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## THE SECOND HALF OF THE XIX CENTURY - THE EFFECT OF THE ECOLOGICAL ENVIRONMENT ON THE SOCIO-ECONOMIC LIFE OF THE TURKESTAN REGION IN THE EARLY XX CENTURY

**Ravshan Tursunov\***

\*Associate Professor,  
Candidate of Historical Sciences (Ph.D.),  
National University of Uzbekistan named after Mirzo Ulugbek,  
Tashkent, UZBEKISTAN  
E-mail: ravshan.tursunov.1980@mail.ru

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### ABSTRACT

*This article examines the causes of natural disasters and infectious diseases that occurred in the Turkestan region in the second half of the XIX - early XX centuries on the basis of sources. The impact of the ecological environment on the socio-economic life of the country is also highlighted.*

**KEYWORDS:** *Ecological Problem, Ecological Environment, Natural Resources, Natural Disasters, Sandstorms, Earthquakes, Floods, Entomology, Infectious Diseases, Epidemics, Cleanliness.*

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### 1. INTRODUCTION

Human life is directly related to nature and the events in it. Therefore, it is important for people to use nature wisely and take care of it. It is known from history that as a result of the violation of the laws of nature in every age and space, humanity has faced a whirlwind of great difficulties. Every action taken against nature in the pursuit of material gain has had its negative impact on the natural environment.

#### **The Main Results and Findings**

The Russian Empire did not refrain from committing atrocities in order to colonize Turkestan. In particular, A.I. Dobrosmyslov According to, in order to capture Tashkent in 1865, General M.G. Chernyaev one of the first orders given by Niyazbek to his troops was the task of destroying these irrigation facilities[1]. Due to the damage to the water systems, the Russian troops were able to easily capture the city[2].

General M.G. Chernyaev's actions, that is, the destruction of the entire irrigation system on the right bank of the Chirchik River, will seriously damage the environment in Tashkent. Due to the demolition of irrigation facilities, water did not reach Tashkent for a long time. The people of the city suffer greatly from drought[3].

In the second half of the 19th century, the khanates in Turkestan, and later the Russian Empire, did not use the region's natural resources wisely, did not protect the flora, and did not take into account water shortages, leading to environmental problems and various natural disasters, including sandstorms. Sand and dust storms are usually atmospheric phenomena observed in desert and semi-desert areas with low vegetation cover, and similar natural phenomena occurred in the Turkestan region during the study period.

Researcher N.A. Maev spent 1880 years exploring the sandy-steppe areas of the Bukhara Khanate. The main purpose of Maev's observations was to determine the suitability of the sandy steppes of Bukhara and the Amudarya region from Kalif to Khiva for agriculture. He noted that the

more he studied the Bukhara and Amudarya basins, the more these countries were facing natural decline, huge sands were approaching the Amu Darya, the sands were moving by northeast winds in the summer, the disaster was causing great damage to cultural areas and could pose serious environmental problems[4].

Turkistan Governor-General K.P. von-Kaufman himself also pays special attention to the study of sandy areas, which hinder the development of agriculture, the creation of new arable lands. Kaufman visited Fergana in the summer of 1880 to explore the sandy areas of the valley.

Russian naturalist and tourist A.F. Middendorf According to, two factors could have influenced the process of sand migration and desertification in the Fergana Valley. First, as a result of the development of livestock activities of the nomadic population, the number of livestock will increase, and their grazing will harm the environment. It is in the local sandy and gravel deserts that the common grasses and shrubs are a natural barrier to sand migration. Decreased vegetation increases the risk of desertification, with livestock eating the plants up to their roots and killing them under their hooves. In addition, desert vegetation, which is a natural barrier, is being further damaged as a result of local people harvesting shrubs and plants in the desert[5].

Inspector of the Department of Agriculture under the Ministry of State Property and Agriculture of the Russian Empire N. Dingelstedt studied the nature and climate of the Syrdarya region, northeast winds were blowing more in the region, with strong storms in the open plains, especially, in the Kyzylkum steppe, dry hot air winds turn into dust storms, noting that their air reaches the Syrdarya itself and as far as Tashkent[6].

N. Dingelstedt study also provides information on the tragic consequences of sand flooding. Both ancient legends and historical research, as well as the remains of cities left in the sand, point to the consequences of this disaster. On the right bank of the Amu Darya, north of Petro-Alexandrovsk, on the right bank of the Amu Darya, there are abandoned ruins and dead trees, which have seen good times, looking like dumb witnesses. Even 10-15 years ago, those lands were flourishing. But the flying sands that came in from the northwest made them that way. Sobolev also gives information about the huge sand-covered areas in Bukhara. Occupying an area of 1.5 km, this rich settlement has been abandoned. In 1868, 16,000 families also moved from another location[7].

