

ON CHANGES IN THE ECOLOGICAL ENVIRONMENT, POLITICAL, SOCIO-ETHNIC PROCESSES IN THE 18TH-FIRST HALF OF THE 19TH CENTURY**Umurzak Alibekov Yuldashevich**Lecturer department of history Gulistan State University, Uzbekistan
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Abstract: The article analyzes the climatic changes that occurred in the Turan ecosystem during the 18th and the first half of the 19th centuries, as well as their impact on political, social, and ethnic processes. Based on historical sources and climatological studies, it reveals how cold and warm periods influenced agriculture, trade relations, migration movements, and the general living conditions of the population. The study also discusses the interrelation between natural disasters, famines, epidemics, and the transformation of ethnic structures.

Keywords: Turan, climate change, ecosystem, ethnic processes, drought, migration, natural disasters, historical geography, trade routes, social crisis.

Introduction. Throughout human history, environmental and climatic changes have been among the most significant factors influencing the development of society. Every historical epoch's political, socioeconomic, and cultural life has been deeply interconnected with the natural environment, as any substantial shift in climate has inevitably left its imprint on human civilization. In particular, during the first half of the 18th–19th centuries, the Turan (Central Asian) region experienced profound ecological and climatic transformations that not only affected the living conditions of its population but also shaped the political, social, and ethnic dynamics of the time.

During this period, fluctuations in temperature, irregular precipitation, droughts, famines, and epidemics caused serious disruptions in agriculture, trade routes, and patterns of human migration. Such ecological shifts forced many communities to abandon their traditional settlements, resulting in changes in ethnic composition, the emergence of new tribal formations, and the intensification of competition among regional powers.

Moreover, climatic crises in Turan contributed to the decline of economic relations between states, the weakening of international trade, and the escalation of territorial conflicts. Historical sources indicate that severe winters, prolonged droughts, and natural disasters in the late 18th and early 19th centuries led to widespread human losses and social instability in various regions. The relevance of this study lies in the fact that, in the contemporary era of global climate change, understanding the historical impacts of ecological processes on human development is of great scientific and practical significance. By analyzing the environmental changes and their political and ethnic consequences in Turan during the first half of the 18th–19th centuries, this research aims to provide new insights into the interdependence between nature and society.

The main objective of this study is to identify how climatic shifts and natural disasters in this period influenced the social, economic, and political processes of the region, and to scientifically substantiate their historical consequences. In doing so, the research seeks to reveal the historical patterns of development in Central Asia within the broader context of its interaction with the natural environment.

METHOD. Research on the environmental and social history of Central Asia demonstrates that the climatic fluctuations of the 18th and early 19th centuries significantly influenced not only the natural environment but also the political, economic, and ethnic structures of the region. In examining these processes, this study relies on both historical written sources and modern climatological and ecological analyses, thereby integrating humanities and natural sciences approaches.

The primary sources of this research include the works of medieval and early modern historians such as Muhammad Yusuf Munshi, Khoja Samandar Termizi, Mir Muhammad Amin Bukhari, and Muhammad Hakimkhan Tura. Their writings provide detailed accounts of climate anomalies, droughts, cold spells, and natural disasters observed between the 17th and 19th centuries, as well as their socioeconomic and political repercussions. Additionally, the works of modern scholars such as M.E. Masson, Yu.M. Petrov, S.S. Gubaeva, and P.P. Ivanov offer valuable insights into the climatic variability of Central Asia, water resource management, and the ethnic composition of its population during this period.

The research employs a combination of historical-comparative, systemic analysis, source-critical, and historical reconstruction methods. The historical-comparative method was applied to compare climatic shifts of the 18th–19th centuries with those of earlier and later periods to identify regional variations and long-term trends. The systemic analysis method enabled the identification of interconnections between political, economic, and ethnic processes, highlighting causal relationships within the historical dynamics of the region.

The source-critical approach was used to examine the credibility and context of historical data, comparing narrative descriptions with climatological records to ensure the scientific reliability of conclusions. The historical reconstruction method allowed for the partial restoration of the ecological landscape of the time and for interpreting the interaction between natural and human factors in a holistic manner.

Furthermore, this research adopts an interdisciplinary framework, integrating methods and findings from history, climatology, ethnology, and geography. This interdisciplinary approach enables a comprehensive understanding of the complex relationships between environmental changes and sociopolitical developments in Turan.

The scientific novelty of the study lies in its examination of the 18th–19th-century environmental transformations not merely as natural phenomena but as dynamic factors that directly influenced political stability, migration patterns, and ethnic configurations in the region. By analyzing these interdependencies, the study contributes to the broader fields of historical geography, social ecology, and ethnic history, offering new perspectives on the adaptive strategies of societies to climatic and ecological stress in Central Asia.

