a safe area by crossing national borders. Refugees' return to their countries will pose a problem in terms of their life safety. Therefore, they are protected by international law according to the 1951 Refugee Convention. In this respect, being defined as a refugee is very important and includes rights (UNHCR, 2010; p. 14, 2015, 2020b, p. 20; Zetter, 2007). However, those displaced as a consequences of climate factors are not considered refugees under international law. Environmental factors, on the other hand, can combine with other factors to reach a level that endangers human life. These people are not protected, because the definition and criteria of climatic or environmental displacement and being a refugee within this scope are not established internationally or nationally. Not all people who are forcibly displaced and cross the border are legally considered refugees.

Another concept, migrant, is used to describe people who have chosen to move in order to improve their living conditions, not because their lives are directly in danger, and it is possible for these people to return to their countries (UNHCR, 2015). The distinction between forced and voluntary migration stems from the fact that forced migration is motivated primarily by political considerations such as conflict and oppression, whereas voluntary migration is motivated primarily by economic factors (Betts, 2009, p. 4). However, it should not be forgotten that the difference between voluntary and forced migration is not always so obvious in practice. Although the 1951 Refugee Convention clarified the distinction between two types of immigrants by linking them to persecution criteria, there is a link between the decision to migrate and many economic, political, and environmental factors (Scheel & Squire, 2014, pp. 2–3). In recent decades, immigration has grown massively, and there were 272 million international immigrants in 2019, with 82 million residing in European countries. (United Nations, Department of Economic and Social Affairs Population Division, 2019, p. iv).

Although migration between countries, particularly with refugees, receives more attention, internal migration can also have a significant impact for countries (UN DESA, 2013, p.15). According to estimates, 763 million people migrated within the country (UN DESA, 2013, p. 15). Furthermore, World Bank predicts that 143 million people will be internally displaced in three regions by 2050: There will be 86 million people in Sub-Saharan Africa, 40 million in South Asia, and 17 million in Latin America. (Kumari et al., 2018, p. xv). The Internal Displacement Monitoring Centre (IDMC) estimated that by the end of 2020, the total number of internally displaced people reached 55 million and 85% of this was due to conflicts mostly triggered by climate change related impacts (IDMC, 2021a, p. 8).

Internal conflicts, such as in Colombia, Somalia, Mali, Iraq, and Syria, or mismanagement, political instability, and oppression, including in Kenya in 2007 and Libya since 2010, or other variables such as food shortages, drought, and natural

disasters, account for the vast majority of displacements (Zetter, 2015, p. 6). However, Castles (2002, p. 5) discussed that the 'environmental refugee' literature is not sufficient to understand the process because the process is affected by more than one factor and is linked to social, political and economic factors. Thus, climate change is likely to cause the recurrence of sudden disasters such as floods, exacerbate the impact of slow events and non-weather events such as earthquakes (IOM, 2014, p. 5), and act as a threat multiplier for potential conflicts (UNHCR, 2021).

Conflict-induced migration is currently one of the world's most pressing issues, and climate change has the potential to exacerbate conflict drivers. Schleussner et al. (2016, p. 9216) point out that the majority of the conflicts are based on ethnic divisions, and while there is no data that climate change triggers the conflicts, the impact of climate change is more tragic in cases of ethnic conflicts. Warming and drought, sea level rise, a rise in the occurrence and intensity of natural disasters, and competition for natural resources can all contribute to conflict escalation (Kumari et al., 2018, p. 24). Climate change has the potential to reduce agricultural production, resulting in lower incomes, food insecurity, and dwindling water resources. As a result, a scarcity of resources can spark new conflicts or exacerbate existing ones. The vulnerabilities and weak coping mechanisms of low-income countries, in particular, in reduced living resources as a result of climate change and increased resource scarcity pressure, can lead to internal or international migration.

The economic dimension of migration is another issue that needs to be taken seriously. Economic explanations are frequently used in migration theories. The connection between immigration and the economy is not new, and Ravenstein's migration laws (1885, 1889) at the end of the 19th century demonstrate that economic factors take priority. Among the well-known models are Lee's (1966) push and pull theory, Mabogunje's systems theory of rural-urban migration (2010), Harris and Todaro's economic model (1970), and Piore's dual labour market theory (1979). Bijak (2006) categorizes migration theories used across disciplines as economic, sociological, geographical, and unifying. Environmental factors are not included among the direct factors influencing migration in these theories. However, among other migration drivers, environmental factors are included in the Foresight report published in 2011 (Foresight, The Government Office for Science, 2011).