Sadriddin Ayni, one of the leading figures of the Bukhara Jadid movement, also wrote in his memoirs about sand and dust storms in Bukhara. He witnessed this natural phenomenon and described in detail the damage it caused to nature and the socio-economic life of the population[8].

One of the Russian researchers, V.P. Nalivkin also wrote valuable information about the nature and climate of the Turkestan region, including the Fergana Valley, as well as dust storms in the region. Nalivkin points to plants and trees as the main means of resisting sandstorms, but also emphasizes that their cutting down by the population for subsistence causes the scale of the natural disaster to further expand.

The author lists the villages at risk of sand invasion and cites the village of Shahidmozor first. Twelve acres of arable land (during 1878-1881) from the fields of Mamarayim, a representative of the local population, were covered with sand and became unusable[9].

To the north of the village of Andarkhan, the sands, which have encountered no obstacles, continue their way, building many sand dunes. Nalivkin said that 5-6 years ago, a sandstorm came to a part of the village of Karaboyin, as a result of which 10 families lost their farms, thanks to the fact that they went to the village of Akbarovot in Margilan, and in recent years there was enough moisture, reeds were planted in the sandy areas, now they are emphasizing that they are defending the village from the sand.

The author also mentions that a 50-100 sajen wide sand stream from a huge sand reserve located

between Andarkhan, Yangichek and Sovurtepa is activated by strong winds, the villages of Kapa, Beshkapa and Kipchak are being severely polluted, and the locals are clearing the canals, the south-west wind, which blew 2-3 more times after the restoration, filled the ditches with sand and caused great damage[10].

According to Nalivkin, in the last 15-20 years alone, more than 100 families have moved from the village of Qiyali to Shahrikhan and Andijan. However, despite the increasing sand migration, no migration situation was observed in 1880, 1881, 1882[11].

At the beginning of the 20th century, various insects and agricultural pests also caused great damage to crops and gardens in Turkestan. For this reason, measures and practical measures have been taken since ancient times to protect agricultural crops, various fruit trees, and plants from insects and pests. Since the middle of the XIX century, a number of researches of Russian naturalists in the field of entomology have been carried out in the country. As a result of this research, a "Locust Committee" was established in 1898 under the Turkestan Agricultural Society to study agricultural pests. The establishment of the Turkestan Entomological Station in Tashkent in 1911 by V. Plotnikov played an important role in the protection of agricultural crops from pests[12].

It should be noted that the damage caused by locusts to vineyards, orchards and agricultural crops in the Turkestan region has been regularly reported in the Jadid press, including the newspaper "Sadoi Fergana". The newspaper reported in its 16th issue in 1914 that locusts had appeared in Golodnoy Steppe and 20 desiatins around the villages of Ulinsky and Gvardsky, and 300 desiatins around Dorogomir station in Khojand district. Specialists and equipment were sent to eradicate these pests. The report also said that locusts appeared in some parts of Hoqand district, locusts were controlled and killed in Samarkand and Kattakurgan districts[13].

At the beginning of the 20th century, a number of practical measures were taken by officials in Turkestan to protect agricultural crops from pests. In particular, entomologists in the field of nature study and pest control will develop a project of the Organization for the Control of Agricultural Pests (Entomology Station) in Turkestan[14].

According to the project, the regional bureau of entomology consists of: the head of the bureau, an entomologist, his subordinate instructors, and other personnel engaged in the control of agricultural pests, in addition to the equipment depot, insecticides, and so on. The said bureau has the task of combating agricultural pests in the provinces and operates under the general guidance and supervision of a senior specialist. In Turkestan, entomologists have studied not only insects that harm plants, but also insects and parasites that pose a threat to humans and animals, and the consequences of their occurrence and damage based on their scientific research and observations.

It should be noted that the activity of the Turkestan entomology station is of special importance in the interests of the empire, it was important to protect agricultural crops, mainly cotton, horticulture and melons, from insects, to cultivate the crop without losses, and to deliver them qualitatively to the imperial markets. From this point of view, despite the large costs incurred by the center, the appeals made by the station management have been resolved almost positively. In particular, a separate building for the station, apartments for staff, a plot of land for an experimental area around the city[15].

