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## **POLLUTION OF THE HYDROSPHERE WITH WASTE WATER FROM INDUSTRIES AND PRODUCTION ENTERPRISES**

**Abstract:** This scientific article describes the contamination of the hydrosphere with waste water generated in industrial and manufacturing enterprises.

**Keywords:** wastewater, hydrosphere, industry and production.

**Introduction.** The pollution of the hydrosphere with wastewater from industries and production enterprises has become a pressing issue globally. As human activities continue to intensify, the discharge of untreated or inadequately treated wastewater into water bodies has led to detrimental consequences for both the environment and human health. The scale and severity of this problem demand urgent attention and effective solutions. This essay aims to explore the causes and effects of pollution of the hydrosphere with wastewater, as well as analyze the current regulatory framework and potential mitigation measures. By examining various case studies and scientific research, this study seeks to provide a comprehensive understanding of the gravity of this problem and highlight the need for immediate action to protect the hydrosphere from further degradation.

One major source of industrial wastewater pollution is the discharge of untreated or inadequately treated wastewater directly into water bodies. Many industries, especially in developing countries, lack the necessary infrastructure and regulations to properly treat their wastewater before releasing it into the environment. This results in the direct contamination of rivers, lakes, and oceans with a myriad of pollutants, including heavy metals, organic compounds, and toxic

chemicals. Additionally, the practice of using water bodies as convenient disposal sites for industrial waste poses serious threats to aquatic ecosystems, as it can lead to oxygen depletion, algal blooms, and the destruction of habitats for marine organisms. Another source of industrial wastewater pollution is the improper storage and disposal of hazardous materials. Industries that produce or handle toxic substances often store them onsite or use them in their production processes. If not properly managed, these materials can leak or spill, resulting in the contamination of soil and groundwater.

One of the significant environmental impacts of industrial wastewater pollution is the destruction of aquatic ecosystems. Industrial wastewater often contains a plethora of harmful substances such as heavy metals, organic compounds, and toxic chemicals. When discharged into rivers, lakes, or oceans, these pollutants can cause severe damage to the flora and fauna that depend on the affected water bodies. The excessive presence of heavy metals, for instance, can lead to bioaccumulation in aquatic organisms, disrupting their physiological processes and even causing death. Moreover, the high levels of organic compounds and nutrients present in industrial wastewater can lead to the excessive growth of algae and other aquatic plants, resulting in eutrophication and oxygen depletion. As a consequence, fish and other aquatic organisms struggle to survive, leading to a decline in biodiversity and the collapse of entire ecosystems. The destruction of aquatic habitats not only affects the aquatic organisms themselves but also has cascading effects on other wildlife species that depend on these ecosystems, including birds and mammals hence, it is imperative to address the issue of industrial wastewater pollution to preserve the delicate balance of the hydrosphere and protect the environmental health of our planet.

One of the most significant health effects associated with industrial waste water pollution is the contamination of drinking water sources. The discharge of untreated or inadequately treated industrial waste water into rivers, lakes, and other bodies of water can contaminate the water supplies used for drinking, cooking, and other domestic purposes. This contamination introduces various hazardous

substances, including heavy metals, toxic chemicals, and pathogens, into the drinking water. When consumed, these pollutants can cause a range of health problems, such as gastrointestinal illnesses, respiratory issues, and even chronic diseases. Moreover, certain contaminants found in industrial waste water, such as lead and mercury, can accumulate in the body over time, leading to long-term health impacts, including neurological disorders and organ damage. Overall, the pollution of water sources by industrial waste water poses a significant threat to public health and calls for urgent action to mitigate its consequences.

One of the key regulatory measures to control industrial waste water pollution is the implementation of effluent standards. Effluent standards are guidelines set by regulatory bodies that prescribe the maximum limits of pollutants allowed in the effluents discharged by industries into water bodies. These standards are based on scientific research and take into account the potential environmental and health risks associated with various pollutants. By setting these limits, regulatory bodies ensure that industries adopt appropriate treatment technologies and practices to reduce or remove pollutants from their waste water before it is discharged. Effluent standards provide a legal framework for enforcement and compliance, with penalties for non-compliance. In addition to effluent standards, regulatory measures also include monitoring and reporting requirements, which mandate industries to regularly monitor their waste water discharges and submit reports to regulatory authorities. This facilitates the detection and measurement of pollution levels, and enables authorities to take necessary actions against non-compliant industries. Overall, regulatory measures such as effluent standards and monitoring requirements play a crucial role in controlling industrial waste water pollution and promoting sustainable industrial practices.

### **Conclusion**

In conclusion, the pollution of the hydrosphere with waste water from industries and production enterprises is a significant environmental issue that requires immediate attention and action. The reckless disposal of untreated waste water not only harms the aquatic life but also poses a threat to human health and

well-being. The increased contamination of water bodies with heavy metals, toxic chemicals, and organic pollutants has far-reaching consequences for ecosystems and biodiversity. It is essential for governments, industries, and society as a whole to recognize the gravity of this problem and implement stringent regulations and effective waste water treatment systems. Additionally, raising awareness and educating individuals about the importance of conserving water resources and adopting sustainable practices is crucial. Only with collective efforts and responsible actions can we hope to mitigate the pollution of the hydrosphere and secure a healthier future for our planet.