There are two basic approaches to climate migration: minimalist and maximalist-alarmist. Lonergan (1998) states that it is not correct to separate climate migration from social, political and economic factors, and that people's perception is also effective along with real conditions. Black et al. (2011) and the Foresight Model (2011), on the other hand, consider economic, social, political and cultural factors in accordance with the minimalist approach. El-Hinnawi (1985), Myers (1993) and Westing (1992), who establish a direct relationship between climate and migration, can be counted as representatives of the maximalist approach (Diallo &Renou, 2015). In order to understand the decision to migrate or stay, environmental factors should be included in the model that explains the migration decision. A conceptual framework for the migration-environment relationship was developed as part of the Foresight project, and five major factors influencing migration were considered. According to the model (Figure 1), environmental factors will influence other factors, thereby changing the outcomes of migration (Foresight, The Government Office for Science, 2011, p. 11).

Although the model identifies environmental, political, demographic, economic, and social issues as the primary drivers, migration decisions are also influenced by micro and meso level factors. The political environment, the cost of migration, social networks, diaspora ties, job finding, and technology are all identified as facilitators in the model. Micro drivers have been identified as wealth, age, gender, preferences, education, marital status, ethnic origin, faith, and language. The decision to move or to stay will be influenced by a combination of all factors. As a result, while the environment does not cause migration on its own, it can cause migration in conjunction with other factors. Furthermore, the facilitators and personal characteristics will influence both the migration decision and the destination country.

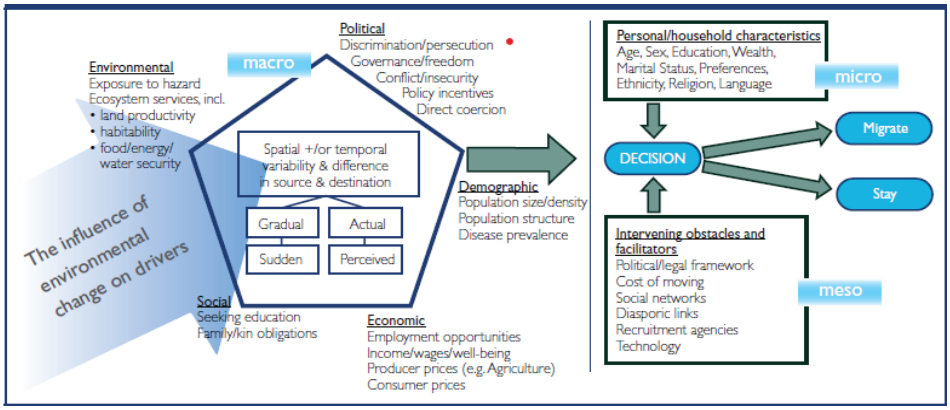

Figure 1. Foresight Project's conceptual framework
Source: (Foresight, 2011, p. 12)

The environment is seen as a negative factor affecting internal migration in refugee studies, and the "political paradigm" gives limited space to the impact of the environment (Piguet, 2008, p. 2). The complexities of climate change and its influence on individuals raise the issue of their legal ramifications; people may migrate due to environmental factors in slow-onset events, but in sudden disasters, vulnerability, rather than environmental factors, may be the primary risk factor driving displacement (IOM, 2014, p. 27). On the other hand, factors such as famine, conflict, governments, and the characteristics and opportunities of individuals or households can all influence migration decisions (IOM, 2014, p. 28). Piguet (2008, p. 3) concludes that environmental factors are not the only reason for migration and that they can reduce or increase migration flow depending on social-political and the economic situation of the threatened region. As a result, while climate change is a driver of migration, the main reason for migration is the vulnerabilities of the regions and a lack of cope with capacity.

Aside from academic debates, the concept of climate refugee has been the subject of several court decisions as a result of refugees from countries affected by climate change, such as Tuvalu, Fiji, and Bangladesh, seeking refuge in countries such as Australia and New Zealand. Environmentally driven migration is a new area, and it may be necessary to resettle displaced people if an island, such as Kiribati, disappears, whereas in other cases, environmental reasons may be a factor that amplifies the impact of other causes

of mobility (Betts, 2009, p. 10). Hinnawi (1985, p. 4) defines "environmental refugees" as anyone who migrates for protection from harm or better living conditions, however the term "climate refugee" has become more popular as global warming has increased (Piguet, 2008, p. 1). For example, in a decision made by the UNHCR in response to a lawsuit filed by Kiribati citizen Ioane Teitiota, who requested to become a refugee in New Zealand, it was stated that people whose lives are threatened due to climate change or natural disaster should not be returned to their country of origin and that refugee laws can be applied in such cases (UNHCR, 2020a). Teitiota's case tells us that the criterion of persecution is no longer sufficient to define refugees, and countries have to consider accepting those whose lives are threatened by climate change as refugees.

