



Ecological Problems Related to Environmental Protection and Population Health

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Abstract: This article talks about the problems related to human ecology, specifically about the nature of Surkhandarya region and the diseases caused by the effects of toxic gases from enterprises and their emissions, which seriously harm people's health.

Keywords: Society, development, human, environment, atmosphere, ecology, soil, plant, nature, natural, moisture, air, enterprise.

Citation: Annayeva, Z. M.
(2024). Ecological problems
related to environmental
protection and population
health. Central Asian Journal of
Social Sciences and History, 5(3),
73-76.
<https://doi.org/10.17605/cajssh.v5i3.1088>

Received: 20 April 2024

Revised: 24 April 2024

Accepted: 2 May 2024

Published: 20 May 2024



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1. Introduction

During the period of the acceleration of scientific and technical development of society, the impact of human activity on the environment is expanding day by day. In many cases, this effect leads to negative consequences, irreversible changes in the ecological balance, reduction of water resources, pollution, deterioration of atmospheric air, erosion of the soil layer and depletion of mineral resources.

Human ecology is very diverse, it includes all factors of the external environment, i.e. air temperature, light, humidity, radiation, noise, weightlessness, etc., various natural disasters: earthquake, hurricane, drought, flood, natural the effect of fires and living organisms (plants, animals and people) is understood [1. 67-69].

One of the enterprises seriously harming the nature and health of people of Surkhandarya region is Tajikistan Aluminum Enterprise. This plant is located in Tursunzoda, Tajikistan, 10 kilometers from the state border of the Republic of Uzbekistan. The aluminum plant was put into operation on March 31, 1975, and its technology operates with the help of electrolyzers with strongly burned anodes. The capacity of the project is designed to produce 517,000 tons of aluminum per year. In the 80s and 90s of the last century, the plant produced 8 types of aluminum and 4 types of silumin [2.5].

According to experts, 33-47 kg of fluorine is used for the production of one ton of primary aluminum, and about 65% of this hydrogen fluoride is released into the atmosphere.

In 1989, Tajikistan Aluminum Plant produced 460,000 tons of electrolysis products. So, in the same year, the factory released about 500 tons of hydrogen fluoride powder into the atmosphere [3].

According to the conclusions of the investigation carried out in the 90s of the last

centuries, the concentration of hydrogen fluoride in the air and soil in Denov, Uzun and Sariosia districts was 10-20 times higher than the norm. In particular, 2.7 percent of soil, 26.9 percent of onions, 14.9 percent of milk, 21 percent of potatoes, 15 percent of yogurt, 22 percent of carrots, 5.5 percent of wheat, and 23 percent of apples were found to contain fluorine hydrogen compounds [4]. These numbers are increasing year by year. In Uzun, Oltinsoy, Denov and Sariosiya districts of Surkhondarya region, the level of soil pollution was 16 points, water basin poisoning was 30 points, atmospheric air poisoning was 30 points, and drinking water quality level was 26 points [5,63]. Every year, 40,000 tons of toxic gas fumes are emitted from the factory's chimneys. Therefore, 400 tons are hydrogen fluoride. The remaining 20,891 tons are sulfur dioxide, nitrogen oxide, and carbon monoxide [6]. According to experts, fluorine is an active substance that binds elements necessary for the body, including iodine, calcium, iron, and phosphorus, so that they cannot be absorbed. As a result, goiter, anemia, fluorosis, and bone tissue diseases occur.

Literature review. Investigations carried out during 1991-1998 showed that a comparative analysis of thyroid disease in the areas affected by aluminum waste gave extremely negative results and the following situation was revealed: that is, in the northern regions of Surkhondarya region, with thyroid diseases in 1991 In 1998, 1737 patients were registered, and in 1998, this figure increased to 38989. In 2001, 44,825 patients were registered with II-III degree endemic goiter in Uzun and Sariosiyo districts, and in six months of 2005, 20,407 people were taken to the dispensary for this disease [7,28]. In 1992-2005, when children up to the age of 14 were examined in the regions where poisonous gases were spread, it was found that the rate of general morbidity (fluorosis, oncological, endocrine and allergic diseases) was high in the districts of Uzun, Sariosia, Denov and Zhargorgon. The impact of the aluminum plant causes more damage, especially to women of childbearing age, and causes an increase in extragenital diseases among them. In particular, at the end of 2004, 72.2 percent of 30,394 women of reproductive age in Uzun district, i.e. 21,968 patients, had various extragenital diseases. During the six months of 2005, 22,050 out of 32,232 women of childbearing age, i.e. 67.5 percent, had various extragenital diseases [8]. There are 32,757 women of childbearing age in Sariosia district, of which 76.7 percent, i.e. 24,895, have extragenital diseases [9].

