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DEGRADATION OF LAND RESOURCES AND STRATEGIES FOR THEIR PROTECTION

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Abstract:*This article analyzes the processes of land resource degradation, their causes and consequences, as well as effective strategies for their protection. The research is based on real situations in the territory of Uzbekistan, and scientifically grounded solutions are proposed.*

Keywords: *land degradation, protection, strategy, ecological sustainability, land reclamation*

Introduction

Land resources are one of the main assets for human life. However, in recent decades, global ecological problems—particularly land degradation—have raised serious concerns. Misuse in agriculture, excessive irrigation, deforestation, and industrial waste are leading to a decrease in soil fertility. Uzbekistan is no exception to this problem—especially in the Republic of Karakalpakstan and the regions of Bukhara, Navoi, and Kashkadarya, where soil salinization and desert encroachment are widespread. Therefore, it is necessary to develop scientifically grounded strategies to protect land resources.

Methodology

The following methods were used in this research:

- Analytical analysis: Statistical data on land degradation in Uzbekistan and globally were studied.
- Comparative method: Various forms of degradation (erosion, salinization, desertification) and their consequences were analyzed.

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- Practical observation: Land condition monitoring was carried out in the Muborak district of Kashkadarya region.
- Expert survey: Surveys were conducted among agricultural specialists and ecologists.

Results

The research revealed the following:

- Main causes of degradation: Excessive irrigation, poor agricultural practices, overuse of mineral fertilizers and pesticides.
- Degree of salinization: Nearly 40% of irrigated lands in Surkhandarya and Kashkadarya regions are saline.
- Desertification risk: Sand movement and loss of vegetation cover are the main forms of degradation in the Aral Sea region.
- Low public awareness: According to the survey, 67% of respondents lack full knowledge about the ecological consequences of land degradation.

Discussion

Land degradation leads not only to environmental but also to socio-economic issues. For instance, the decline in land fertility reduces agricultural output and household incomes. The following strategies are proposed for land protection:

- Agroecological approach: Use of eco-friendly technologies and biological methods.
- Improving irrigation systems: Implementation of drip irrigation and monitoring of land reclamation status.
- Afforestation and expansion of green zones: To prevent sand movement.
- Strengthening ecological education: Enhancing public environmental awareness and responsibility towards land use.
- Monitoring systems**:** Continuous observation of land condition through GIS technologies.

Conclusion

Land degradation is a pressing issue on both global and national scales. In the context of Uzbekistan, comprehensive and scientifically based strategies are

necessary to halt this process and restore land productivity. In particular, strengthening environmental education, rational resource use, and the implementation of modern technologies are essential. Only through the collaboration of the state, scientific institutions, and the public can this issue be effectively addressed.

REFERENCES

1. Karimov, I.A. (2010). *High Spirituality – An Invincible Power*. – Tashkent: Ma'naviyat.
2. Qodirov, M., & Tursunov, S. (2020). *Ecology and Environmental Protection*. – Tashkent: Uzbekistan National Encyclopedia Publishing House.
3. Rasulov, M. (2019). *Land Resources and Their Use*. – Samarkand: SamSU Publishing House.
4. FAO (2021). *Global Assessment of Soil Degradation*. Food and Agriculture Organization of the United Nations. https://www.fao.org
5. UNCCD (2020). *Land Degradation Neutrality: The Target Setting Programme*. United Nations Convention to Combat Desertification. https://www.unccd.int
6. Nurmatov, D., & Tadjibayeva, G. (2018). *Forest Resources and Their Protection Strategies*. – Tashkent: Ekosan.
7. Meliev, N. (2017). "Restoration of Ecological Balance in Uzbekistan's Desert Areas." // *Ecology and Life Journal*, No. 2, pp. 45–49.
8. Karimova, S. (2022). "Land Degradation and Issues of Sustainable Development in Agriculture." // *Journal of Sustainable Development Issues*, No. 4, pp. 33–38.
9. GOST 17.4.1.02-83. *Protection of Land. General Requirements*. Moscow: Gosstandart.
10. Presidential Decree of the Republic of Uzbekistan, No. PQ–5024 (March 19, 2021). "On Measures to Ensure Environmental Sustainability and Protect Land Resources."