While explaining the relationship between globalization and forced migration, Betts (2009, p. 154) emphasizes that the causes of cross-border displacements, such as conflict, persecution, environmental causes, and economic pressure, are related to the consequences of globalization such as production, governance and identity. Furthermore, migration was previously associated with those fleeing communism and between East and West, but now there is transcontinental migration between South and North (Betts, 2009, p. 157). It is critical to consider climate change's direct and indirect impacts. Climate change affects more than just fragile states and conflict zones. It should be considered that climate change may harm the economic growth of not only low-income countries or conflict zones, but also developed countries. Climate change will influence migration patterns to developed countries as well as the direction of their development assistance.

As countries deal with the influx of migrants and refugees, restrictive policies have been put in place to control the flow of undocumented migrants, and especially EU's efforts to prevent undocumented migration have increased. With the 2015 refugee crisis, the issue of refugees and asylum seekers has taken centre stage on the agendas of all countries, including the EU. This paved the way for international studies and agreements that link migration and climate change.

Methodology

This study is based on IDMC, DGMM, YÖK statistics and scanning of international documents and adopts a qualitative approach. The main research question is: How does climate change affect migration from Afghanistan, Pakistan, and Bangladesh to Turkey using the Foresight Framework? Sub-questions are: What is the relationship between climate change and migration? How does the threat-increasing role of climate on the relationship between climate change, migration and conflict work? In the study, the data of IDMC, DGMM and YÖK were used as secondary data. Because the focus was on climate-driven migration, economic factors were ignored. IDMC data has been chosen because it is among the most comprehensive data in this sector, as it is gathered from UN agencies, national governments, the International Federation of the Red Cross (IFRC), and the UN Office for the Coordination of Humanitarian Affairs (OCHA). Afghanistan, Pakistan, and Bangladesh were chosen based on IDMC data; however, India was excluded from the comparison due to a lack of DGMM data. Because there is no other data that can be utilized on this topic, DGMM and YÖK data were picked. In Turkey, most Afghan immigrants are unregistered, and there are approximately 300,000 Afghan immigrants

(BBC, 2021). As a result, the statistics of irregular migrants apprehended by the DGMM were considered for comparison.

Generally, pull and push factors have been used to explain migration drivers. According to Beine and Parsons (2015, s. 763), there is a minimal direct relationship between climate-related issues and international migration, but there are frequently indirect consequences, such as wage differences in the country of origin and destination linked to climate change. Fussel et al. (2014) state that it is incorrect to make generalizations about future migration without precise data in the calculation of the environment-migration link, and the deterministic perspective that relates mass migration with climate change is rejected in studies on the subject. This paper argues that the minimalist approach is more effective in predicting climate-induced migration than the maximalist-alarmist approach in the case of Turkey. One of this paper's limitations is the absence of comprehensive data sets on the climate-migration link in Turkey. As a result, estimates of climate-related migratory patterns in Turkey will be based on a restricted data and minimalist approach.

This research is a limited evaluation of prospective migration from some South Asian countries to Turkey based on restricted available data. This article is only an attempt to explore the conceptual framework's consistency with the available statistics. Climate change's impact on migration, on the other hand, is dependent on assumptions and has limits. Within the framework of the Foresight model recognized in this study, migration is influenced by macro variables such as economic, social, political, and similar factors, as well as micro and meso ones such as diaspora links, ethnic and religious closeness. Climate is one of the things that binds all of these together. With the limited data available, it is impossible to predict the migration trend towards Turkey based on the migration-climate link, hence the focus has been on addressing the factors influencing migration within the framework of the Foresight model. Experts in the field may be able to offer more detailed information, but owing to Covid-19 concerns, experts in the area were not interviewed.

