

ANALYSIS OF POLLUTIONS EMPLOYED BY THE MANUFACTURING ENTERPRISE AND ITS IMPACT ON HUMAN HEALTH**Halmatov Musliddin Muhammadovich**

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Abstract. *In this article, a number of problematic processes may develop depending on the extent of atmospheric pollution. These include a functional decline in the economic efficiency of the natural, social, and production systems, as well as dangerous changes in human health and environmental components. Depending on the scale of air pollution, a number of problematic processes may develop. The study aimed to determine the relationship between the concentration of harmful substances detected in the atmosphere.*

Keywords: *urban air purification, vehicle waste soil pollution, air and soil moisture, gas, sludge, depending on the type, heavy metals, plant plants componentlaratmospheric cleanliness.*

АНАЛИЗ ЗАГРЯЗНЕНИЙ, ИСПОЛЬЗУЕМЫХ ПРОИЗВОДСТВЕННЫМ ПРЕДПРИЯТИЕМ, И ИХ ВЛИЯНИЕ НА ЗДОРОВЬЕ ЧЕЛОВЕКА

Аннотация. *В данной статье в зависимости от степени загрязнения атмосферы может развиваться ряд проблемных процессов. К ним относятся функциональное снижение экономической эффективности природных, социальных и производственных систем, а также опасные изменения в здоровье человека и компонентах окружающей среды. В зависимости от масштабов загрязнения атмосферного воздуха может развиваться ряд проблемных процессов. Исследование направлено на определение взаимосвязи между концентрацией вредных веществ, обнаруженных в атмосфере.*

Ключевые слова: *очистка городского воздуха, загрязнение почвы автомобильными отходами, влажность воздуха и почвы, газ, шлам, в зависимости от вида, тяжелые металлы, растительные растения, составляющая атмосферной чистоты.*

INTRODUCTION.

Atmospheric air pollution is, in a word, the excessive accumulation of foreign substances and additives in the air. Air pollution can be natural or artificial (anthropogenic). Our analysis of artificial air pollution is reasonable.

Anthropogenic pollution occurs mainly as a result of the release into the air of wastes and emissions from the use of fossil fuels in vehicles, industrial plants and power generating industries. The damage caused to humans by air pollution is no less than the damage caused by dumping industrial and domestic waste in open water bodies [1]. In industry, vehicles Dust formation and separation is observed in almost all work performed in industry, vehicle operation, and agriculture. In general, the types of powders are considered as natural and artificial powders, taking into account their sources of origin [2].

The total volume of anthropogenic sources of solid particles in the atmosphere in the country is much lower than natural sources and is estimated at 1.311 million tons / year. The proportion of solid particles in anthropogenic separations is not high and is 16% for industrial sources and 2% for portable sources [3].

MATERIALS AND METHODS OF RESEARCH

Natural powders include powders that are formed in nature without human intervention. Such dust is formed by the flight of eroded layers of sand and soil under the influence of wind and strong storms, dust from flora and fauna, volcanic eruptions, the burning of meteorites and other space objects exposed to the Earth's atmosphere from space. dusts and other dusts. The amount of natural dust in the atmosphere depends on natural conditions, weather conditions, seasons and the location of the zone being identified. For example, it is known that the amount of dust in the atmosphere is higher in the southern regions than in the northern regions, in the desert zones than in the forest zones, as well as in the summer months compared to the winter months [4]. It was found that each cubic meter of air contains about 6,000 dust particles of various sizes in large urban areas (some sources include smoke from vehicles in the order of 30,000), ten times that amount in fields and gardens. decreases, and in mountainous areas there are even fewer dust particles [5].

