Library Progress International
Vol.44 No. 3, Jul-Dec 2024: P. 16748-16761

Print version ISSN 0970 1052
Online version ISSN 2320 317X

Original Article

Available online at www.bpasjournals.com

Environmental Degradation and Migration: Insights from Afghanistan

Mohammad Reza Rafat

Research Scholar, Department of Political Science, University of Kerala, Thiruvananthapuram,
rafat.masumi@gmail.com, ORCID. ID: 0000-0002-4261-767X

How to cite this article: Mohammad Reza Rafat (2024) Environmental Degradation and Migration: Insights from Afghanistan. *Library Progress International,* 44(3), 16748-16761

Abstract

Environmental degradation and migration have become pressing concerns in the 21st century, particularly in fragile contexts such as Afghanistan. This article adopts a descriptive-analytical approach to explore the intricate relationship between environmental degradation and migration in Afghanistan, where persistent conflict and climate-related challenges intensify vulnerabilities. The study acknowledges the complex interplay between environmental stressors and socio-economic instability, revealing how Afghanistan's unique topography and climate make it highly susceptible to natural disasters such as droughts, floods, and landslides, which contribute to significant displacement. Based on both primary and secondary data, this research underscores the critical need for sustainable environmental management and improved disaster preparedness to mitigate the impacts of environmental degradation and enhance resilience among affected communities. By focusing on Afghanistan, the article deepens our understanding of environmental migration dynamics and emphasizes the importance of addressing the root causes of environmental degradation in order to foster a more sustainable and stable future for vulnerable populations.

Keywords: Environmental Degradation, Climate Change, Natural Disaster, Migration, Internal Displacement, Afghanistan.

Introduction

Environmental degradation and environmental migration represent two of the most pressing challenges of the 21st century. As ecosystems face increasing levels of destruction due to unsustainable resource exploitation and climate change, millions of people worldwide are being forced to leave their homes. The traditional drivers of human migration have been primarily political, economic, and social in nature—wars, insecurity, unemployment, and poverty have historically shaped migration flows. However, in recent years, environmental factors have emerged as significant contributors to forced migration. This group of migrants, often termed "environmental migrants," are displaced as a result of environmental disruptions such as droughts, floods, desertification, and rising sea levels. The scope and scale of environmental migration are vast, posing challenges to both migrants and the regions they leave behind or relocate to. In developing countries, where economic and political institutions are often weaker and governance structures are less capable of addressing environmental challenges, the impact of environmental degradation is particularly severe. These nations frequently lack the necessary infrastructure to mitigate the consequences of environmental disasters, making their populations more vulnerable to forced migration. Afghanistan, as one of the world's least developed countries, offers a striking example of how environmental degradation can intertwine with social, economic, and political instability to drive large-scale migration. The country's geographical location at the crossroads of Central and South Asia, combined with its unique topography, makes it highly vulnerable to natural disasters and climatic hazards. These environmental challenges, compounded by decades of conflict and political instability, have severely impacted Afghanistan's socio-economic development. Natural disasters such as droughts, floods, landslides, avalanches, and earthquakes are recurring phenomena, exacerbating the fragile living conditions for the country's population. On average, 400,000 people are affected by recurrent natural disasters annually, with nearly half of the country's districts classified as hazard-prone (UNEP and UNOHA, 2016). In 2019, Afghanistan had the highest number of internally displaced persons (IDPs) due to disasters globally, with 1,198,000 displaced people country (Internal Displacement Monitoring Centre, 2020). These figures are alarming, reflecting the extent to which environmental disasters disrupt livelihoods, particularly in rural areas where agriculture is the primary means of subsistence. Droughts and floods, among the most frequent disasters, have had particularly devastating effects on agricultural productivity and household assets. The severe drought of 2018-19 affected more than two-thirds of the population, displacing over 370,000 individuals and leaving nearly 9.8 million people in food crisis (UNOCHA, 2019). These climatic events, coupled with rising

temperatures, threaten the country's agricultural output, water availability, and food security (National Environmental Protection Agency and UNEP, 2016). Predictions suggest that flood-affected populations could more than double by 2050 due to the combined effects of climate change and poor socio-economic development (World Bank Group, 2017). Moreover, reduced precipitation during critical spring months will significantly impact agricultural regions, making droughts a regular occurrence and further exacerbating poverty and food insecurity among vulnerable households reliant on rain-fed agriculture (Savage *et al.*, 2009). The ongoing conflict in Afghanistan, now entering its fifth decade, is recognized as one of the primary drivers of migration and displacement. However, the convergence of conflict with environmental disasters has deepened poverty and vulnerability across the country. The economic strain of prolonged conflict, political instability, and climatic shocks reduces household resilience, making it increasingly difficult for affected populations to recover. Rapid-onset disasters often displace families permanently, as those who lose their homes, assets, and agricultural land may find it difficult to return and are more likely to seek new livelihoods elsewhere. Assessing the full impact of environmental degradation on Afghanistan presents unique challenges. The country's historical meteorological data is incomplete due to decades of conflict, and its diverse topography results in significant regional variations, particularly in precipitation patterns. Despite these challenges, it is clear that the combination of environmental degradation and socio-political instability is shaping migration patterns in complex ways. While environmental factors are a critical driver of migration, other influences, such as poverty and insecurity, also play a significant role. Differentiating between environmental-induced migration and displacement is crucial, as Afghanistan has one of the highest numbers of internally displaced persons (IDPs) worldwide, many of whom have been displaced by natural disasters. This article aims to explore this intersection, with a specific focus on how environmental degradation influences migration in Afghanistan. By employing a descriptive-analytical approach, the article investigates the unique geographical and climatic challenges Afghanistan faces, while also considering the ways in which decades of conflict have exacerbated environmental degradation. Drawing on both primary and secondary sources, including interviews with 15 individuals involved in environmental governance and migration, as well as government documents, international organization reports, and existing academic literature, this study aims to provide a comprehensive analysis of the types of migration-driven by environmental stress. The research is divided into five sections. The next section presents the conceptual framework of environmental migration. The third section provides an overview of Afghanistan's environmental characteristics, while the fourth section outlines the migration patterns in the country. The fifth section examines the specific effects of environmental degradation on migration, before concluding with recommendations for addressing the environmental and migration challenges facing Afghanistan. These recommendations focus on potential policy solutions aimed at mitigating the impacts of environmental degradation and addressing the growing crisis of forced migration in the country.

Environmental Degradation and Migration: Theoretical Framework

Environmental degradation is recognized as one of the most critical challenges confronting humanity today, posing significant threats to ecosystems, biodiversity, and natural resources. It leads to profound consequences for the planet's health, human well-being, and the sustainability of future generations. According to Matthews (2014)**,** environmental degradation is the "temporary or permanent decrease in the capability of the environment to support the resource demands of the organisms that inhabit it" (p. 348). This definition underscores the multifaceted impacts on both ecological systems and the resource base essential for supporting biological populations. On land, soil, and land degradation are prevalent, with soil degradation arising from diminished productivity due to nutrient depletion, erosion, and chemical or biological alterations. Land degradation reflects a broader decline in productivity, exacerbated by factors such as soil erosion, salinization, and desertification, and encompasses socio-economic dimensions. Aquatic ecosystems experience degradation primarily through pollution, including acidification from acid rain and contamination by metals, leading to reduced productivity and compromised water safety. Air pollution, resulting from emissions of carbon dioxide, dust, and carbon monoxide, deteriorates air quality, threatening both human health and ecosystem stability. Climate change, driven by the intensified greenhouse effect, further exacerbates environmental degradation by shifting vegetation zones, altering hydrological cycles, and accelerating soil erosion in vulnerable regions, such as the Chinese loess plateau. The symptoms of degradation include algal blooms, biodiversity loss, anoxia in aquatic systems, and disruption of biogeochemical processes and ecological integrity (Harris, 2008, p. 2062). One of the significant socio-economic consequences of environmental degradation is its role in driving human migration. As Usher (2005) explains, environmental degradation can trigger large-scale migration (p. 24). This process, known as "environmental migration," is influenced by factors such as climate-related disasters, desertification, rising sea levels, and other environmental shifts, often forcing individuals and communities to relocate (Kaczan and Orgill-Meyer, 2020). The International Organization for Migration (IOM) defines environmental migrants as:

> "persons or groups of persons who, for compelling reasons of sudden or progressive change in the environment that adversely affects their lives or living conditions, are obliged to leave their habitual homes, or choose to do so, either temporarily or permanently, and who move either within their country or abroad"(IOM, 2009, p. 19).