The leadership of the Republic of Uzbekistan drew attention to the fact that Sariosia district is becoming one of the worrying points of the negative impact of the aluminum plant. For example, in 1989, on the basis of orders No. 182 and 298 of the Ministry of Health of the Uzbek SSR, in order to study the harm caused by the toxic waste of the Tajikistan Aluminum Plant to the public health, four brigades of leading specialists of the Republic visited the districts of Sariosia and Jarkurgan. conducted inspections. The results showed that two times more of certain diseases were found in Sarysia than in Zhargorgon district [10,28]. For example, per thousand people, the number of people with circulatory system diseases is 364.4 in Sarysia, 68.3 in Zharghurgan, nervous system diseases are 248.3 in Sarysia, 139.5 in Zharghurgan, endocrine diseases in Sarysia 48, 11.5 people in Zharghurgan, upper respiratory tract diseases 308.5 in Saryziya, 162.2 people in Zharghurgan, various infectious diseases 196.1 in Saryziya, and 50 people in Zharghurgan it can be seen that

Based on the decision of the Cabinet of Ministers of the Republic of Uzbekistan No. 282 on August 2, 1998, a working group was formed to study the health of the residents of Sariosiyo district and assess the ecological situation [12].

Materials and methods. In order to prove our opinion, we refer to examples: if in 1992, 164 patients with diabetes were registered in Saryosi district, then in 2003, this number increased by 2.5 times and made 363 people. In 1999, 383 people were treated with bronchial asthma from allergic diseases, and in 2005, more than 600 people were treated at the dispensary. As a result of the increase in anemia among women and the hardening of the pelvic bones caused by hydrogen fluoride, the number of babies born with brain and other injuries has increased. In particular: 68 babies were born in 1999, 70 in 2000, 74 in 2001, 82 in 2002, 108 in 2003, 196 in 2004, and 240 in 2005 with various injuries. In addition, oncological diseases have increased among the population. For example: in 1996, 527 patients with tumor diseases were registered, in 2005, 2,822 patients with tumor diseases were registered, and the rate of this disease in the district was 5th in ten years. It was found that it increased by 5.5 times.

According to the report of the Regional Health Department dedicated to the end of 2009, in the next five years, the number of stillbirths of children in the Saryosi district increased by 7.7 times, more than 42 thousand of the 175 thousand residents of the district have endocrine diseases. diseases have been identified [13.85-91].

Along with the increase of various carcinogenic substances in atmospheric air, water and soil, it was felt that the number of oncological diseases in Surkhandarya region is much higher than in other regions of the republic. Until 1975, it was noted that the rate of oncological diseases in the region was low compared to other diseases. But in recent years, the number of people infected with this disease is increasing every year. For example, among the population living in Sariosia, Denov, Uzun, Shorchik and Altinsoy districts of the region, the number of oncological patients was 411 in 2002, 467 in 2003, 477 in 2004, and 502 in 2005. did [14].

Results and discussion. At the twelfth plenary session of the Senate of the Oliy Majlis of the Republic of Uzbekistan held in August 2013, the mayor of Surkhandarya region gave a report on "The negative impact of the Tajikistan Aluminum Plant on the population of Surkhandarya region and the environment" did In the report, the total morbidity in Uzun, Sariosia and Denov districts of the region was 22,275.8 per 100,000 people in 2010, and increased to 25,077.9 by 2012. During the six months of 2013, it was recorded that it was 12,637.8 people [15.32].

As can be seen from the analysis mentioned above, the toxic gases coming out of the Tajikistan Aluminum Plant aggravate the ecological situation in the northern regions of the region and cause serious damage to the environment and human health. This situation requires representatives of both countries to come to a constructive solution to this issue. All creatures on earth, including humans, whose existence, longevity, and health are directly related to atmospheric air. Atmospheric air is polluted mainly from two sources, the first is a natural source, and the second is anthropogenic, i.e., a source resulting from human activity. Natural sources of pollution include volcanic eruptions, dust, fires in forests and steppes, space dust, and others. The source of anthropogenic pollution includes waste from energy, industrial enterprises, transport and other means. Various gases and toxic substances released into the atmosphere seriously harm the health of plants, animals and humanity.

Conclusion. In conclusion, it should be noted that the environmental situation in the southern regions of Uzbekistan has seriously deteriorated. The main reason for this is the

thoughtless decisions of the authoritarian regime and disregard for national interests, and the second reason is the serious increase in technology and equipment. Diseases related to the endocrine, allergic, blood circulation, gastrointestinal system among the population have increased dramatically. In order for people to be healthy on our planet, there should be enough clean water, clean air and clean soil, not the miracles of technology. This requires people to treat nature with care.

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