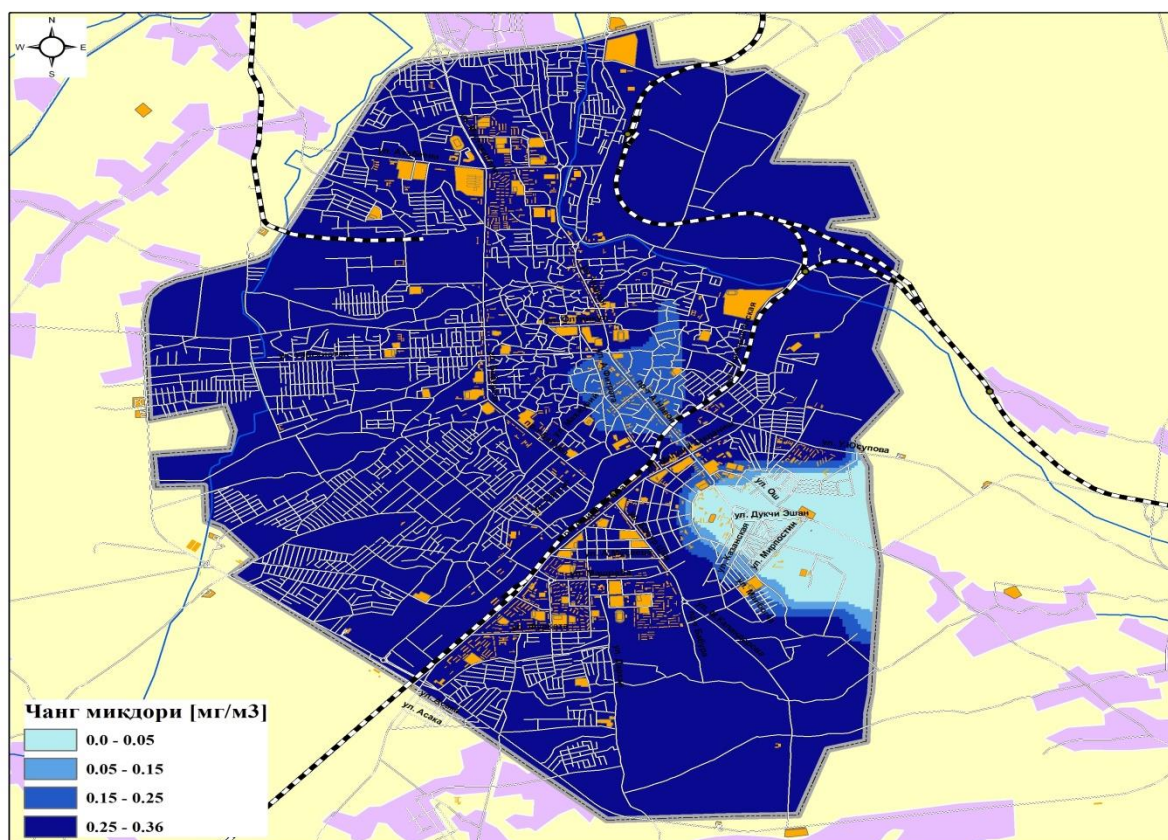


Figure 1. In the city of Andijan, the distribution of the concentration in the lower atmosphere.

Artificial dust includes dust generated as a result of direct or indirect human exposure in industrial plants and buildings. For example, in the machine-building industry, a certain part of coal burned in blast furnaces and open-hearth furnaces, as well as in all foundry shops of this industry, is released into the atmosphere as ash and smoke. as well as the extraction of large amounts of dust from the mountains during mining and other activities, the release of which can have a devastating effect on the environment. In some industries, such as the chemical industry, such hazardous industrial dusts are released that to expel them without cleaning them would have created tragic circumstances. [6] The chemical composition of industrial emissions varies