Natural disasters, with their destruction, have a negative impact not only on nature, but also on the socio-economic life of the state and society. On May 2, 1914, Khojaabad and Uyghur villages of Namangan district were flooded, flooding 1,900 hectares of arable land[16].

In early May 1914, the Karadarya River overflowed around Andijan. The floods in the Kara-Darya River also affected the Shahrikhan River, flooding many lands and crops[17].

These floods caused significant damage to housing and crops, and had a significant impact on the economic and social situation of the population.

Another natural disaster in the region is an earthquake, the damage caused by which also has a serious impact on the socio-economic life of the population and the state. In particular, according to the archival data, the earthquake that struck the Andijan region on December 2, 1902 at 10:00, which left a tragic mark on the history of earthquakes in the Turkestan region, 4652 people were killed and many buildings, dwellings, railways and other socio-economic facilities were severely damaged[18].

On Monday, May 26, 1914, an earthquake shook Tashkent. The newspaper "Sadoi Fergana" reported that "heavy objects fell from the ground due to the movement of the earth. Before the earthquake, there were sounds of tremors"[19].

In the newspaper "Sadoi Fergana" on the night of June 3, 1914 in Almaty [20], In the afternoon of July 2, 1914, an earthquake[21] was reported in Hoqand. In the late 19th and early 20th centuries, various infectious diseases and epidemics occurred in Turkestan due to improper use of water resources, unfit for drinking water, lack of attention to cleanliness and sanitation, and a number of other factors. Valuable information about this is also provided in the monograph published by Professor S.B. Shadmanova. In particular, doctors point to the contamination of drinking water canals as one of the reasons for the spread of acute infectious diseases, as well as the lack of proper irrigation[22].

Almost all researchers in the Bukhara Emirate have noted that the waters in the region contain various parasites, which cause malaria, plague, smallpox, plague and ringworm. Consumption of water that has been stagnant in ponds and ponds for a long time has caused ringworm disease, and it is recommended to drink boiled water regularly as an effective measure to combat it[23].

According to Russian media reports, the plague epidemic of 1892 alone killed 307 of Tashkent's 669 patients under medical supervision and 1,201 of patients without medical supervision from June 7 to August 18, 1892[24].

Abdurauf Fitrat, a mature representative of the Jadid movement, says that cleanliness and cleanliness is one of the main factors that serve human health and prolong its life. Freedom protects human health. The author laments that the main cause of various diseases in Turkestan is pollution and impurity. He said that civilized nations have made cleanliness a guarantee of their lives, taught their children cleanliness, that Islam commands people to be clean, that it is a faith to keep human bodies and clothes clean, and urges people to keep clean and keep the environment prosperous.

Focusing on health, the author argues that a nation that fails to protect its health and peace will eventually perish, and that the governments of civilized foreign countries will spare no effort to protect the health of their nations. Emphasizing that ecologically clean areas and clean streets in Russian and French cities were not built for people's dreams, but to protect their health, he encourages people to create scenic gardens and clean the streets through hashars and increase the number of ecologically clean places[25].

Fitrat also said that there are many diseases in the world, and according to the research of today's world scientists, malaria, tuberculosis, ringworm, measles, chickenpox, measles and other diseases can be transmitted to humans in various ways, spreading to others, the team of scientists point out that the main cause of this condition is microbes[26].

## **2. CONCLUSION**

In conclusion, the socio-economic life of a society is closely related to the ecological environment of a particular region and area. The natural disasters that took place in Turkestan in the mid-nineteenth and early twentieth centuries, the misuse of natural resources by people, the lack of

conservation of flora, and the deforestation of trees as fuel had a negative impact on the region's ecological environment. This, in turn, has caused various problems in the socio-economic life of the country and the population. Deterioration of the environment has affected the health of the population, leading to an increase in infectious diseases. From the above considerations, it is possible to see how important it is for every state and individual, first of all, to improve their territory, their habitat, to adhere to cleanliness, to use natural resources wisely.