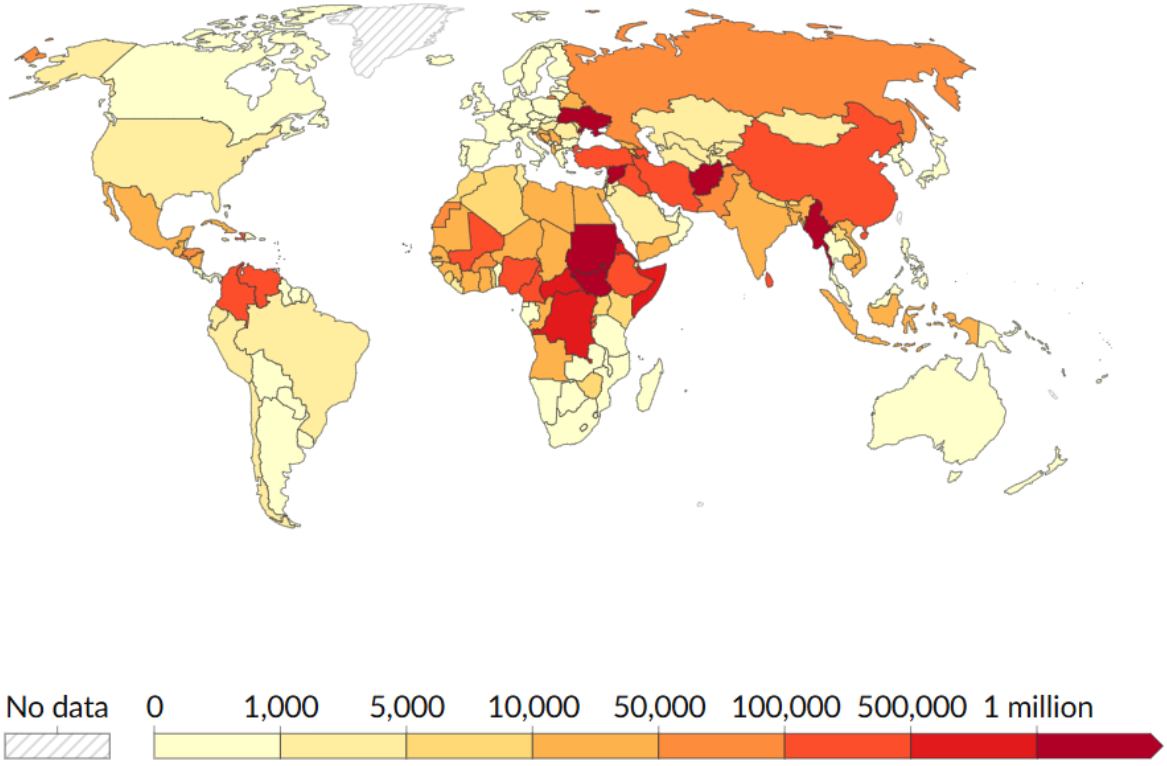
Environmental migration can be complex, involving forced or voluntary movement, which may be temporary or permanent. It can occur within a country or across international borders, depending on the environmental factors and the individuals affected (IOM, 2014). Environmental migration is frequently analyzed through the lens of migration theories, with the push-pull framework offering particular value. This theory, introduced by Lee in 1966, categorizes migration drivers into push factors—negative circumstances in a person's place of origin, such as economic hardship or environmental degradation—and pull factors—positive attributes of a potential destination, such as better job opportunities or favorable environmental conditions (Lee, 1966). In the context of environmental degradation, push factors like deteriorating ecosystems force individuals to leave their homes, while pull factors in other regions, including economic stability and safer environments, attract them. Environmental degradation manifests in various forms, including desertification, deforestation, soil erosion, biodiversity loss, and the depletion of freshwater resources. These forms of degradation are often accompanied by more frequent natural disasters, such as floods, droughts, landslides, and storms, which have far-reaching consequences for communities dependent on natural resources for their livelihoods. As environmental conditions worsen, these communities face heightened economic instability and food insecurity, which serve as strong push factors for migration (Kaczan and Orgill-Meyer, 2020). In many cases, migration becomes a survival strategy in response to environmental degradation. For instance, in Afghanistan, rural communities reliant on rain-fed agriculture are increasingly affected by droughts and crop failures due to climate change, prompting migration to urban areas in search of better living conditions. Similarly, populations in low-lying coastal regions threatened by rising sea levels may be forced to relocate to avoid flooding and land erosion. These examples illustrate how environmental degradation, often intertwined with socio-economic and political challenges, can compel migration as a coping mechanism. While push factors play a crucial role in driving migration, pull factors also significantly influence migration decisions. Destinations offering more favorable environmental conditions, resilient economies, and higher living standards often serve as attractive options for migrants. Urban centers, with their better infrastructure and reduced risk of environmental hazards, can act as pull factors, drawing people from degraded rural areas (IOM, 2007). In some instances, migration may not solely be a reaction to environmental degradation but rather a proactive adaptation to changing environmental conditions. Migrants may seek regions with long-term sustainability, such as those with ample fresh water, fertile land, or milder climates. Additionally, economic opportunities linked to favorable environmental conditions often serve as important pull factors. For example, as agricultural productivity diminishes in one area due to environmental degradation, individuals may be drawn to regions where agriculture or other resource-based industries remain viable. However, migration decisions are rarely driven by a single factor. They result from the complex interplay of multiple push and pull factors. Even when environmental degradation pushes people to leave their homes, migration typically requires corresponding pull factors at the destination that offer better prospects. The push-pull framework also brings attention to issues of environmental inequality. Wealthier regions or nations, with more resilient environments and greater economic opportunities, often attract migrants from poorer, environmentally degraded areas. This dynamic raises important questions about climate justice and the responsibilities of wealthier nations in addressing the consequences of environmental degradation in less developed regions. In the case of Afghanistan, environmental degradation, compounded by political instability, limited infrastructure, and weak governance, acts as a powerful push factor, driving migration from rural communities heavily reliant on agriculture. The lure of more stable economic conditions, particularly in urban areas or abroad, serves as a pull factor. The push-pull theory provides a valuable framework for understanding the complex dynamics of migration in Afghanistan, as it clarifies how environmental and socio-economic pressures intersect to shape migration decisions. Through this framework, it becomes clear that environmental degradation not only compels migration but also interacts with broader socio-political factors to influence migration patterns both within Afghanistan and between Afghanistan and other countries.

Afghanistan's Migration Profile

Migration in Afghanistan is a complex and multifaceted phenomenon, deeply embedded within the country's historical, political, social, and economic contexts. It is not a recent development, but rather one with a long history rooted in centuries of conflict, invasions, and political transformations. Afghanistan's geographical location as a landlocked nation at the crossroads of Central and South Asia has long positioned it as a hub for migration, trade, and warfare. Over the centuries, the region has witnessed invasions by various empires, including the Persians, Greeks, Mongols, and British, all of which have triggered significant population movements. The contemporary migration patterns in Afghanistan, however, can largely be traced back to the Soviet invasion of 1979. This invasion and the subsequent Soviet-Afghan war precipitated

one of the largest refugee crises of the 20th century, forcing millions of Afghans to flee, primarily to neighboring countries such as Pakistan and Iran. At the height of the conflict, it is estimated that more than six million Afghans were displaced, both internally and internationally, marking a critical juncture in the country's migration history (IOM, 2004, p. 22). Following the withdrawal of Soviet forces and the subsequent civil war in the 1990s, Afghanistan's instability continued to drive migration. The rise of the Taliban in the mid-1990s further exacerbated the situation, as the regime's oppressive policies forced many Afghans to flee in search of safety and freedom. The U.S.-led invasion in 2001, which resulted in the Taliban's ouster, triggered yet another wave of displacement, as the prospect of return and reconstruction became central to the discourse on Afghan migration. Migration in Afghanistan as stated by Karim Samani[1], a former official in Afghanistan's Ministry of Refugees and Repatriation (MRR), is driven by a combination of factors, including conflict, insecurity, economic hardship, and natural disasters. These factors often intersect, compounding the challenges of addressing migration-related crises. Armed conflict remains the primary driver of forced migration. Decades of war, first with the Soviet Union, followed by civil conflict, the Taliban regime, and more recently, the global war on terror, have fostered an environment of chronic instability and violence. The Taliban's takeover of Afghanistan in August 2021, as highlighted by Samin Jamshidi[2], marked another significant turning point, prompting millions of Afghans—particularly women, ethnic minorities, and those associated with the former government—to flee the country. Many sought refuge in neighboring states or Western countries, driven by fears of persecution, restrictions on personal freedoms, and violence.

