

## Uniform Health of the Tajik Aluminum Lednigig Plant on Gaslaring Influence (On the Example of the Northern Districts of the Surkhandarya Region)

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**Abstract:** The global process of globalization is rapidly accelerating, and today the issue of living in an environmentally safe space for mankind is increasingly becoming a pressing issue, resulting in a variety of diseases associated with the deterioration of the ecological environment. In this article, the influence of toxic gases of the Tajik aluminum plant on the health of the inhabitants of the Northern Districts of the Surkhandarya region is scientifically based and conclusions are given.

**Keywords:** environment, fluoride hydrogen, endemic fluorosis disease, lesions of tooth buds, environmental norms, children's disability, children's illness.

### Introduction

The region of Surkhandarya is located in the south of our Republic, borders with the regions of Tajikistan from the North-East, Afghanistan from the south and Turkmenistan from the west, causing serious damage to the environment as a result of the development of technical and industrial enterprises.

In addition to the natural pollution of the atmosphere, in addition to this, it is also intellectually polluted by human hands. This is due to the fact that the energy sector, the construction of various industrial enterprises, the excessive production of vehicles and their use in accordance with the requirements of world standards are not in the White House. And the waste from these industrial enterprises is spread to the environment in a liquid and solid state with the help of gases. In particular, the release of toxic gases into the atmosphere poses a great threat to the life of all plants and animals, as well as humans.

The fluoride hydrogen, nitrogen oxide, sulfur dioxide and other similar gases, which are separated from Tajikistan (TojAZ), that is, from the aluminum plant, spread into the atmosphere throughout the time of the Surkhandarya region. The compounds of poisonous gases that separate, accumulate not only atmospheric air, but also plant, soil, water, living things in the body of people, causing them great spiritual, social, economic damage. As a result, in the body of plants and animals of the Sariosian, Uzun, Denov, Shurchi, Altinsay, Kumkurgan and Jarkurgan districts, more than a dozen diseases of the human body have been diagnosed. And since the number of sick people increases from year to year, it is necessary to conduct in-depth scientific research. This determines the relevance of this topic.

**Purpose of the study.** Scientifically substantiate the influence of toxic gases of the Tajik aluminum plant on the health of the population of the Northern Districts of the Surkhandarya region.

### The results obtained and their analysis.

Due to the destructive impact of Tajik aluminum plant (TojAZ) on the environment and public health, the environmental situation in Sariosia, uzun and Denov districts of the Surkhandarya region is becoming more acute. As the amount of atmosphere, water resources, hydrogen with fluoride in the soil and other toxic substances emitted by the plant increases, the risk of various diseases increases, especially babies born dead or disabled increases. The incidence of recurrence of pathological disorders in children and adults in the districts with cross-border exposure to these toxic substances is 3 times higher than the average in the Surkhandarya region.

The Uzbek-Tajik government agreement on cooperation in improving the environmental situation in the zone of negative impact of the Tajik aluminum plant is also not implemented, in particular, the negative impact of the Tajik aluminum plant was explained in Tashkent on November 17, 1994, the program of scientific research and technical work on improving the environmental situation of the Tajik aluminum plant Activities aimed at reducing the negative impact of the plant on the population and the environment living in the mentioned regions of the Surkhondarya region, stipulated in the article of the agreement, have not been fully implemented in the following directions, in particular:

Financing of the development of sanitary and hygienic architects and environmental architects in hot climatic conditions, as well as determining the amount of economic damage caused;

Implementation of an automated control system on atmospheric air pollution;

Compensation of economic losses of negative impact in Uzun and Sariosiya districts of the Surkhondarya region.

With the increase in the production capacity of the Tajik aluminum plant, the environmental situation in this region can worsen and aggravate. For the initial assessment of the impact of cross-border pollutants, especially fluorinated hydrogen released by the Tajikistan aluminum plant on the environment of the population and some regions of the Republic of Uzbekistan in the Surkhondarya region, the data of the Ministry of Health, the Ministry of Health, the state of Uzgidromet, the state of Ergeodeskadastr, the Botanical and Zoological Institutes of the Academy.

TojAZ has a projected capacity of 548 thousand tons aluminum production in a year.

The total amount of release of harmful substances into the atmosphere was reduced to 21,613 thousand tons, including fluorinated hydrogen from 1342,6 tons to 652,6 tons.

The maximum level of pollution of atmospheric air with fluorinated hydrogen in the territory of Sariosia at a distance of 11,5 km from the Tajik aluminum plant is -1,4 STChKo'.s. as indicated, the maximum amount reached 0,048 mg/m<sup>3</sup> (2,4 STChK). High levels of fluoride were observed in soils and plants.

Analysis of the dynamics of the amount of fluorinated hydrogen in atmospheric air indicates that the average annual amount is at the level of 0,002-0,004 mg/m<sup>3</sup>. The maximum single-dose amount was recorded around 0,010-0,019, the sulfur dioxide content was about 0,005 mg/m<sup>3</sup> per day on average.

The amount of compounds (chlorogenic acid, quercetin and flavonoids) performed by regional centers of the Ministry of health of the Republic of Uzbekistan sanitary-epidemiological service was only 15-20% compared with control samples.

Among the inhabitants of the districts of Sariosia and Uzun, patients with fluorosis of the tooth were registered, with an average intensive index of 11.9% (every 1000 people).

Endemic fluorosis is a disease caused by an increase in the content of fluoride and other toxic gases in the air and water content, which occurs as a result of damage to the tooth buds during the mother's pregnancy. The disease begins mainly before the tooth erupts, and with the eruption of the tooth, defects begin to appear in it. To date, in the population of the Northern Districts of the region, it has been found that there are more than five types of fly agaric disease (barcode form, spotted form, White oachipor form, erosive form, destructive form).

In the rating compiled by the International Organization "let's protect children", it is not surprising or spontaneous that Uzbekistan ranks 9th among the countries that care most about the health of the growing younger generation. In particular, the poisonous gas coming out of the Tajik aluminum plant was not only affected the health of people living in these regions, but also prevented the development of trees and livestock. The number of births among the residents of these districts is increasing, the interest rate decreases day by day, the number of children with disabilities.

According to statistics, in the Surkhondarya region until July 1, 2020 there were 14 districts and 1 city, 10998 of the population living here were included in the list of disabled children under 16 years of age, 32.4% of them correspond to Sariosia, Uzun and Denov districts.

The relationship between children's illness and living conditions has been found in a number of similar studies. Family, living (home) conditions have a direct impact on the health of family members and are of great importance in medicine and health care as a motivating factor in the occurrence of certain diseases. Therefore, every medical worker, especially doctors engaged in professional work, should be able to correctly assess the living conditions of the family and draw the appropriate conclusions and develop measures for the Prevention of diseases. The results of our study showed that the lower the quality description of home conditions, the higher the incidence of children, including 19% as long as families with disabled children have unsatisfactory home conditions.

**Conclusion.** The outbreak of infertility cases in young boys and girls living in the Northern Districts today, an increase in the incidence of various diseases in people, an increase in their number, infertility, the birth of babies with disabilities have become a tragedy for the nation.

Thus, effective measures should be developed not only to alleviate the acute environmental situation in the districts of the Surkhandarya region, but also to completely change it to the whole good. After all, even a child, a person's suffering is a great tragedy. And in these districts hundreds of thousands of people live. Therefore, it is necessary to take immediate measures to eliminate the destructive impact of this enterprise on ecology and public health.

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