RESULTS. According to the analytical conclusions of climatologists, great empires have historically emerged during periods when the Earth was dominated by cold climates. During such times, humanity's intellectual capacity and spiritual values flourished, leading to remarkable discoveries and advancements. Conversely, in warmer climatic periods, the opposite trend was observed — empires declined and faced crises. For instance, during warm climatic phases, China experienced political fragmentation and frequent territorial wars, whereas colder periods brought about the unification of the country into a single empire.

The climatic changes and political processes that took place in the Turan ecosystem during the first half of the 18th–19th centuries affected not only the region's socioeconomic conditions but also the transformation of its ethnic structures. During this period, Turan's climatic environment played a particularly significant role in agriculture and livestock farming. Radical climatic shifts complicated the living conditions of the population, making agricultural production and trade activities increasingly difficult. Such circumstances also influenced international trade and economic relations, leading to growing complexity in interactions among ethnic groups and triggering new waves of migration.

DISCUSSION. It is well known that the second glacial period in human history, spanning from the 13th century to the first half of the 19th century, left a profound mark on the political, state, economic, and migratory developments in Turan.

Analysis of historical sources indicates that some years at the end of the 17th century were characterized by abnormal heat. According to Muhammad Yusuf Munshi and Khoja Samandar Termizi, due to a shortage of rainfall in 1687–1688, crops withered and dried up by mid-April in

Turan. The lack of fodder led to the mass death of livestock. In May, locust invasions devastated the farmlands, resulting in famine and widespread starvation[1].

The spring of 1689, however, was marked by heavy rainfall, while in 1692–1693, severe snowfalls and abnormally cold weather were recorded. Although the climate of 1705 was relatively mild, the years 1706–1711 were characterized by early spring heat followed by extremely hot summers[2]. These climatic fluctuations affected not only the daily lives of the local population but also altered the entire region's economic and social dynamics. Consequently, the living standards of rural inhabitants declined, giving rise to social tensions and increased discontent throughout the region.

In the 1770s, the winters in Movarounnahr were relatively mild. During this period, snowfall across the khanates was minimal, and the rivers did not freeze. However, from the early 1780s onward, heavy snowfalls occurred, and the weather turned noticeably colder[3].

In 1809, Olimkhan's military campaign against Tashkent coincided with an extremely cold winter. Due to the severe frost, the Kokand Khanate's army suffered significant losses — many soldiers had their hands or feet frostbitten, and even among their loyal Tajik allies, dissatisfaction and unrest began to emerge[4].

By the late 1810s and early 1830s, winters had become unusually mild, while summers grew increasingly hot. In 1817, a powerful earthquake struck Samarkand, causing widespread destruction throughout the city. In 1821, due to an abnormal rise in temperature, locusts infested the Samarkand region[5], devastating crops and farmlands[6]. This disaster was compounded by the outbreak of a plague, which claimed the lives of a large portion of the population, while many others were forced to migrate to different areas. In our view, the melting of snow and glaciers accumulated in the mountains during the glacial period further deepened the ecological catastrophe — the Dargom Dam was washed away by the floodwaters[7].

The Khitay-Kipchaks and Karakalpaks who inhabited the steppe regions between Samarkand and Bukhara suffered immensely from the severe droughts of the early 19th century. It is believed that their protests against the Bukhara Emirate, which began in 1810, as well as the uprisings that took place between 1821 and 1825, were largely driven by the economic devastation caused by these natural disasters.

In 1820, a plague outbreak in the city of Bukhara claimed numerous lives[8]. During the 1830s, persistent droughts led to a sharp increase in grain prices, rising several times higher than usual, further deepening the economic crisis[9].

Natural disasters also struck the Kokand Khanate — a powerful earthquake occurred in 1823, and a cholera epidemic spread in 1828–1829. In addition to these calamities, growing public discontent and uprisings reflected the population's desire to change their political situation and improve economic conditions[10]. These movements further complicated the political climate of the region and led to the emergence of new ethnic and social forces.

Historical sources and analytical studies by historians indicate that the mid-1830s and early 1840s were marked by extremely cold winters. Climatologists note that after the severe cold period of the 1850s–1860s, the climate began to warm, signifying the end of the second glacial era. In the region of Movarounnahr (referred to in modern historiography as “Turan” or “Turkistan”), the actual conclusion of the glacial period is believed to have occurred in the early 1870s.

The Zarafshan River, which usually seeps away into the vast desert sands, first overflowed its banks and flowed into the Amu Darya around ten thousand years ago, following the end of the first glacial period[11]. With the conclusion of the second glacial period, the melting of accumulated mountain snow and ice reserves, combined with increased precipitation, once again caused the Zarafshan River to flood. In 1874, powerful torrents carried away everything in their path, and the river flowed into the Amu Darya for the second time in recorded history.