Figure 1: Refugee population by country or territory of origin, 2023



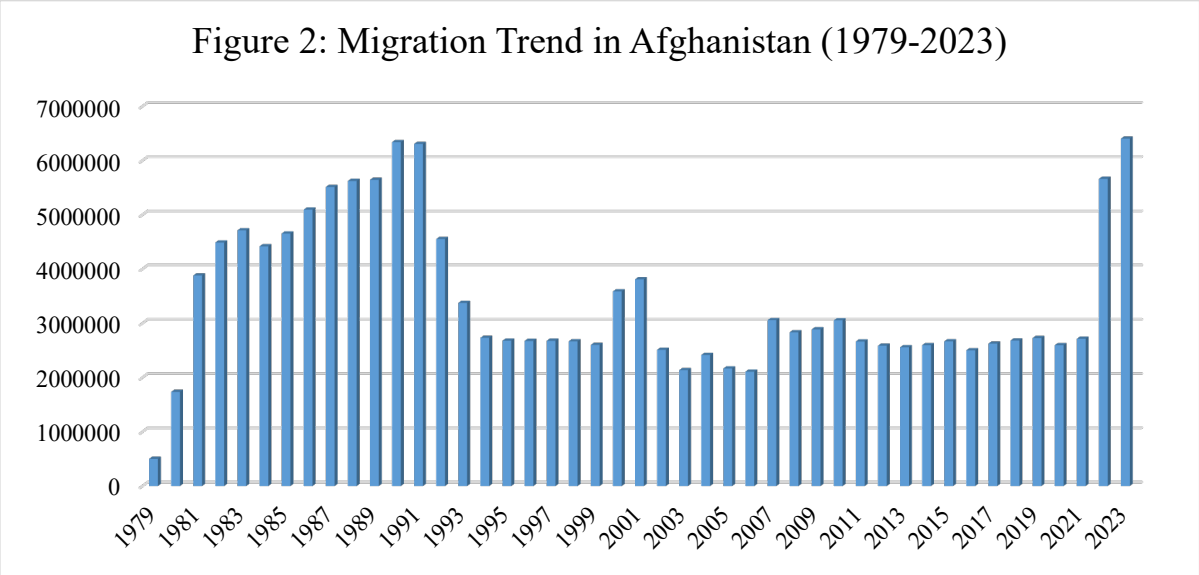
Source: Our World in Data (2023)

Even in the absence of active conflict, economic factors play a crucial role in compelling migration. Afghanistan is among the poorest countries in the world, with high levels of unemployment, inflation, and poverty. The economic collapse that followed the Taliban's return to power further worsened these conditions. International sanctions, the freezing of Afghan assets abroad, and the cessation of international aid have left millions of Afghans with limited access to basic necessities, such as food, healthcare, and employment. Consequently, many are forced to migrate in search of better opportunities, both within Afghanistan and abroad. According to data from Our World in Data (2023), by 2023, 6,403,144 Afghan citizens had emigrated, with Pakistan and Iran being the primary destinations. Internally displaced persons (IDPs) also constitute

[1] The interview with Mr Karim Samani (alias given by the author as respondent prefers to stay anonymous), was conducted via Google Meet on July 09 2024.

[2] The interview with Mr Samim Jamshidi (alias given by the author as respondent prefers to stay anonymous), an administrative officer at MRR was conducted via Google Meet on July 07 2024.

a significant portion of Afghanistan's migration landscape. In addition to conflict and economic hardship, Afghanistan's geographical and environmental conditions contribute to migration. The country's mountainous terrain and arid climate make it particularly susceptible to natural disasters such as droughts, floods, and earthquakes. Climate change has exacerbated these challenges, leading to increased food insecurity and water scarcity. In rural areas, where agriculture is the primary source of livelihood, drought has devastated communities, forcing families to migrate to urban centers or across borders in search of sustenance. While the environmental dimensions of migration are often overshadowed by the more immediate concerns of conflict and economic instability, they remain critical, particularly when considering the long-term implications of Afghan migration. As of 2023, according to Our World in Data, approximately 5,689,000 individuals had been displaced, including 1,502,000 due to natural disasters. Internally displaced persons in Afghanistan, as pointed out by Shoaib Fatimi[3], face severe challenges, including inadequate shelter, food insecurity, and limited access to healthcare and education. Many live in makeshift camps or temporary shelters in urban areas, where they struggle to integrate into local communities or secure sustainable livelihoods.



Source- Spooner *et al.* (2023). Data visualized using Microsoft Excel

Environmental Degradation in Afghanistan

Afghanistan, a landlocked nation situated at the intersection of Central and South Asia, possesses a diverse geography and complex topography. Its terrain ranges from the frozen peaks of the Hindu Kush mountain range to the arid deserts in the southern regions. Approximately 73% of Afghanistan's land is covered by savannah, scrub, and grassland, while about 15% is composed of sparse or barren vegetation, snow, and ice (ActionAid International, 2022). According to the National Environmental Protection Agency (NEPA) and UNEP (2016), the country's altitudes vary significantly, from as low as 250 meters to over 7,000 meters above sea level. This geographic diversity results in a wide array of climatic conditions. The eastern and northeastern regions experience a continental climate, characterized by hot summers and cold winters, whereas the western and southern regions have predominantly dry and semi-arid climates. The central highlands, known for their cold winters and heavy snowfall, serve as the source of numerous rivers and streams, essential for agriculture and daily life.

Afghanistan's climate is predominantly dry to semi-arid, with considerable seasonal temperature variations and differences in altitude. The country exhibits a generally dry continental climate, though the monsoons from the Indian subcontinent bring some moist maritime air from the southeast during the summer. Most areas experience cold winters and hot summers, with precipitation primarily occurring between October and May. The arid deserts receive less than 100 mm of annual precipitation, whereas the mountainous regions above 1,000 meters receive significant precipitation, mostly as snow during winter months (NEPA and UNEP, 2016). According to the NEPA and UNEP (2016), the average annual temperature in Afghanistan has increased by 1.8°C since 1950, with marked regional variations. In the southern region, temperatures have risen by 2.4°C, while in the Hindu Kush region, the increase is around 1°C, and in the eastern region, it is 0.6°C. Concurrently, spring precipitation has decreased by nearly a third, with the central, eastern, and northern highlands most

[3] The interview with Mr Shoaib Fatimi (alias given by the author as respondent prefers to stay anonymous), a farmer official in Afghanistan Disaster Management Authority was conducted via Google Meet on July 07 2024.

affected. In the Central Highlands, spring rainfall declined by approximately 40% between 1950 and 2010 (NEPA and UNEP, 2016). Agriculture, the cornerstone of Afghanistan's economy, is particularly vulnerable to climate change. The nation ranks 8th among 170 countries in terms of climate change vulnerability over the next 30 years, with 59% of the population impacted by climate shocks, compared to 19% affected by security shocks) (International Bank for Reconstruction and Development, 2018). The effects of climate change have significantly aggravated Afghanistan's environmental challenges. Rising temperatures have prolonged droughts, especially in water-scarce regions, reducing crop yields, depleting water resources for agriculture and domestic use, and increasing the frequency of forest fires, which further degrade the land. Flash floods have become more frequent and severe, particularly during spring when snowmelt rates are high, often leading to the destruction of homes, infrastructure, and agricultural lands. Unpredictable rainfall patterns disrupt farming cycles, complicating farmers' efforts to plan and maintain sustainable agricultural practices. Additionally, the melting glaciers of the Hindu Kush have reduced long-term water availability. Glacial retreat not only diminishes river flows but also heightens the risk of glacial lake outburst floods (GLOFs), which can lead to catastrophic downstream flooding. These shifts in river flow have far-reaching consequences for irrigation systems, fisheries, and hydropower generation, placing further strain on Afghanistan's already limited resources.