depending on the type of fuel (solid, liquid, gaseous) and the methods of its combustion. Coal, oil and gas fuels do not burn completely for various reasons. Therefore, industrial enterprises emit large amounts of semi-combustible particles (dry matter, ash, dust) and harmful gases (carbon dioxide, hydrocarbons, sulfur compounds, sulfur (II) oxide, nitrogen oxides) into the atmosphere [7]. According to the origin of the dust, it is defined as organic, mineral and mixed powders. The description of the harmful effects of dust depends mainly on its chemical composition [8]. gaseous) and vary according to the methods of combustion. Coal, oil and gas fuels do not burn completely for various reasons. Therefore, industrial enterprises emit large amounts of semi-combustible particles (dry matter, ash, dust) and harmful gases (carbon dioxide, hydrocarbons, sulfur compounds, sulfur (II) oxide, nitrogen oxides) into the atmosphere [7]. According to the origin of the dust, it is defined as organic, mineral and mixed powders. The description of the harmful effects of dust depends mainly on its chemical composition [8]. gaseous) and vary according to the methods of combustion. Coal, oil and gas fuels do not burn completely for various reasons. Therefore, industrial enterprises emit large amounts of semi-combustible particles (dry matter, ash, dust) and harmful gases (carbon dioxide, hydrocarbons, sulfur compounds, sulfur (II) oxide, nitrogen oxides) into the atmosphere [7]. According to the origin of the dust, it is defined as organic, mineral and mixed powders. The description of the harmful effects of dust depends mainly on its chemical composition [8]. nitrogen oxides) [7]. According to the origin of the dust, it is defined as organic, mineral and mixed powders. The description of the harmful effects of dust depends mainly on its chemical composition [8]. nitrogen oxides) [7]. According to the origin of the dust, it is defined as organic, mineral and mixed powders. The description of the harmful effects of dust depends mainly on its chemical composition [8].

The description of the classification of dust by groups is as follows:

- 1 very large dispersion,
- 2 large dispersed,
- 3 average dispersed,
- Dispersed on May 4,
- 5 very finely dispersed.

RESEARCH RESULTS

This classification applies to all types of solid or liquid particles present in the air up to 500 μm in size, as well as dusts consisting of aerosol, liquid and solid particles with particle size less than 5 μm [19,20].

Dusts are divided into three groups according to their size (i.e., dispersed composition): a) Dusts larger than 10 μm are called coarse dusts. Typically, such dusts land on the ground under the influence of their own weight; b) dusts with a size of 10 μm to 0.25 μm . These dusts are called fine dusts or microscopic dusts. They can land on the ground when there are certain positive conditions, such as rain, snow, and dew, when they are stuck to heavy particles falling on the ground; d) Dusts smaller than 0.25 μm are referred to as ultramicroscopic dusts, and these dusts never land, but fly in accordance with the rules of Brownian motion [9].

The largest natural sources of dust in the atmosphere in Uzbekistan are the unstrengthened sandy soils and saline deserts of the Karakum, Kyzylkum and Aralkum [10]. The exposed seabed forms the Aral Sea salt desert, from which large amounts of salt and sand particles are dispersed

each year by wind. The mass of dry dust varies from 500 to 2702 kg / year on average. The content of sulfate salts in this powder is 25-48%, chloride salts - 18-30%, carbonate salts - 10-20%. The main volumes of dust-salt migration occur within 300 km of the coastal strip. The amount of dust falling on the soil in the Southern Aral Sea is ten times higher than on irrigated lands. Industrial enterprises are the main sources of dust emissions. Higher specifics of dust emissions are observed in cities with mainly cement production and coal-fired thermal power plants. Various minerals, metal oxides, silicates, dry matter, fluorides, arsenic oxides, antimony, selenium are found in the dust that settles around industrial centers. Among the specific compounds in the dust composition of large industrial cities are metals such as cadmium, copper, lead, nickel, zinc, manganese. Atmospheric air composition and quality are more affected by the following pollutants by ATM (vehicle emissions) organizers arsenic oxides, antimony, selenium. Among the specific compounds in the dust composition of large industrial cities are metals such as cadmium, copper, lead, nickel, zinc, manganese. Atmospheric air composition and quality are more affected by the following pollutants by ATM (vehicle emissions) organizers arsenic oxides, antimony, selenium. Among the specific compounds in the dust composition of large industrial cities are metals such as cadmium, copper, lead, nickel, zinc, manganese. Atmospheric air composition and quality are more affected by the following pollutants by ATM (vehicle emissions) organizers

According to the latest data, the effect is:

- Carbon oxides: carbon monoxide-SO and carbon dioxide-SO₂ (50% of emissions);
- Sulfur oxides: SO₂ and SO₃ (16%);
- Volatile organic compounds (VOC): methane-SN₄, benzene-S₆N₆, chlorofluorocarbons (15%);
- Nitric oxides: NO, NO₂ and N₂O (14%);
- Suspended particles: dust, dry matter, asbestos, lead salts, arsenic, sulfuric acid N₂SO₄, oil, etc. (5%);
- Photochemical oxidants: ozone (O₃), hydrogen peroxide (N₂O₂), formaldehyde (SN₂O);
- Radioactive substances: rhodon-222, iodine-131, strontium-90, plutonium-239;
- Heat radiation;
- Noise.