When discussing environmental factors, migration should be discussed alongside macro, meso, and micro factors, and the Foresight framework prepared by Black et al. (2011) (Foresight, The Government Office for Science, 2011) covers all these factors and environmental relationship. Black et al. (2011) point out that the climate can pose a direct threat to the space and at the same time indirectly affect the economy and living opportunities, indirectly affecting domestic and international migration. Climate change may act as a 'threat multiplier' (UNHCR, 2021) in conflict areas, and this paper uses this concept to explain whether conflict and climate relation cause migration or not. In terms of climate and migration, the Global Compact for Migration promotes disaster planning, collaboration with neighbouring countries, the implementation of humanitarian visas, private sponsorship activities, and, most importantly, keeping people in their country of origin.

This study aims to understand the possible migration flows to Turkey on the axis of climate and conflict, rather than discussing Turkey's asylum or migration policies. So, this research may contribute to better understanding the relationship between conflict, climate, and migration, as well as provide insight into potential migration waves to Turkey, where the climate change is also a factor using the macro, micro and meso factors.

International Agreements on Climate Change-Migration Nexus

As stated above, migration decisions are influenced by a variety of economic, social, and environmental factors, and it may be motivated by different reasons. However, the climate change issue, which is the basis of these factors, is increasingly coming to the fore. The migration and climate relationship and measures are also included in various international agreements on climate change. The relationship between climate change and migration was included for the first time in studies under the United Nations Framework Convention on Climate Change (UNFCCC) in the context of the 2010 Cancun Adaptation Framework. It is agreed in the Cancun Agreement to expand cooperation in displacement, migration, and relocation as a result of climate change (United Nations, 2010). The issue of the effects of climate change on migration was raised again in the Doha decision on Loss and Damage in 2012 (UNFCCC, 2012). The Warsaw International Mechanism has incorporated the approaches determined to reduce the damage linked to climate change, and human mobility is included in the five major strategic studies determined. Human mobility is defined in this framework as migration, displacement, and planned relocation (Approaches to Address Loss and Damage Associated with Climate Change Impacts in Developing Countries, 2021).

Another important UN document that deals with the relationship between climate change and migration is the UN 2030 Agenda and Sustainable Development Goals (SDGs) adopted in 2015. SDG-13 has the title 'Climate Action'. The Target 10.7 under SDG-10: Reduced Inequalities includes to take immediate action to combat climate change and its consequences, and one of the targets is to facilitate safe, regular, and responsible migration. In addition, SDG-5: Gender Equality, SDG-8: Decent Work and Economic Growth and SDG-16: Peace, Justice and Strong Institutions include content and targets that deal with migration and mobility of people (United Nations, 2015a; MDP, 2021).

The Paris Agreement, which was adopted as a result of the UNFCCC 21st Conference of the Parties (COP-21) held in Paris at the end of 2015 in the same year as the SDGs, and entered into force as of 4 November 2016, is an internationally legally binding agreement on climate change. Article 7 of the Agreement established the Global Goal on Adaptation (GGA). The aim of GGA is to keep global warming well-below 1,5 degrees Celsius by increasing adaptation efforts. GGA is to increase adaptation capacity and resilience while decreasing vulnerability (UNFCCC, 2015, 2021).

An important UN document is the Sendai Framework for Disaster Risk Reduction 2015-2030, and this international agreement covers the relationship between migration and climate change. Climate change as a cause of migration has been recognized by states at various levels. Countries have agreed to develop programs and increase resilience against disaster-related migration movements under this Framework (United Nations, 2015b, p. 20).

The Global Compact for Migration is document which takes a comprehensive and holistic approach to international migration. The Global Compact for Migration includes commitments related to "natural disasters, the adverse effects of climate change, and environmental degradation". Following the UN 2030 Agenda and SDGs, Member States committed to international cooperation to facilitate safe, orderly, and regular migration.

The Global Compact for Migration declares that it is a "non-legally binding, cooperative framework" and confirms "the sovereign right of States to determine their national migration policy" (Global Compact for Migration, 2018).

One of the Global Compact for Migration's goals is to reduce the factors that force people to leave their home country, with adaptation in the country of origin given priority. To reduce the negative effects of climate change, the countries agreed to improve analysis and information exchange, create adaptation and resilience strategies, incorporate displacement aspects into disaster preparedness strategies, and improve cooperation with neighbouring states. Furthermore, countries' responses to natural disasters, other uncertain situations, and slow-onset natural disasters, as well as the negative effects of climate change and environmental degradation, vary. The countries agreed to provide humanitarian visas, private sponsorship, and educational opportunities for children of migrants who were forced to leave their home countries caused by natural disasters or other unforeseen circumstances. The Global Compact prioritizes policies aimed at keeping people in their countries of origin, while emphasizing the minimizing of structural problems and drivers that induce people to migrate. That is, it seeks to present options for people to remain in their home countries while adapting to climate change. Furthermore, in natural disasters that make it impossible to stay in the country of origin, the goal is to provide means for safe and regular migration, such as humanitarian visas and private sponsorship (Global Compact for Migration, 2018).