Deforestation represents a critical environmental issue in Afghanistan, driven by a combination of human activities and natural factors. Illegal logging, the demand for firewood, and the construction industry are primary contributors to widespread deforestation, leading to significant ecological consequences (Kawa, 2024; Akrami, 2022). This unchecked deforestation, often driven by the illegal cutting, selling, and smuggling of timber to Pakistan, exacerbates environmental degradation. In particular, soil erosion is a direct result of deforestation, as the removal of trees reduces the land's ability to retain soil, making it more vulnerable to erosion by wind and water. Consequently, the land's fertility decreases, rendering it less suitable for agricultural purposes.

Land degradation in Afghanistan is further intensified by overgrazing, improper agricultural practices, and the encroachment of agriculture into fragile ecosystems. The erosion of topsoil, coupled with the depletion of essential nutrients, reduces agricultural productivity, compelling farmers to either seek new lands or abandon farming entirely. This not only exacerbates food insecurity but also triggers rural-urban migration as people search for better opportunities. The environmental consequences extend beyond agriculture, as deforestation and land degradation also threaten biodiversity. The loss of native plant and animal species disrupts ecosystem services such as pollination, water purification, and natural pest control, which are vital for sustaining agricultural productivity and rural livelihoods. Compounding the environmental and agricultural challenges are reports of conflicts over forest resources. In 2022, a dispute among Taliban members over the distribution of pine seeds resulted in a forest fire in the Nurgram region of Nuristan province, highlighting the exploitation of forest resources as a source of conflict (Etilaat-e-Roz, 2023; Rawnaq, 2021; Nazari, 2024). Such incidents underscore the complex interplay between environmental degradation, political instability, and resource exploitation in Afghanistan.

Air and water pollution, along with water scarcity, are critical challenges in Afghanistan, severely impacting public health and the environment. Air pollution has become a major public health crisis, with approximately 5,000 deaths annually attributed to poor air quality (Hussaini, 2023). In addition to air pollution, water scarcity and contamination are widespread, affecting both urban and rural populations. In Kabul, only about 10% of residents have access to safe drinking water, a situation mirrored in other provinces where access to clean water remains dangerously limited (Hussaini, 2023).The country's reliance on limited water resources, particularly for agriculture, exacerbates the crisis. Agriculture consumes around 90% of Afghanistan's available water, yet inefficient irrigation practices, outdated infrastructure, and poor water management policies result in significant water loss and wastage. The over-extraction of water for both irrigation and domestic use has led to the depletion of aquifers, causing declining water tables and making it increasingly difficult for communities to access clean water. In addition to scarcity, water sources are further compromised by contamination from industrial waste, agricultural runoff, and inadequate sanitation systems, contributing to health issues and diminishing the quality of life for millions. Political conflicts and disputes over water rights between communities further complicate the situation. Shared water resources frequently become points of contention, with disputes sometimes escalating into violent conflicts. According to Janan Sadaqat[4], the absence of a cohesive national water management strategy significantly hampers efforts to address water scarcity, leaving much of the population vulnerable to water-related hardships. This

[4] The interview with Mr Janan Sadaqat (alias given by the author as respondent prefers to stay anonymous), a manager at MRR was conducted via Google Meet on July 08 2024.

combination of environmental degradation, inadequate infrastructure, and political instability underscores the urgent need for comprehensive solutions to Afghanistan's air and water crises.

Afghanistan's rich biodiversity faces significant threats as a result of environmental degradation, primarily stemming from habitat loss, unsustainable resource management, and illegal activities. The ongoing destruction of forests, wetlands, and pastures has jeopardized the survival of numerous plant and animal species, while also undermining critical ecosystem services essential for human well-being. The crisis is further exacerbated by the poaching of wildlife, with reports implicating Taliban forces in the killing of various species (MelliunIran, 2021; Vafaei, 2022; Afghanistan International, 2022). Additionally, the unsustainable harvesting of medicinal plants, such as Yame (ephedra viridis) and Illa Rang (alkanna tinctoia)," have become widespread, driven by smuggling and illegal trade (Kawa, 2024 (Farzam, 2023) . Afghanistan's natural resource management practices have deteriorated, with mining activities often being conducted in a haphazard manner, showing little concern for environmental consequences or proper waste management. Protecting and restoring Afghanistan's ecosystems is critical for preserving biodiversity and ensuring the sustainability of ecosystem services. However, the ongoing environmental degradation and absence of effective protection policies pose substantial challenges (Nazari, 2024).

Desertification, the process by which fertile land becomes desert, is a pressing concern in Afghanistan. It is driven by a combination of climatic factors, such as prolonged droughts and high temperatures, and human activities like deforestation, overgrazing, and improper irrigation practices. The encroachment of deserts into arable land reduces the available space for agriculture, forcing farmers to abandon their fields and migrate in search of more fertile areas. Soil erosion, closely linked to desertification, results from the loss of vegetation cover and the degradation of soil structure. Without adequate plant roots to anchor the soil, heavy rains and strong winds can easily wash away the topsoil, which is rich in nutrients necessary for crop growth. This not only diminishes the land's productivity but also leads to sedimentation in rivers and reservoirs, affecting water quality and storage capacity. Regions such as Badghis, Farah, and Herat provinces are particularly vulnerable to desertification and soil erosion. These areas have seen significant reductions in agricultural output, contributing to food insecurity and economic instability. The loss of productive land also means that communities can no longer sustain themselves through traditional farming practices, pushing them towards migration as a survival strategy.

As rural areas become increasingly uninhabitable due to environmental degradation, there is a notable shift towards urban centers. Cities like Kabul, Kandahar, and Mazar-i-Sharif are experiencing rapid population growth, which places additional stress on already strained urban infrastructure and resources (Paikan, 2020). Urbanization in Afghanistan often leads to the expansion of informal settlements and slums, where access to clean water, sanitation, and healthcare is limited (Peter Ellis and Roberts, 2016). The increased demand for resources in urban areas have lead to overexploitation of water sources, exacerbating water scarcity issues. Moreover, the influx of migrants created social tensions and competition for jobs, housing, and services, potentially leading to increased poverty and inequality within cities. The environmental impact of urbanization includes higher pollution levels, increased waste generation, and greater demand for energy and transportation. Without sustainable urban planning and investment in green infrastructure, Afghan cities may struggle to accommodate their growing populations, further deteriorating living conditions and contributing to a cycle of environmental and social challenges.

Overall, Afghanistan's fragile natural environment has been shaped by human activity and livestock grazing for millennia. Presently, there is no region, except for the highlands, that remains untouched by human influence (ActionAid International, 2022). Poor governance, ongoing conflict, insecurity, drought, and poverty have rendered Afghanistan highly susceptible to environmental degradation.

The Nexus Between Environmental Degradation and Migration in Afghanistan

Environmental degradation, encompassing phenomena such as deforestation, soil erosion, and pollution, undermines the integrity of ecosystems, thereby heightening their susceptibility to natural hazards, including floods, landslides, and storms. The degradation of environmental conditions can intensify both the frequency and severity of these hazards, establishing a destructive cycle that adversely affects both ecological systems and human populations. Afghanistan is particularly vulnerable to severe and recurrent natural disasters, which include droughts, landslides, floods, flash floods, avalanches, and earthquakes (The World Bank Group, 2017). Since 1980, natural hazards have impacted approximately nine million individuals in the country and resulted in over 20,000 deaths (Ranghieri and Nagar, 2019). Specifically, floods and earthquakes have collectively caused more than 16,000 fatalities since 1990 (International Bank for Reconstruction and Development, 2018). The recurrent nature of these disasters underscores the urgent need for sustainable environmental management practices to mitigate their impacts and safeguard both ecological resilience and human well-being.