According to the latest data, more than 500 organic compounds have been found in the exhaust gases emitted into the atmosphere by the internal combustion engines of vehicles alone [12].

Atmospheric pollution causes great economic damage to the national economy. Including:

- Due to atmospheric pollution, materials decompose and corrode
- Polluted air in cities, especially in industrial areas, reduces the service life of enterprise equipment by 1.5 times
- Atmospheric pollution causes many diseases (people suffer from physical and mental illnesses)
- Air pollution is causing great damage to agricultural lands
- Bitter smoke from air pollution makes it difficult for vehicles to move, and many accidents (plane crashes) occur.

- Atmospheric pollution makes it difficult to produce semiconductors, precision instruments

- As a result of atmospheric pollution, there is a change in the natural state of the geographical crust

CONCLUSION

Currently, the Center of Hydrometeorological Service of the Republic of Uzbekistan (Uzhydromet) conducts regular monitoring of air pollution at 65 permanent points in 25 cities.

In particular, in the city of Andijan, monitoring of air pollution is carried out at 13 permanent points. At these permanent points, monitoring is carried out for 10 substances that pollute the air. At the same time, the observation of dust particles has been established.

Currently, the amount of dust is measured in 4 permanent monitoring points of air pollution in Andijan. However, the analysis of the content of the obtained samples is not carried out. In summary, the results of the analysis were not conducted. Therefore, monitoring of air pollution by dust should be carried out at all monitoring points.

- As a result of atmospheric pollution, there is a change in the natural state of the geographical crust

Currently, the Center of Hydrometeorological Service of the Republic of Uzbekistan (Uzhydromet) conducts regular monitoring of air pollution at 65 permanent points in 25 cities.

Currently, ecology days, tree planting, and fresh air events are being held to prevent pollution. In this regard, it is proposed to systematically organize practical events such as environmental monthly, environmental competitions to normalize emissions from vehicles.

References:

1. SH.M. Mirziyoev. Critical analysis, strict discipline and personal responsibility should be a daily rule of every leader. Report of the enlarged session of the Cabinet of the President of the Republic of Uzbekistan. - "Xalq so'zi" newspaper, Tashkent, January 16, 2017 №11 (6705). B. 1-3.
2. Karimov I.A. "The global financial and economic crisis, ways and measures to overcome it in the context of Uzbekistan". - T: Uzbekistan. 2009. - 56 b.
3. Karimov I.A. "Uzbekistan's path of development and prospects". - T. 1995. 42-55 p.
4. National Encyclopedia of Uzbekistan. Volume 8 - T.: State Scientific Publishing House. 2003. -514-550 p.
5. Qudratov O. Industrial ecology.-T. 98-124 b.
6. Clayborn, K., Shaltanis, J., Griffin, R., Amonov, M. The results of pilot studies on the amount of fine volatile particles in the atmospheric air in Tashkent.// Ecological Bulletin.2007. № 8. 24-26 B.
7. Rekomendatsii po kachestvu vozduxa dlya Evropy. Second edition. WHO regional publications. Ser. 91. Copenhagen: Evropeyskoe regionalnoe byuro VOZ, 2000. // Internet. - <http://www.euro.who.int/air/activities/20050223> 4.
8. Ves Mir. 2004. with translation into Russian. Moscow.
9. Cohen A. et al. Mortality impacts of urban air pollution. In: Comparative quantification of health risks: global and regional burden of disease attributable to selected major risk factors. WHO, 2004. -P.1353-1434.

10. Watkiss P. et al., CAFE CBA: Baseline analysis 2000 to 2020. Didcot. AEA Technology Environment, 2005. // Internet.