The Global Compact lays out the steps to be taken in emergencies like natural disasters, as long as they stay within the states' sovereignty, and it establishes the objective of safe and regular migration. As a result, countries need monitor and manage safe and regular movement, and understanding the relationship between climate change and migration is crucial in anticipating possible migratory trends, particularly irregular migration.

Climate Change, Migration and Turkey

Because of its geopolitical position, Turkey is constantly concerned with the issue of migration, both as a transit country and as a country of immigration and emigration. As a result, estimating potential migration movements to the country is critical. However, because the migration decision is influenced by a variety of factors, it is impossible to predict which country to migrate and when. Immigrants to Turkey, for example, may be impacted not only by conflict or climate change, but also by a migration flow to Turkey due to historical or cultural ties. Not only asylum seekers but also immigrants from the Balkans and Turkic Republics, with which the country has historical and cultural ties, as well as Pakistan and Myanmar, are making their way to Turkey.

Climate change has a significant impact on Turkey, as does the country's geopolitical position, which leads to both voluntary and forced migration from the neighbouring countries. However, being a transit country, in between sending states and receiving states, entails some uncertainty, and some immigrants are frequently trapped in these countries. As a result, Turkey's position requires it to manage both the immigrants who are directed towards it and those who want to go to Europe but remain in the country. Taking into account the impact of tropical storms, heavy rains, floods, and drought on migration, as well as the current migration pattern to Turkey, future migration to Turkey

can be expected from South Asia, the Balkans, the Black Sea, and the Middle East within the framework of the Foresight model. Even if there is no conflict with the effect of the climate, components such as familial ties, ethnic and religious identity, language, social networks, and diaspora linkages that are incorporated in the model and directly affect the choice might enhance migration from these regions to Turkey.

Sofuoğlu and Ay (2020) point out that climate change is predicted to exacerbate political instability by reducing food production, diseases, and stress on water resources in the MENA region and act as a threat multiplier (Sofuoğlu and Ay, 2020). Iraq and Syria, Turkey's neighbouring countries, are active conflict zones, and drought, water shortages, and food shortages in these countries may exacerbate conflicts. Syria has been involved in conflict for more than a decade, and climatic factors have exacerbated the vulnerability caused by the internal conflicts. The example of Syria illustrates the relationship between climate, migration, and conflict. According to some scholars, following the 2006 drought in Syria, agricultural products decreased, water and food prices increased, and people migrated to cities, resulting in increased pressure on jobs and resources, combined with ethnic segregation and poor governance, ultimately leading to war (Chen, 2019; Karak, 2019; Mansharamani, 2016).

Drought has had a significant impact on Eastern Syria and Northern Iraq since the beginning of 2021, putting pressure on agriculture and water resources, and the society's coping capacity is low due to years of conflict. The number of displaced persons has not changed, but there is a high risk of food and water shortages (Copernicus, 2021). The continuation of the drought may result in increased migration to Turkey, as well as internal displacement. On the other hand, protests in Iran have been sparked by the country's drought and water shortage, which has been ongoing since 2020. According to IDMC, approximately 146.362 people will be forced to move in the case of an earthquake and 30.141 people will be forced to move in the case of a flood in Iran (IDMC, 2021b). It can be concluded that drought alone does not cause migration from Iran to Turkey but can lead to migration when other factors such as conflict come together. Turkey requires a monitoring mechanism for climate affected migration that takes into account disasters that may occur in its neighbours.

Areas affected by climate change are regions where, although not conflict, there is likely to be internal displacement and this could trigger international migration. According to IDMC data, the Pacific and the East Asia generate 39,3 percent of new displacements in 2020, South Asia generate 30,1 per cent, Sub-Saharan Africa generate 14 per cent, and the Americas generate 14,7 per cent, with tropical cyclones, monsoon rains and floods being the primary causes (IDMC, 2021a, p. 21). The total number of IDPs by end of 2020 is 55 million (IDMC, 2021, p.8). 48 million is as a result of conflict and 7 million is as a result of disasters. When the data is compared, it is clear that not all conflict zones are disaster zones, and disaster-induced displacements can occur on their own. Afghanistan, India, Pakistan, and Bangladesh have the greatest rates of disaster-related displacement in South Asia *(Figure 2, Figure 3)*. Syria, on the other hand, tops the list of countries with conflict-related displacement, while Afghanistan comes in fifth.