Implementing strategies aimed at environmental restoration and conservation could significantly contribute to reducing the vulnerability of communities in Afghanistan and other similarly affected regions. By addressing the root causes of environmental degradation, it may be possible to break the cycle of destruction and foster a more sustainable and resilient future.

Natural disasters have caused the displacement of numerous citizens, alongside considerable loss of life and property. According to data from Our World in Data, between 2008 and 2023, over 1.5 million individuals were compelled to leave their homes and seek refuge in safer locations as a result of these disasters.

Figure 3: Disasters around Kabul (1998-2018)

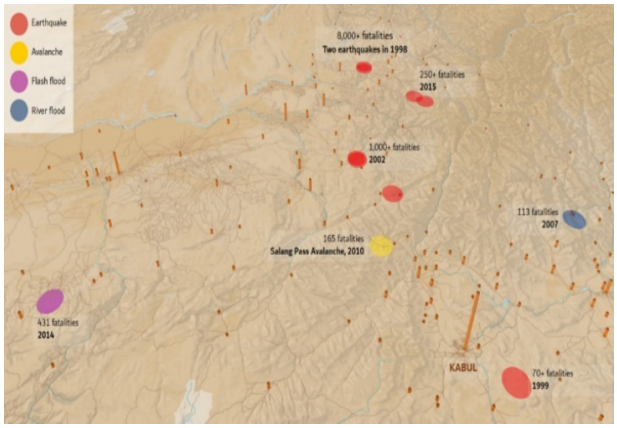
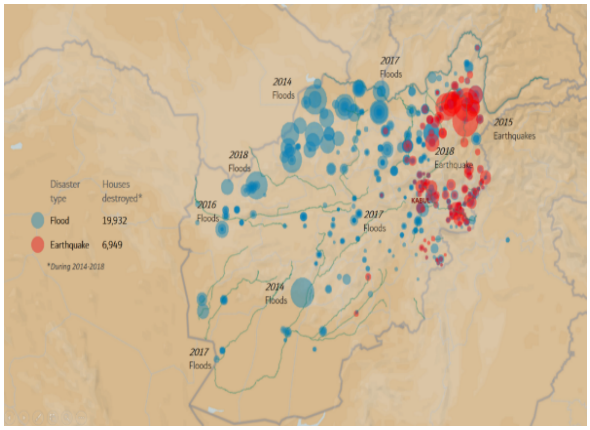
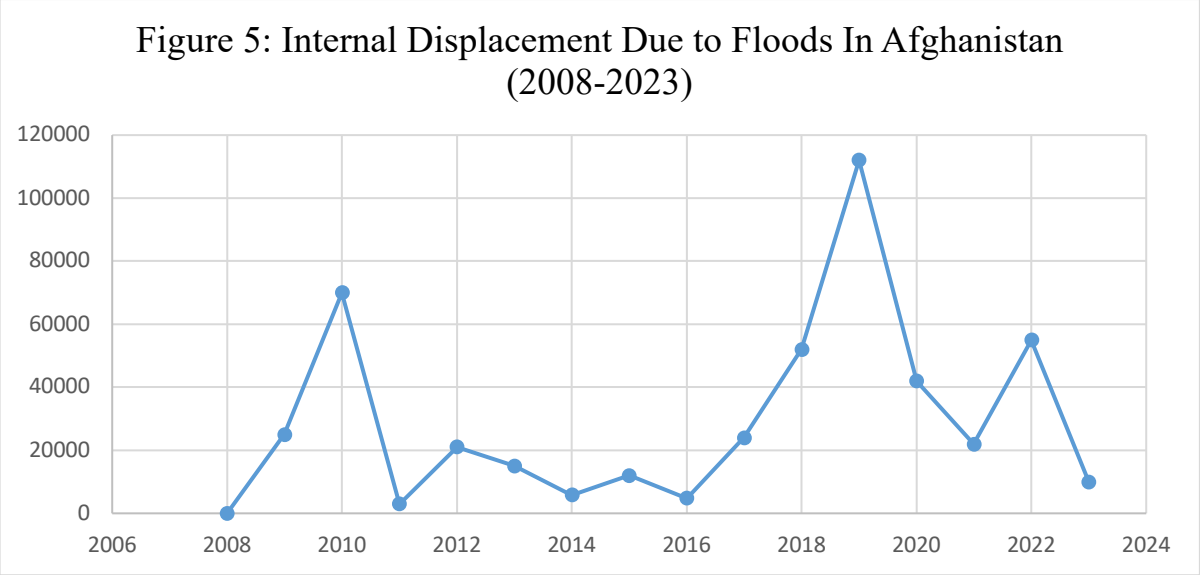


Figure 4: Houses destroyed by floods and earthquakes (2014 to 2018)



Source Ranghieri and Nagar (2019).

Flooding is one of Afghanistan's most frequent and devastating natural hazards, with 2,245 incidents occurring between 2010 and 2019 (ActionAid International, 2022. p. 17). This vulnerability is primarily due to the country's topography, with rivers originating in steep, mountainous regions prone to heavy rainfall and rapid snowmelt, which trigger floods (BBC, 2021). The degradation of mountain vegetation and extensive deforestation exacerbate the flood risks, leaving exposed soil vulnerable to erosion. Afghanistan's rivers, fed by snow and glaciers, are particularly susceptible to seasonal flooding. On average, floods affect around 101,000 people annually, resulting in significant economic losses, including approximately USD 54 million in damages each year (International Bank for Reconstruction and Development, 2018, p. 6). One of the most severe recent flood events occurred in May 2014, displacing 20,000 individuals and impacting 90,000 people across 14 northern provinces. The damage from this single event exceeded USD 100 million (World Bank Group, 2017). The displacement caused by floods compounds Afghanistan's humanitarian challenges, forcing families from their homes, destroying infrastructure, and limiting access to essential services. According to data from the Internal Displacement Monitoring Center (2024), 473,000 people were displaced due to floods between 2008 and 2023. As climate change intensifies, the frequency and severity of these flood events are likely to increase, putting even more people at risk of displacement and further destabilizing the already fragile socioeconomic fabric of the country (IOM, 2022).This persistent displacement due to flooding contributes to ongoing hardships for many Afghan communities, particularly in remote and vulnerable regions.



Source- Internal Displacement Monitoring Center (2024). Data visualized using Microsoft Excel

Drought has been a persistent issue in Afghanistan, causing widespread displacement and exacerbating the country's socio-economic challenges. Since 2000, over 6.5 million people have been affected by four major droughts, with notable occurrences in 2000, 2006, 2008, 2011, and 2018 (World Bank Group, 2017; ActionAid International, 2022). The agriculture sector, which is highly dependent on rainfall, is especially vulnerable. In 2018-2019, drought affected more than two-thirds of the country, reducing agricultural incomes by half in some regions (UNOCHA, 2018; Pikulicka-Wilczewska, 2019), and leading to the displacement of over 370,000 people (Internal Displacement Monitoring Center, 2024). On average, droughts inflict an economic toll of USD 280 million on agriculture annually, with extreme events potentially causing damages exceeding USD 3 billion (World Bank Group, 2017). Moreover, desertification and land degradation, exacerbated by changing precipitation patterns and rising temperatures, have significantly reduced vegetation cover, particularly in the northern, western, and southern regions (UNOCHA, 2023). These environmental changes have forced many Afghans to migrate in search of better living conditions (IOM, 2022), as their livelihoods, which rely heavily on rainfed farming and livestock rearing, are increasingly unsustainable (*Whole of Afghanistan Assessment 2022*, 2022). In the past nine years alone, there have been 496 incidents of drought, highlighting the severity of the issue. The consequences of drought in Afghanistan extend beyond economic losses to include displacement and rising health concerns due to water scarcity and the spread of diseases (ActionAid International, 2022).