The anomalous cold spells that marked the final stage of the second glacial period, followed by recurring droughts occurring roughly every 10 to 20 years, initiated a new phase of aridization

across the Earth. The transition to these aridization processes was reflected in all aspects of life within the Uzbek khanates — their political systems, socioeconomic structures, and daily economic activities. The natural and social crises that emerged during this time even manifested themselves in the foreign policies of the khanates.

In the history of statehood, control over trade caravan routes has always held great strategic importance. Although the significance of the Great Silk Road in Central Asia declined due to the Great Geographical Discoveries and the rise of interoceanic trade, it is well known that the Uzbek khanates continuously maintained and developed traditional trade relations with neighboring states throughout the 16th century up to the 1860s[12]. The struggle for dominance over existing and newly emerging caravan trade routes was vividly reflected in the foreign policies of the Bukhara Emirate and the Kokand Khanate, leaving a notable impact on ethnopolitical and migratory processes in the region.

The Bukhara Emirate, which consistently fought to preserve its territorial integrity, had long played a crucial role in the trade relations between Central Asia and Iran, particularly from the 18th century onward. However, after prolonged conflicts, it lost control of the city of Merv to the Khiva Khanate in 1855[13].

Northern Afghanistan (also known as Turkistan Afghanistan), rich in livestock and grain and of great importance in trade relations with South Asia, was incorporated into Afghanistan in 1860 following the defeat of the Bukhara forces.

Under the prevailing circumstances, Chorjuy (modern Turkmenabat) remained an important transit center for trade and cultural exchanges with the Eastern countries. The struggle between the Bukhara Emirate and the Khiva Khanate for control over this strategic route continued until the Russian imperial conquest.

Trade and cultural relations between Central Asia and Eastern Europe have a long history and experienced significant growth during the 16th–17th centuries. A new stage in commercial relations between Russia and the Central Asian khanates began in the 1730s with the founding of the city of Orenburg. Until then, Astrakhan had played a key role in these interactions, although its importance gradually declined thereafter.

In trade relations conducted through Orenburg, the city of Tashkent played an increasingly significant role. The Tashkent–Orenburg caravan route was frequented not only by traders from the Uzbek khanates but also by merchants from South and Southeast Asia, particularly from Afghanistan and India, which enhanced Tashkent's commercial status. Merchants from Kashgar and Badakhshan also traveled to Orenburg. The independent city of Tashkent thus became a focal point of rivalry — the struggle between the Bukhara Emirate and the Kokand Khanate intensified as both sought to capture the city and gain control over the Tashkent–Orenburg trade route.

By the beginning of the 19th century, the Kokand Khanate had succeeded in strengthening its independence and expanding its borders, while the process of centralization within the khanate intensified. During the reign of Olimkhan (1798–1810), he first unified Fergana and then brought Angren, Tashkent, Chimkent, Turkistan, and Sayram under his control. Under Umar Khan (1810–1822), the territories up to Lake Issyk-Kul, the Ili Valley, and the Kazakh steppes along the Syr Darya River were also subjugated to the Kokand Khanate. In 1817, the fortress of Aqmachit (present-day Kyzylorda) was built in the region connecting Bukhara, Khiva, and Tashkent with the Astrakhan and Orenburg trade routes. In the 1820s, the fortress-city of Aulie-Ata (modern Jambyl) was founded, followed later by the construction of the Bishkek fortress.

During the reign of Muhammad Ali Khan (1822–1842), the Kokand Khanate made attempts in 1826 and 1830 to overthrow the rule of the Chinese Qing authorities in Kashgar. Although this plan was not successfully implemented, the Kokand Khanate obtained a number of important economic and trade privileges in Eastern Turkestan, which served as a major trade route with China[15].

By 1834, the Kokand Khanate had seized Karategin, Kulob, and Darvaz — neighboring regions rich in rare underground minerals. In short, as Mirzaolim Mushrif wrote, during the reign of Umar Khan, “China paid tribute to him; the Dashti Qipchaq submitted to his rule; he received gifts and offerings from Badakhshan and Kabul. Likewise, Karategin was under his authority[16]”.

CONCLUSION. In the Turan eco-environment, the climate changes and their consequences that occurred during the 18th and the first half of the 19th centuries played an important role in the region’s political and economic history. Sharp climatic fluctuations — such as droughts and sudden cooling — weakened agricultural and trade systems, leading to famine and the spread of epidemics among the population. These processes, in turn, intensified migration flows and contributed to the emergence of new ethnic groups. Traditional relations between states and peoples in the region entered a new phase, making economic and political interactions more complex. As a result, the environmental transformations in Turan affected not only local social structures but also altered political maps on a global scale.

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