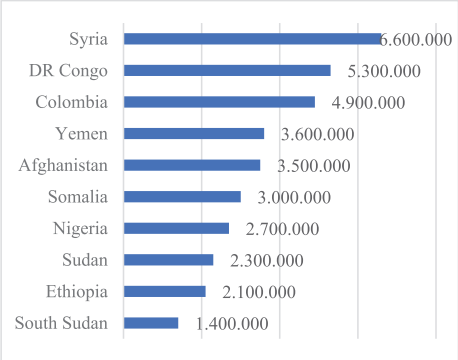

Figure 2. IDPs as a result of conflict

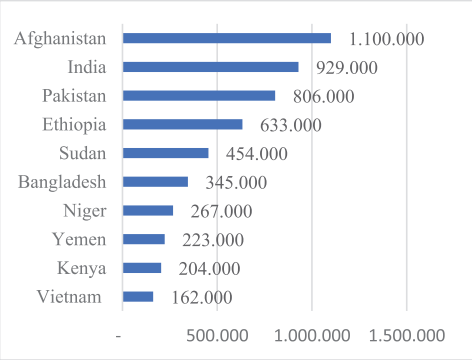

Figure 3. IDPs as a result of disasters

Source: (IDMC, 2021, p.8)

The estimation of migration to Turkey from zones affected by climate change is important in terms of policy making. According to DGMM statistics in 2019, there were 454.662 irregular migrants, and in 2020, there were 122.302. As of December, 2021, the number of irregular immigrants was 162.966 (*Figure* 4).

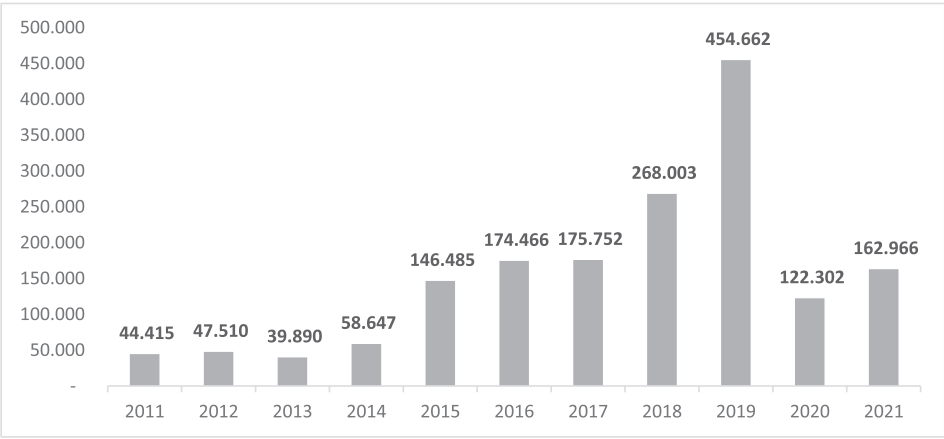

Figure 4. Irregular migration to Turkey (2011-2021)

Source: (DGMM, 2021)

When the countries from which irregular immigrants originate are examined, Afghanistan ranks first, Syria second and Pakistan third according to the DGMM 2021 data. Based on the statistics, it is possible that migration from these countries to Turkey could grow as a result of climate change or other factors in the Model (Figure 4).

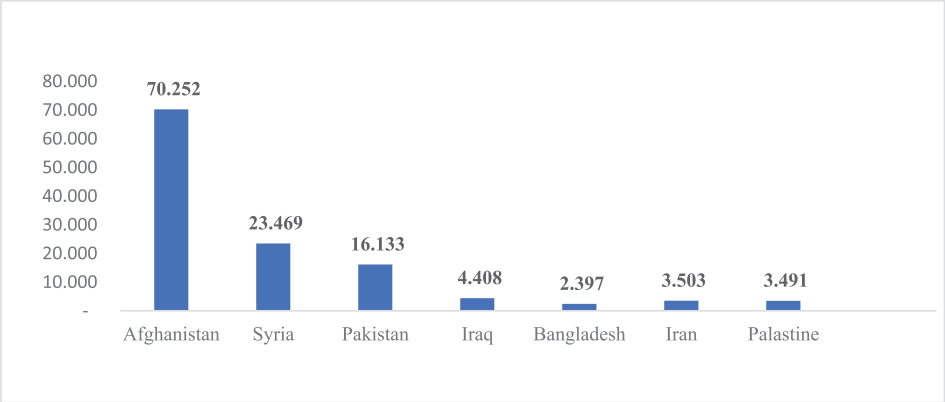

Figure 5. Irregular immigration to Turkey by origin countries
Source: (DGMM, 2021)[1]