Landslides are a frequent hazard in Afghanistan, driven by the country's mountainous terrain, which covers 60 percent of its land, and its unstable soil composition (Drury, 2024). According to data from the World Bank (2017), over 3 million people in Afghanistan live in areas exposed to the risk of landslides, with assets worth more than $6 billion at risk. These assets include critical infrastructure, such as over 400 schools and 300 health centers, highlighting the severe potential impact on communities. One of the most vulnerable regions is Badakhshan province, where approximately 280,000 people and more than $800 million in assets face landslide hazards (World Bank Group, 2017).

In 2014, a tragic landslide occurred in Ab Barak village in northeastern Afghanistan. The hillside, saturated by heavy rainfall, collapsed, resulting in at least 350 fatalities, though some estimates suggest the death toll could have surpassed 2,000 (World Bank Group, 2017). Such events not only cause loss of life and property but also drive migration, as people are forced to flee from high-risk areas to seek safety. The destruction of homes, farmland, and infrastructure, combined with the psychological toll of living under constant threat, pushes many Afghan families to migrate (Hossaini and Faiez, 2014), further contributing to the country's internal displacement crisis. Since 2012, Afghanistan has experienced a total of 43 wet mass movement events and 3 dry mass movement events, according to data from IDMC. These events have resulted in approximately 21,000 internal displacements due to wet mass movements and an additional 2,300 displacements linked to dry mass movements (Internal Displacement Monitoring Center, 2024).

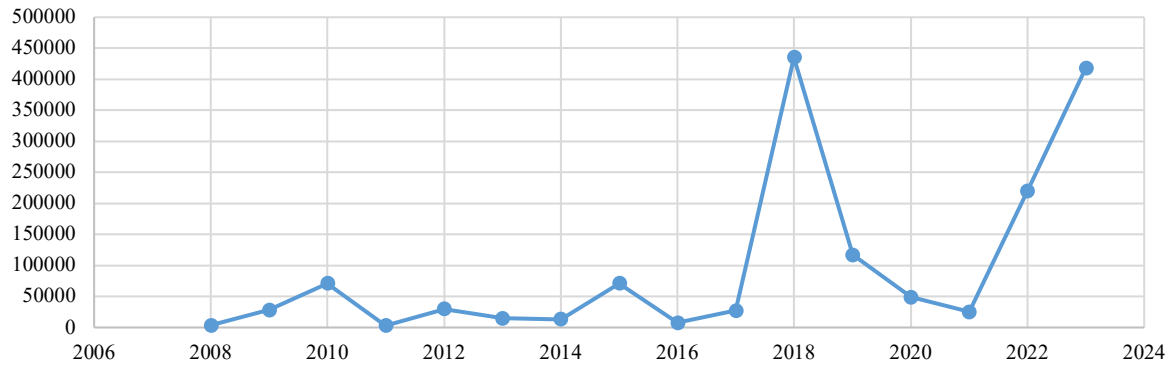
Avalanches pose a significant threat to the people, settlements, and infrastructure within the Hindu Kush mountain range of Afghanistan. These hazardous events are primarily influenced by the region's topography and elevation, affecting mountainous areas from the northeast to the western regions (ReliefWeb, 2023). According to World Bank Group (2017), Badakhshan, Kabul, and Daykundi are particularly vulnerable, experiencing substantial impacts on both populations and local economies. With around 2 million people exposed to avalanche risks, the threat extends to over 10,000 kilometers of

roads and approximately $4 billion in assets, with Badakhshan alone seeing $990 million in exposed assets. The challenge of providing aid to remote populations following avalanche events is exacerbated by accessibility issues, hindering rescue and recovery efforts. Climate change introduces a complex dynamic; while rising temperatures may reduce avalanche risks in lower-lying areas, higher altitudes like the Salang Pass may witness an increase in frequency and severity of avalanches during mid-winter due to heavier snowfall. The tragic consequences of these events were highlighted in 2015 when a series of avalanches and flash floods claimed over 300 lives, primarily in the Panjshir Valley. Between 2000 and 2015, more than 153,000 individuals were affected by avalanches (World Bank Group, 2017). Such disasters contribute to migration, as people flee affected areas in search of safety and stability.

Other disasters such as heavy rains, harsh winter conditions and earthquakes are other challenges that have affected the lives of Afghans and in some cases have led to their displacement. The National Disaster Management Commission of Afghanistan reported that in February 2008, severe winter conditions resulted in the tragic loss of 926 lives, with 321 individuals injured and over 1,000 homes either damaged or destroyed (ActionAid International, 2022). Earthquakes, in particular, have devastating consequences for Afghan communities. The United States Geological Society identifies Afghanistan as one of the most perilous seismic regions globally. Since 1980, earthquakes have claimed more than 10,000 lives and caused approximately 250,000 injuries, making them one of the most significant threats to the population's safety and stability (World Bank Group, 2017). According to the Afghanistan Geospatial Data Center, an alarming 24 million people out of the country's 33.5 million residents have been affected by seismic activities (ActionAid International, 2022). Since 2012, Afghanistan has experienced 17 significant earthquake events, which have resulted in the displacement of approximately 605,000 individuals, according to data from the Internal Displacement Monitoring Centre (2024). These events underscore the substantial impact of seismic activity on internal displacement within the country. Moreover, according to data from the Internal Displacement Monitoring Centre (2024), Afghanistan has experienced several disaster events related to extreme temperatures and erosion since 2012. Specifically, 18 extreme temperature events have been reported, leading to the internal displacement of approximately 7,900 individuals. Additionally, 1 erosion-related disaster event has been documented, resulting in 240 internal displacements. These figures highlight the varied environmental challenges contributing to population displacement in the country.

The cumulative impact of these disasters is profound, affecting not only the immediate safety, shelter and livelihoods of affected populations but also leading to their displacement. As natural disasters continue to threaten Afghanistan, the need for effective disaster management and preparedness becomes increasingly critical in safeguarding the country's population against future adversities.

Figure 6: Internal Displacements Due to Natural Disasters in Afghanistan (2008-2023)



Source- Spooner *et al.* (2023). Data visualized using Microsoft Excel.

Discussion

The analysis of environmental degradation and migration in Afghanistan reveals a complex interplay between ecological degradation, recurrent natural disasters, and forced displacement. Environmental degradation, through deforestation, soil erosion, and unsustainable land-use practices, has significantly exacerbated the vulnerability of Afghan communities to natural hazards such as floods, droughts, and landslides. These environmental changes, combined with Afghanistan's mountainous topography and climatic conditions, have intensified the frequency and severity of natural disasters, creating a destructive cycle in which environmental damage increases the likelihood of disasters, and disasters in turn contribute to further ecological decline. This cycle underscores the centrality of environmental factors in understanding the patterns of