**REFERENCES:**

1. Добросмыслов А.И. Ташкент в прошлом и настоящем. – Тошкент, 1912. – С.136.
2. Алимова Д.А., Филанович М.И. Тошкент тарихи. (Қадимги даврлардан бугунги кунгача) – Тошкент: “ART FLEX”, 2009. – Б. 60.
3. Зияев Ҳ. Ўзбекистон мустамлака ва зулм исканжасида (XIX асрнинг иккинчи ярми – XX аср бошлари) Тошкент: “Шарқ”, 2006. – Б. 20.
4. Турсунов Р. XIX асрнинг иккинчи ярмида Туркистон ўлкасида содир бўлган кум ва чанг бўронлари тарихига назар. // Ўтмишга назар. 2021. 3-Махсус сон. – Б.485.
5. Миддендорф А.Ф. Очерки Ферганской долины. – СПб., 1882. – С.38.
6. Дингельштедт Н. Опыт изучения ирригации Туркестанского края. Сырь-Дарьинская область. – С.Петербург. 1893. – С.25.
7. Дингельштедт Н. Опыт изучения ирригации Туркестанского края. Сырь-Дарьинская область. – С.Петербург. 1893. – С.15.
8. Tursunov R. Coverage of the ecological situation in Turkestan in the memoirs of Sadridin Ayni. // Pedagogy and modern education: tradition, experience and innovation, International Scientific and Current Research Conference. – USA. 2021. – P.19-23.
9. Наливкин В.П. Опыт исследования песков Ферганской области. – Новый Маргелан. 1887. – С.129.
10. Наливкин В.П. Опыт исследования песков Ферганской области. – Новый Маргелан. 1887. – С.136.
11. Наливкин В.П. Опыт исследования песков Ферганской области. – Новый Маргелан. 1887. – С.137.
12. Ўзбекистон худудида табиий фанлар йўналишидаги илмий тадқиқотлар ва экспедициялар (XIX аср – XX аср бошлари) [Матн] / лойиҳа раҳбари Д.Ҳ.Зияева. – Тошкент: Akademnashr, 2019. – Б.239-240.
13. Чигиртка // Садои Фарғона. 1914 йил. 16-сон.
14. ЎзМА, И.7-фонд, 1-рўйхат, 3523-иш, 333а-варақ.
15. Ўзбекистон худудида табиий фанлар йўналишидаги илмий тадқиқотлар ва экспедициялар (XIX аср – XX аср бошлари) [Матн] / лойиҳа раҳбари Д.Ҳ.Зияева. – Тошкент: Akademnashr, 2019. – Б.240.
16. Туркистон хабарлари. // Садои Фарғона. 1914 йил 1 июнь.



17. Tursunov R. Ecological condition and mysteries in Turkestan periodical press in the early XX century (in the case of Sadoi Fergana newspaper) // ISJ Theoretical & Applied Science, Philadelphia, USA. 2019, 05(73),- P. 570-574.; Tursunov R. The research analysis of the socio-economic issue of the Turkestan Jadids in the beginning of the 20th century // Central Asian Problems of Modern Science and Education. 2019, 4 (2), -P. 337-348.; Tursunov R. The “Sadoi Fergana” newspaper – the most important historical source in the lighting of socio-economic processes in Turkestan. // International Journal of Information Research and Review. 2019, 2 (6), - P. 6154-6155.; Турсунов Р. Воззрения национальных прогрессистов на социально-экономические процессы в Туркестане в начале XX века. Автореф. дисс. канд. ист. наук.– Тошкент. 2008. 30 с.
18. ЎзМА, И-1-фонд, 28-рўйхат, 554-иш, 87-варак.
19. Зилзила. Туркистон хабарлари. // Садои Фарғона. 1914 йил 1 июнь.
20. Зилзила. Хўқанд хабарлари. // Садои Фарғона. 1914 йил 6 июль.
21. Зилзила. Туркистон хабарлари. // Садои Фарғона. 1914 йил 42-сон.
22. XIX аср охири – XX аср бошларида Туркистонда тиббиёт ва халқ таъбири / Лойиҳа раҳбари, масъул муҳаррир ва нашрга тайёрловчи т.ф.д., профессор С.Б.Шадмонова. – Тошкент: Ўзбекистон Республикаси Фанлар академияси “Фан” нашриёти. 2020. – Б.68.
23. Tursunov R. Information on the ecological situation in the emirate of Bukhara in the second half of the XIX century and at the beginning of the XX century. // Electronic journal of actual problems of modern science, education and training. 2021-11/2. – P.98.
24. Шульгин К. Холерная эпидемия в Туркестанском крае в 1892 г. // Туркестанские ведомости. 1893. – № 101.
25. Абдурауф Фитрат. Танланган асарлар. 5-жилд. Илмий рисоалар. – Тошкент: Маънавият, 2010. – Б.165.
26. Абдурауф Фитрат. Танланган асарлар. 5-жилд. Илмий рисоалар. – Тошкент: Маънавият, 2010. – Б.166.