South Asian countries are one of the most vulnerable to displacement and climate change. Afghanistan has a number of vulnerabilities because of its topography and climate, making it vulnerable to natural disasters such as floods and drought. Additionally, climate change problems are compounded by decades of conflicts, socioeconomic problems and food insecurity. On 23 June 2021, the Afghan government announced that 80 percent of the country is under threat of drought, and that families who depend on agriculture, especially in rural areas, have been displaced within the country (DRC, 2021). While it is important to distinguish Afghan migration from climate migration, poverty caused by climate-related drought causes underdevelopment, conflict, and chaos. Such conflict environments will become more common in drought and famine-stricken countries in the future. With the Taliban seizing control of the Afghan provinces, it is estimated that 500,000 people will flee to neighbouring countries, according to the UN (Deutsche Welle, 2021). So, in this case, the main driver of migration seems to be conflict, but the drought may be viewed as a threat multiplier for internal displacements and international migration. Despite the fact that Turkey is not a neighbour of Afghanistan and there is roughly a 3.000-kilometer distance between the two countries, Afghan immigration, which has increased in recent years, is still one of the most discussed topics in Turkey. Because the EU does not want to repeat the 2015 crisis, while activating the aid mechanism to keep the Afghan crisis in neighbouring countries, Germany may attract immigration as a result of its large Afghan diaspora (Deutsche Welle, 2021). When the Foresight model is applied, drought and the resulting food security crisis are identified as environmental factors, while conflicts are identified as political factors. Other causes for migrating include economic and social factors such as education and social networks formed with people who have previously emigrated to Turkey. The Model is supported by the fact that according to DGMM statistics, the number of illegal immigrants addressed is 70,252 and the number of international students is 8,428. As a result, while migration to Afghanistan is primarily motivated by conflict-climate, the Foresight model's diaspora connection and social network are likely to facilitate migration to Turkey as a transit or receiving country.

1 Data for Bangladesh is August 2021 data, other country data is 2021 year-end data. Since Bangladesh was not found in DGMM year-end data, August data was taken.

According to the IDMC report, 806.000 people were internally displaced in Pakistan in 2020 due to disasters (*Figur*e 3). Despite the fact that there is no active conflict in Pakistan and Bangladesh, such as there is in Afghanistan, migration to Turkey continues (IDMC, 2021). Pakistan is ranked third in illegal migrants caught by the DGMM, while Bangladesh is ranked seventh (Figure 3). Pakistan and Bangladesh, according to IDMC statistics, are climate-vulnerable countries. The number of Pakistani illegal migrants caught, according to DGMM statistics, is 16.133, and the number of international students, according to YÖK data, is 2.948. There are 2,347 irregular migrants from Bangladesh caught, as well as 751 international students. These statistics may be viewed as the influence of international student mobility, religious affiliation, and social networks, in addition to Turkey being a transit country. On the other hand, economic motivation should always be kept in mind in understanding international migration.