displacement in the country. Flooding, in particular, represents one of the most pervasive and devastating natural hazards in Afghanistan. The degradation of mountain vegetation and widespread deforestation has left the soil more vulnerable to erosion, exacerbating flood risks, particularly during periods of heavy rainfall or rapid snowmelt. Flood-induced displacement has been severe, with hundreds of thousands of people forced to flee their homes due to these events. The increasing regularity of floods, projected to intensify with climate change, not only disrupts lives and livelihoods but also poses long-term socioeconomic challenges, especially in regions where infrastructure is weak, and the capacity for disaster response is limited. The case of the 2014 floods, which displaced 20,000 people and caused economic damages exceeding USD 100 million, highlights the extent to which environmental degradation can magnify the impacts of natural disasters, further contributing to population displacement. Similarly, drought is a major driver of migration in Afghanistan. As agriculture is heavily dependent on rainfall, recurrent droughts have severely affected agricultural productivity, leading to the displacement of rural communities that rely on subsistence farming and livestock rearing. The fact that over 370,000 people were displaced during the 2018-2019 drought underscores the magnitude of this issue. Desertification, coupled with rising temperatures and unpredictable precipitation patterns, has reduced vegetation cover, making land less viable for farming. These ecological shifts have resulted in significant economic losses in the agricultural sector, further pushing vulnerable populations to migrate in search of more stable livelihoods. The displacement caused by droughts reflects both the direct impacts of environmental changes on human habitation and the broader economic consequences of environmental degradation. Landslides and avalanches, though more localized, also contribute to significant displacement in Afghanistan. The country's mountainous regions, particularly in provinces such as Badakhshan, are prone to landslides due to unstable soil conditions and increased erosion caused by deforestation and agricultural practices. The 2014 landslide disaster in Ab Barak, which led to a high death toll and displaced many families, serves as a stark example of how environmental degradation can amplify the risks of natural hazards. Similarly, avalanches, driven by the topography and climatic conditions of the Hindu Kush mountain range, have displaced large numbers of people, further exacerbating the challenges of managing displacement in remote and inaccessible areas. These events highlight the geographical and environmental vulnerabilities of Afghanistan, where mountainous regions are particularly susceptible to environmental hazards that directly result in human displacement. Moreover, the compounded effects of climate change are expected to exacerbate the existing environmental challenges in Afghanistan. Rising temperatures and changing precipitation patterns will likely increase the frequency and intensity of natural hazards such as floods, droughts, and avalanches. The increased unpredictability of weather patterns could further destabilize agricultural production and increase the occurrence of extreme weather events, thus intensifying both environmental degradation and displacement. The projected escalation of climate-induced hazards poses a critical threat to Afghanistan's already fragile social and economic systems, making effective environmental management and disaster preparedness essential for mitigating future displacement. Overall, the situation in Afghanistan highlights the multifaceted relationship between environmental degradation and migration. Displacement is not solely a response to sudden, catastrophic events but is also driven by the gradual deterioration of the environment, which undermines the sustainability of livelihoods, particularly in rural and agricultural communities. This underscores the need for comprehensive strategies that address both the immediate and long-term impacts of environmental degradation. Sustainable land management practices, reforestation efforts, and improved disaster preparedness are crucial for reducing vulnerability and mitigating the displacement caused by environmental degradation. Furthermore, addressing the root causes of environmental degradation is imperative to breaking the cycle of disaster and displacement, thereby promoting a more resilient and sustainable future for Afghan communities.

Conclusion

The intertwined phenomena of environmental degradation and migration in Afghanistan present a complex and pressing challenge for the country and its people. The evidence discussed throughout this article underscores the devastating impacts of environmental degradation—driven by factors such as deforestation, soil erosion, and the frequency of natural disasters—on both ecosystems and human populations. Afghanistan's vulnerability to climatic hazards, including droughts, floods, landslides, and earthquakes, is exacerbated by decades of conflict and political instability. These challenges significantly undermine socio-economic stability, leading to forced migration as communities struggle to survive amid increasingly inhospitable conditions. The scale of environmental-induced migration in Afghanistan is alarming. Over the past few decades, millions have been affected by recurrent natural disasters, displacing families and disrupting livelihoods. The statistics paint a grim picture: approximately 400,000 individuals are affected by disasters annually, with Afghanistan reporting the highest number of IDPs due to disasters globally in recent years. The severe drought of 2018-2019, which left nearly 10 million people in food crisis and displaced over 260,000 individuals, exemplifies the direct correlation between environmental challenges and migration. Similarly, floods, landslides, and other natural disasters have caused

immense suffering, destruction, and displacement, perpetuating a cycle of vulnerability that demands urgent attention. Moreover, the confluence of environmental degradation with socio-political instability presents significant barriers to effective governance and disaster management. In a country where governance structures are often weak, the capacity to address the root causes of environmental challenges is limited. The result is a compounded effect of environmental stressors and socio-economic crises, which diminishes household resilience and exacerbates poverty. The inability to recover from repeated environmental shocks forces families to migrate in search of safety and stability, often leading to long-term displacement. Addressing these challenges necessitates a multifaceted approach that integrates environmental management with migration policies. It is imperative to recognize environmental degradation not just as a background issue but as a primary driver of migration. Implementing sustainable environmental practices can mitigate the impacts of natural disasters and reduce vulnerability among affected communities. Strategies such as reforestation, sustainable agricultural practices, and improved water management can foster resilience and diminish the likelihood of displacement. Furthermore, developing robust disaster response mechanisms will be crucial in protecting vulnerable populations and minimizing the disruption caused by environmental hazards. International cooperation and support are essential in this regard. Afghanistan's challenges are not isolated; they are part of a broader global discourse on environmental degradation and migration. Engaging with international organizations, NGOs, and neighbouring countries can facilitate knowledge sharing, resource mobilization, and the development of effective strategies to manage environmental risks. By prioritizing environmental sustainability and incorporating migration considerations into policy frameworks, Afghanistan can begin to break the cycle of degradation and displacement. Ultimately, the relationship between environmental degradation and migration in Afghanistan requires urgent attention and action. As the impacts of climate change intensify, proactive measures are essential to safeguard the livelihoods of vulnerable populations and create a sustainable future for the country. Addressing these issues holistically can not only improve the resilience of Afghan communities but also contribute to regional stability and prosperity. The path forward must prioritize both environmental conservation and the humane management of migration, ensuring that the needs of affected populations are met in an increasingly uncertain world.

References

ActionAid International (2022) *Climate Change Drives Migration in Conflict-Ridden Afghanistan*. Available at: https://actionaid.org/publications/2020/climate-change-drives-migration-conflict-ridden-afghanistan#downloads.

Afghanistan International (2022) *emzayi qarardad 42 million dollari; taliban az kharjyha poul migirad wa bah anha ijaazah shekar medhad*. Available at: https://www.afintl.com/202212148370.

Akrami, E. (2022) *istikhraaj muadin bah yak munba daramad taliban mobadel shadeh ast*, *DW*. Available at: https://www.dw.com/fa-af/آغاز-استخراج-معدن-زغال-سنگ-توسط-مردم-و-طالبان-در-بامیان/a-60659848.

BBC (2021) *Afghanistan Taliban: Flash Flooding Kills Dozens in Remote Province*. Available at: https://www.bbc.com/news/world-asia-58017439 (Accessed: 3 October 2024).

Drury, F. (2024) *Afghanistan: Landslide Kills 25 After Heavy Snow*, *BBC*. Available at: https://www.bbc.com/news/world-asia-68336140 (Accessed: 3 October 2024).

Etilaat-e-Roz (2023) *afrad naashnaas sadha darakht raa dar jungle kunar qata kordand*. Available at: https://www.etilaatroz.com/167144/قطع-جنگلات-کنر/ (Accessed: 20 July 2024).

Farzam, A. (2023) *nigrani az qachaq giyahhan kuhi dar badakhshan; masoolin: nasal barkhi gayahan dar haal inqiraaz qarar dared*, *Pajhwok Afghan New*. Available at: https://pajhwok.com/fa/2023/11/13/worrying-about-the-smuggling-of-mountain-plants-in-badakhshan-officials-the-generation-of-some-plants-is-on-the-verge-of-extinction/.

Harris, G. (2008) 'Lagoons', *Encyclopedia of Ecology*. Elsevier.

Hossaini, M. and Faiez, R. (2014) *Afghans mourn hundreds killed in landslide*. Available at: https://www.timesofisrael.com/afghans-observe-day-of-mourning-for-hundreds-killed-by-slide/ (Accessed: 6 June 2024).

Hussaini, F.H. (2023) *amniat zistmuhiti dar afghanistan*. Available at: https://8am.media/fa/environmental-security-in-afghanistan/.

Internal Displacement Monitoring Center (2024) *Country Profile; Afghanistan*. Available at: https://www.internal-displacement.org/countries/afghanistan/ (Accessed: 7 June 2024).

Internal Displacement Monitoring Centre (2020) *Global Report on Internal Displacement 2020*. Geneva. Available at: https://www.internal-displacement.org/global-report/grid2020/#:~:text=IDMC's Global Report on Internal Displacement is the official repository.

International Bank for Reconstruction and Development (2018) *Afghanitan Multi-hazard risk assessment*. Washington, D.C. Available at: https://reliefweb.int/report/afghanistan/afghanistan-multi-hazard-risk-assessment#:~:text=Being both a natural hazard and conflict prone country, Afghanistan.

IOM (2004) *Afghanistan Migration Profile*. Kabul. Available at: https://reliefweb.int/report/afghanistan/afghanistan-migration-profile.

