WATER RESOURCES AND THEIR PROTECTION AT THE SAMARKAND STATE UNIVERSITY. THE VALUE OF WATER IN HUMAN ECONOMIC ACTIVITY. WATER SUPPLY AND WATER CONSUMPTION, WATER CLASSIFICATION. SOURCES OF WATER POLLUTION AND IRRATIONAL USE OF WATER RESOURCES AT SAMARKAND STATE UNIVERSITY

Water resources of the Earth. Water has always been one of the most important resources of civilization, and in this sense, the situation has not changed today. Water is a very widespread substance on Earth, 71% of the surface of which is covered with water, which makes up oceans, seas, lakes, rivers, etc. Also, water in a gaseous state is in the atmosphere of the planet in the form of clouds, fogs, etc. a unified water fund, including oceans, seas, rivers, lakes, swamps, etc. Water is the most valuable natural resource. It plays an exceptional role in the metabolic processes that form the basis of life.

Water is of great importance in industrial and agricultural production. It is well known that it is necessary for the everyday needs of man, all plants and animals. For many living creatures, it serves as a habitat.

The growth of cities, the rapid development of industry, the intensification of agriculture, a significant expansion of the area of irrigated land, the improvement of cultural and living conditions and a number of other factors are increasingly complicating the problem of water supply. Water resources and their protection. Protection of water resources from depletion and pollution and their rational use for the needs of the national economy is one of the most important problems requiring urgent solutions. One of the main areas of work for the protection of

water resources is the introduction of new technological production processes, the transition to closed (closed) water supply cycles, where treated wastewater is not discharged, but is reused in technological processes. Closed cycles of industrial water supply will make it possible to completely eliminate wastewater discharged into surface water bodies, and use fresh water to replenish irrecoverable losses.

In the chemical industry, a wider introduction of low-waste and non-waste technological processes, which will give the greatest environmental effect, is planned. Much attention is paid to improving the efficiency of industrial wastewater treatment. It is possible to significantly reduce the pollution of the water discharged by the enterprise by isolating valuable impurities from the wastewater; the complexity of solving these problems at the enterprises of the chemical industry lies in the variety of technological processes and products obtained. It should also be noted that the bulk of the water in the industry is used for cooling. The transition from water cooling to air cooling will reduce water consumption by 70-90% in various industries.

In this regard, it is extremely important to develop and implement the latest equipment that uses a minimum amount of water for cooling. The introduction of highly effective methods of wastewater treatment, in particular physicochemical, of which one of the most effective is the use of reagents, can have a significant impact on increasing water circulation.

The use of the reagent method of industrial wastewater treatment does not depend on the toxicity of the present impurities, which is of significant importance in comparison with the method of biochemical treatment. The wider introduction of this method, both in combination with biochemical treatment, and separately, can, to a certain extent, solve a number of problems associated with the treatment of industrial wastewater. In the near future, it is planned to introduce membrane methods for wastewater treatment. For the implementation of a set of measures to

protect water resources from pollution and depletion in all developed countries, allocations are allocated reaching 2-4% of the national income.

The costs associated with the production of coagulants and flocculants can be partially reduced due to the wider use of waste products from various industries for these purposes, as well as sludge generated during wastewater treatment, in particular excess activated sludge, which can be used as a flocculant. more precisely a bioflocculant. Thus, the protection and rational use of water resources is one of the links in the complex global problem of nature protection. The value of water in human economic activity. One of the most important problems of our time is the provision of the needs of the national economy with water resources. In connection with the increase in the scale and pace of economic development, industrial development of countries, water resources are turning into one of the scarce natural resources. Fresh water is consumed for drinking and household needs, for production purposes in all sectors of the national economy. Nothing can exist without water, therefore the importance of water resources in human economic activity is very great. Water supply and water consumption, classification, types.

The supply of the population with clean water in sufficient quantities is of great sanitary and hygienic importance. A complex of engineering structures designed to obtain water from natural sources, improve its quality and transfer it to places of consumption is called a water supply system or a water supply system. The creation of more advanced water supply and sewerage systems is aimed at rational use of water resources, industrialization and reduction of construction costs, saving metal and electricity. The problem of providing the population with good-quality drinking water is the most urgent. Natural waters are subdivided into: atmospheric, surface and underground. Atmospheric waters falling to the ground in

the form of rain and snow. Surface waters, waters of open reservoirs: rivers, lakes, seas, etc. Groundwater, water of artesian wells, wells, springs. The main directions of the rational use of water resources. At the present stage, the following directions of rational use of water resources are determined: more complete use and expanded reproduction of fresh water resources; development of new technological processes to prevent pollution of water bodies and minimize the consumption of fresh water. Sources of water pollution and irrational use of water resources.

Pollution of water resources means any changes in the physical, chemical and biological properties of water in reservoirs due to the discharge of liquid, solid and gaseous substances into them, which cause or may create inconvenience, making the water of these reservoirs dangerous for use, causing damage to the national economy, health and safety of the population. Pollution of surface and ground waters can be divided into the following types: mechanical - an increase in the content of mechanical impurities, which is characteristic mainly of surface types of pollution; chemical - the presence in water of organic and inorganic substances of toxic and non-toxic action; bacterial and biological - the presence in the water of a variety of pathogenic microorganisms, fungi and small algae; radioactive - the presence of radioactive substances in surface or ground waters; thermal - release of heated waters of thermal and nuclear power plants into reservoirs. The main sources of pollution and contamination of water bodies are insufficiently treated wastewater from industrial and municipal enterprises, large livestock complexes, production wastes from the development of ore resources; water of mines, mines, processing and alloying of timber; discharges of water and rail transport; flax primary processing waste, pesticides, etc.

The harmful effect of wastewater of this group is mainly in oxidative processes, as a result of which the content of oxygen in the water decreases, the biochemical need for it increases, and the organoleptic characteristics of water deteriorate. Oil and oil products at the present stage are the main pollutants of inland water bodies, waters and seas, and the World Ocean.

Once in water bodies, they create various forms of pollution: oil slick floating on water, dissolved or emulsified in water. Oil products, heavy fractions settled to the bottom, etc. At the same time, the smell, taste, color, surface tension, viscosity of water change, the amount of oxygen decreases, harmful organic substances appear, water acquires toxic properties and poses a threat not only to humans. 12 g of oil makes a ton of water unusable. Phenol is a rather harmful pollutant of industrial waters. It is found in wastewater from many petrochemical plants. At the same time, the biological processes of reservoirs, the process of their self-purification, sharply decrease, the water acquires a specific smell of carbolic acid. The life of the population of reservoirs is adversely affected by wastewater from the pulp and paper industry. Wood pulp oxidation resistance.