## REFERENCES

1. Umarjonovna, D. D., & Gulomjonovna, Y. Y. (2022). CHALLENGES OF FOOD SECURITY. *Conferencea*, 505-507.
2. Mashrapov, Q., Yoqubjanova, Y., Djurayeva, D., & Xasanboyev, I. (2022). THE ROLE OF CREDIT-MODULE SYSTEM IN DEVELOPMENT OF STUDENTS'SPECIALTIES IN TECHNICAL HIGHER EDUCATION INSTITUTIONS. *Theoretical aspects in the formation of pedagogical sciences*, 1(6), 332-336.
3. Бахриддинов, Н. С., Мамадалиев, Ш. М., & Ёқубжанова, Ё. (2022). ПРАКТИЧЕСКОЕ ЗНАЧЕНИЕ ОРГАНИЗАЦИИ ЭКОЛОГИЧЕСКОГО ОБРАЗОВАНИЯ В ДОШКОЛЬНОМ УЧРЕЖДЕНИИ. *Oriental renaissance: Innovative, educational, natural and social sciences*, 2(5), 443-448.
4. Yakutkhan, Y. Khoshimjon o'gli, YS (2022). Educate the Population on the Types and Causes of Emergencies. *Journal of Ethics and Diversity in International Communication*, 2(5), 22-26.
5. Ahmadjanovich, T. A., Gulomzhanovna, Y. Y., Khoshimjon, Y. S., & Saidulla, M. Z. (2022). MAIZE, MAINTENANCE AND DEVELOPMENT OF WAYS TO OVERCOME DEFICIENCIES IN GROWTH FROM THE SUBSYSTEM. *PEDAGOG*, 5(7), 939-946.
6. Gulomjonovna, Y. Y. Khoshimjon o'glu, YS (2021). CAUSES OF FLOOD AND FLOOD DAMAGE ALSO PREPARE TO DO THE RIGHT ACTION IN THIS

EMERGENCY SITUATION. *International Journal of Development and Public Policy*, 1(5), 158-161.

7. Tukhtamirzaevich, M. A., & Gulomjonovna, Y. Y. (2022, December). Use of new pedagogical technologies in teaching the subjects of industrial sanitation and labor hygiene. In *Proceedings of International Conference on Modern Science and Scientific Studies* (Vol. 1, No. 3, pp. 378-386).

8. Пулатов, А. С., Сарibaева, Д. А., Ёкубжанова, Ё. Г., & Дадамирзаев, М. Х. (2014). Основное значение пива в системе рационального питания. *Молодой ученый*, (2), 184-186.

9. Ёкубжанова, Ё. Г. (2022). Использование Инновационных Технологий При Организации Занятий По Промышленной Санитарии И Гигиене. *Central Asian Journal of Literature, Philosophy and Culture*, 3(10), 25-27.

10. Mashrabboyevich, M. S., & Gulomjonovna, Y. Y. (2022). Teaching Construction Ecology with New Pedagogical Technologies. *Central Asian Journal of Theoretical and Applied Science*, 3(5), 210-212.

11. Yoqutxon, Y., & Go'zalbonu, R. (2022). A Change of Ecosystem, Education, Technology and Lifestyle. *International Journal of Formal Education*, 1(9), 84-89.

12. Пулатов, А. С., Сарibaева, Д. А., & Ёкубжанова, Ё. Г. (2014). Некоторые константы и содержание жирных кислот в бараньем курдючном жире. *Молодой ученый*, (20), 211-214.

13. Yoqubjonova, Y., & Xalimjonova, U. (2022). КАСБДАН ЗАҲАРЛАНИШ ВА КАСБ КАСАЛЛИКЛАРИ МАВЗУСИНИ ЎҚИТИШДА ИНТЕРФАОЛ УСУЛЛАРДАН ФОЙДАЛАНИШ ИМКОНИЯТЛАРИ. *Science and innovation*, 1(B8), 532-537.

14. Пулатов, А. С., Ёкубжанова, Ё. Г., & Сарibaева, Д. А. (2015). Влияние тепловой обработки на пищевую и биологическую ценность баранины при приготовлении узбекских национальных блюд. *Современные научные исследования и инновации*, (7-2), 11-13.

15. G'ulomjonovna, Y. Y., & Khoshimjon, Y. S. (2023). CALCULATION OF LIGHTNING AND LIGHTNING ARRESTER AND FIRE PROTECTION SYSTEM IN FIRE PREVENTION. *JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH*, 6(4), 1108-1114.

16. Gulomjonovna, Y. Y. (2022, December). QURILISH EKOLOGIYASI FANINI O‘QITISHDA ILGOR PEDAGOGIK TEXNOLOGIYALARDAN FOYDALANISH. In *Proceedings of International Educators Conference* (Vol. 1, No. 3, pp. 191-199).

17. Пулатов, А. С., Сармбаева, Д. А., & Ёкубжонова, Ё. (2016). Изменение содержания азотистых веществ мяса при тепловой обработке. *Молодой ученый*, (3), 194-196.

18. Mashrapov, Q., Yoqubjanova, Y., Djurayeva, D., & Xasanboyev, I. (2022). THE ROLE OF CREDIT-MODULE SYSTEM IN DEVELOPMENT OF STUDENTS’SPECIALTIES IN TECHNICAL HIGHER EDUCATION INSTITUTIONS. *Theoretical aspects in the formation of pedagogical sciences*, 1(6), 332-336.