IOM (2007) *Migration and the Environment, Discussion Note: MC/INF/288*. Available at: https://environmentalmigration.iom.int/environmental-migration#:~:text="Environmental migrants are persons or groups of persons,either within their country or abroad" %28IOM%2C 2007%3A33%29.

IOM (2009) *Migration, Environment and Climate Change: Assessing the Evidence*. Available at: https://publications.iom.int/books/migration-environment-and-climate-change-assessing-evidence.

IOM (2014) *IOM Outlook on Migration, Environment and Climate Change*. Available at: https://environmentalmigration.iom.int/sites/g/files/tmzbdl1411/files/mecc_outlook.pdf.

IOM (2022) *Building Climate Resilience: How A Flood Protection Wall Revived an Afghan Community*. Available at: https://afghanistan.iom.int/stories/building-climate-resilience-how-flood-protection-wall-revived-afghan-community#:~:text=Severe droughts and floods have worsened over the,damage%2C desertification%2C food insecurity%2C economic difficulties and displace (Accessed: 10 May 2024).

Kaczan, D.J. and Orgill-Meyer, J. (2020) 'The impact of climate change on migration: a synthesis of recent empirical insights', *Climate Change*, 158, pp. 281–300.

Kawa, A. (2024) *tagheer aqlimi wa bibarnamhagi taliban gayahan nadir tabiee dar haal nabudi ast*. Available at: https://8am.media/fa/climate-change-and-the-lack-of-planning-of-the-taliban-rare-natural-plants-are-being-destroyed/ (Accessed: 7 July 2024).

Lee, E.S. (1966) 'A Theory of Migration', *Demography*, 3(1), pp. 47–57.

Matthews, J.A. (2014) *Encyclopedia of Environmental Change*. London: SAGE Publications Ltd.

MelliunIran (2021) *jangjuyan talib parandegan nayab afghanistan raa brai khushgazrani shekar mikunand*. Available at: https://melliun.org/iran/281741.

National Environmental Protection Agency and UNEP (2016) *Afghanistan: Climate Change Science Perspectives*. Kabul. Available at: https://wedocs.unep.org/handle/20.500.11822/42280#:~:text=Afghanistan's variety of different climates has a large natural variability;

Nazari, M.A. (2024) *takhrib mohit zest ba hakmiyat talebani*, *8am Dialy*. Available at: https://8am.media/fa/environmental-destruction-under-taliban-rule/ (Accessed: 18 July 2024).

Our World in Data (2023) *Refugee population by country or territory of origin*. Available at: https://ourworldindata.org/grapher/refugee-population-by-country-or-territory-of-origin (Accessed: 1 June 2024).

Paikan, W. (2020) *dalaiel wa payamadhai waziat nahanjar rosh shahri dar afghanistan*, *Etilaat-e-Roz*. Available at: https://www.etilaatroz.com/109638/causes-and-consequences-of-the-abnormal-situation-of-urban-growth-in-afghanistan/#:~:text=این موارد از بزرگترین مشکلات تحول شهری و انکشاف شهرهای (Accessed: 4 October 2024).

Peter Ellis and Roberts, M. (2016) *Leveraging Urbanization in South Asia: Managing Spatial Transformation for Prosperity and Livability*. Washington, D.C. Available at: https://www.worldbank.org/en/region/sar/publication/urbanization-south-asia-cities.

Pikulicka-Wilczewska, A. (2019) *War, drought, diplomatic rifts deepen Afghanistan's water crisis*. Available at: https://www.aljazeera.com/features/2019/5/5/war-drought-diplomatic-rifts-deepen-afghanistans-water-crisis.

Ranghieri, F. and Nagar, A. (2019) *Building a more resilient Afghanistan*, *World of Opportunity*. Available at: https://medium.com/world-of-opportunity/building-a-more-resilient-afghanistan-2fb3b07b56d0#id_token=eyJhbGciOiJSUzI1NiIsImtpZCI6IjI4YTQyMWNhZmJlM2RkODg5MjcxZGY5MDBmNGJiZjE2ZGI1YzI0ZDQiLCJ0eXAiOiJKV1QifQ.eyJpc3MiOiJodHRwczovL2FjY291bnRzLmdvb2dsZS5jb20iLCJh (Accessed: 1 October 2024).

Rawnaq, J. (2021) *taliban brai hifazati az junglat yak qita nizami 400 nafari aijad mikunand*. Available at: https://www.etilaatroz.com/133019/the-taliban-are-building-a-400-strong-military-unit-to-protect-the-forests/.

ReliefWeb (2023) *Afghanistan - Avalanches (AMD, media) (ECHO Daily Flash of 15 February 2023)*. Available at: https://reliefweb.int/report/afghanistan/afghanistan-avalanches-amd-media-echo-daily-flash-15-february-2023 (Accessed: 4 October 2024).

Savage, M. *et al.* (2009) *Socio-Economic Impacts of Climate Change in Afghanistan: A Report to the Department for International Development*. Available at: https://portal.research.lu.se/en/publications/socio-economic-impacts-of-climate-change-in-afghanistan-a-report-#:~:text=Socio-Economic Impacts of Climate Change in Afghanistan: A Report to.

Spooner, F. *et al.* (2023) *Migration*, *Our World in Data*. Available at: https://ourworldindata.org/migration (Accessed: 4 September 2024).

The World Bank Group (2017) *Afghanistan: Disaster Risk Management & Resilience Program*. Available at: https://www.worldbank.org/en/programs/afghanistan-disaster-risk-management-and-resilience-program#:~:text=Since 1980, disasters caused by natural hazards have affected 9 (Accessed: 1 October 2024).

UNEP and UNOHA (2016) *Environment and Humanitarian Action Country Study Afghanistan*. Available at: https://www.unocha.org/publications/report/afghanistan/environment-and-humanitarian-action-country-study-afghanistan#:~:text=The Afghanistan Environment and Humanitarian Action %28EHA%29 country-level,environmental concerns have been mainstreamed in human.

UNOCHA (2018) *Humanitarian Needs Overview Afghanistan 2019*. Kabul. Available at: https://www.unocha.org/publications/report/afghanistan/2019-afghanistan-humanitarian-needs-overview#:~:text=Today%2C 6.3 million people require some form of,essential livelihoods and limited access to basic services.

UNOCHA (2019) *Humanitarian Needs Overview Afghanistan 2020*. Kabul. Available at: https://www.unocha.org/publications/report/afghanistan/afghanistan-humanitarian-needs-overview-2021-december-2020#:~:text=This Humanitarian Needs Overview (HNO) looks at likely evolution of.

UNOCHA (2023) *Humanitarian Needs and Response Plan - Afghanistan*. Available at: https://www.unocha.org/publications/report/afghanistan/afghanistan-humanitarian-needs-and-response-plan-2024-december-2023#:~:text=The 2024 humanitarian response in Afghanistan prioritizes the comprehensive needs.

Usher, E. (2005) *The Millennium Development Goals and Migration*. Geneva: International Organization for Migration. Available at: https://publications.iom.int/system/files/pdf/mrs20.pdf.

Vafaei, M. (2022) *aiteraaf taliban bah daramad 42 million dollar az waghazari shekargah bah qatariha*, *Independent Farsi*. Available at: https://www.independentpersian.com/node/290901/جهان/اعتراف-طالبان-به-درآمد-۴۲-میلیون-دلاری-از-واگذاری-شکارگاه-به-قطری‌ها.

Whole of Afghanistan Assessment 2022 (2022). Kabul. Available at: https://reliefweb.int/report/afghanistan/whole-afghanistan-assessment-2022-key-findings-presentation-inter-cluster-coordination-team-kabul-20-september-202#:~:text=The progressive shift in the drivers of humanitarian needs, from.

World Bank Group (2017) *Disaster risk profile : Afghanistan (English)*. Washington, D.C. Available at: https://documents.worldbank.org/en/publication/documents-reports/documentdetail/284301491559464423/disaster-risk-profile-afghanistan#:~:text=Disaster risk profile : Afghanistan (English) Afghanistan's rugged mountain landscape.