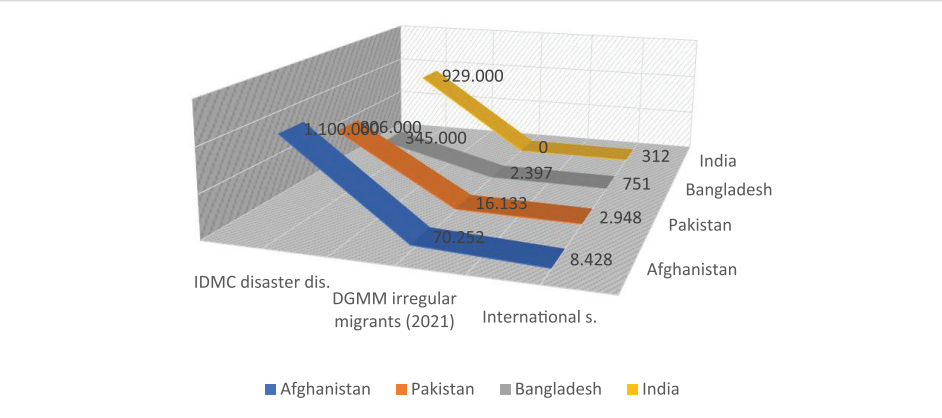

Figure 6: Data by country and source
Source: DGMM, 2021; YÖK 2021; IDMC 2021

Possible migration movements to Turkey from Afghanistan, India, Pakistan and Bangladesh, which are the most vulnerable to disaster-related displacement, are consistent with DGMM data on irregular migrants apprehended except India and YÖK international student data. As a result, Turkey will need to establish precise datasets and a model for all of the elements in the Foresight Model in order to forecast migratory mobility and design policies. In addition to political and environmental factors, social factors such as education, networks formed by past immigrants and students, and religious affiliation are also important in attracting people to migrate out of these countries and predict climate-conflict affected migration.

From the review of above-mentioned countries, it appears that environmental factors such as floods or drought do not always result in international migration. Internal displacement can, however, occur as a result of these processes. Even if migration occurs during a drought, international migration is likely to happen when non-environmental factors and drought interact. For example, the escalation of conflicts in Afghanistan may have triggered migration in conjunction with the drought but drought is not a cause alone. As a result of the country's vulnerabilities, which include multiple vulnerabilities, migration has occurred. However, simply being a transit or neighbouring country

cannot explain the migrations to Turkey. Former immigrants' social networks, as well as international students' social networks, are essential. Therefore, it may be possible to make predictions about climate-conflict-induced migration from countries within the framework of comprehensive models.

Conclusion

Climate migration is a complex problem, and because there is no single solution, solutions that increase immigrants' resilience and adaptation come to the fore. It is also very difficult to predict the climate-conflict driven migration to countries. Therefore, within the framework of a model such as the Foresight model, it is necessary to know the other components that will affect the decisions of individuals and households, beyond the dynamics of migration, in order to predict the direction of migration. However, it must be acknowledged that neither conflict-related nor climate-related migration can be completely avoided.

Economic, social, demographic, and environmental factors, as well as a variety of macro, meso, and micro factors, have an impact on migration decision according to the Foresight Model. Although countries' concerns about the effects of climate change have been around for a long time, the link between migration and climate is a relatively new topic. Climate change is a global issue, not just a developing-world issue. Climate change impacts developed countries in a variety of ways as well. This paper tries to forecast the possible migration from Afghanistan, Pakistan, and Bangladesh to Turkey within the framework of the Foresight model, based on the climate-migration relationship and the conflict-increasing effect of the climate. In this paper, the data of IDMC, DGMM and YÖK were used as secondary data. This paper is an assessment of potential migration from Afghanistan, Pakistan, and Bangladesh to Turkey based on limited data. This article is only an effort to explore the conceptual framework's consistency with the existing data. The influence of climate change on migration, on the other hand, is contingent on assumptions and has limitations.

Turkey, due to its geopolitical position, is vulnerable to droughts, floods, and temperature increases caused by climate change, as well as climate and labour-based migration from other countries. In addition to being a transit country, particularly in terms of migration to Europe, Turkey also receives immigrants from the Balkans and Turkic Republics, which have historical and cultural ties. Migration from these regions requires consideration of micro and meso factors in the Foresight Model as well as climate change. According to IDMC statistics, Afghanistan, India, Pakistan, and Bangladesh have the highest disaster-induced internal displacement among South Asian countries. When these statistics are compared to DGMM's irregular migrant data, they are found to be consistent, with the exception of India. YÖK international student data, on the other hand, is compatible with both IDMC and DGMM data. Afghanistan is the country with the most irregular migrants apprehended, followed by Pakistan. As a result, it has been established that, in addition to political and environmental factors, social factors such as education, networks formed by past immigrants and students, internal displacements, and religious affiliation are also important in attracting people to migrate out of these countries. Therefore, the minimalist approach is more effective in predicting climate-induced migration than the maximalist-alarmist approach in the case of Turkey.

Detailed data sets should be preserved in order to comprehend migration to Turkey as a result of climate change, taking into consideration the drivers such as environment, politics, society, economy, demographics, personal and household characteristics, and intermediate obstacles and catalysts. It is recommended that the causes of migration be thoroughly explored by interviewing people who have migrated as a result of climate change, as well as region specialists, and that a prediction model for Turkey be developed.

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