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## GLOBAL CHANGES AND SUSTAINABLE PROGRESS: THE ROLE OF NATURAL RESOURCE MANAGEMENT IN PRESERVING THE PLANET

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### ABSTRACT

"We must leave a healthy environment for our descendants."

President Republic of Uzbekistan Shavkat Mirziyoyev

The modern world has witnessed remarkable achievements in technology and economics, but these successes come at a cost. It is essential to understand that nature is a central element of our existence, and sustainable progress is impossible without considering its needs and limitations. In this article, we will explore the role of natural resource management in the concept of sustainable development, as well as the consequences of the contemporary environmental crisis caused by excessive consumption of natural resources. We will also analyze the state of our planet's ecosystems in the early 21st century, examine natural disasters, their dynamics, and the reasons for changes in Earth's climate on both long and short-term scales.

### KEYWORDS

sustainable development, as well as the consequences of the contemporary environmental crisis caused by excessive consumption of natural resources.

## INTRODUCTION

This article on the role of natural resource management in preserving the planet is relevant for the following reasons:

- **Global Challenges:** Climate change and biodiversity loss pose serious threats to the environment.
- **Sustainable Development:** Natural resource management plays a crucial role in achieving a balance between economic, social, and environmental interests.
- **International Agreements:** Global agreements, such as the Paris Agreement, focus on norms of natural resource management.
- **Economic and Social Aspects:** Natural resource management affects the economy and society, making its sustainability critically important.
- **Education and Awareness:** Raising awareness about natural resource management is essential.

### 1. Natural Resource Management as the Central Component of Sustainable Development

Natural resource management plays a pivotal role in the concept of sustainable development. This concept entails meeting the needs of current and future generations without compromising natural resources and ecosystems. Sustainable natural resource

management includes rational resource utilization, restoring their natural balance, and protecting biological diversity.

Key aspects of natural resource management in the context of sustainable development include:

- **Rational Resource Utilization:** Sustainable natural resource management involves efficient and economical use of natural resources to minimize losses and overconsumption. This means managing resources in a way that ensures their availability for future generations.
- **Restoring Natural Balance:** Natural resource management should encompass efforts to restore natural balances that may have been disrupted by human activities. As President Shavkat Mirziyoyev of our republic states, "It's not without reason that there is a saying, 'Cut down one tree, plant ten.'"
- **Protecting Biological Diversity:** One of the most critical aspects of sustainable natural resource management is the protection and preservation of biological diversity. Ecosystems and species play a vital role in ecological balance and the provision of ecosystem services.
- **Collaboration and Societal Engagement:** Sustainable natural resource management

requires active participation from society, including governments, businesses, local communities, and the scientific community. Collaboration at all levels and involving all stakeholders is necessary for the development and implementation of sustainable strategies.

- Innovation and Technology: The development of new technologies and innovations plays a significant role in sustainable natural resource management. New methods and technologies can help reduce the negative impact of human activities on nature and increase resource efficiency.

Natural resource management as the central component of the concept of sustainable development implies a balance between human needs and the preservation of natural resources and ecosystems for future generations. This requires a comprehensive approach, consideration of ecological aspects, societal collaboration, and innovation in the field of natural resource management. Recognizing the importance of sustainable natural resource management is a key step in ensuring the long-term well-being of the planet and humanity.

## 2. Consequences of the Contemporary Environmental Crisis Caused by Excessive Consumption of Natural Resources

The consequences of the contemporary environmental crisis caused by excessive consumption of natural resources have a profound impact on the planet and humanity. Here are some key consequences of this crisis:

1. Climate Change: High levels of greenhouse gas emissions, primarily from the use of fossil fuels (coal, oil, gas), have led to global warming. This results in extreme weather conditions, rising sea levels, increased frequency of natural disasters, and a threat to ecosystems.
2. Biodiversity Loss: Excessive land use, deforestation, overfishing, and environmental pollution have led to a loss of biodiversity. Many species are at risk of extinction, disrupting ecosystems and food chains.
3. Deterioration of Water and Soil Quality: Pollution of water and soil resources with chemicals and waste leads to the deterioration of water quality and negatively impacts human health and ecosystems. This can result in a shortage of clean drinking water and agricultural problems.
4. Reduced Accessibility of Natural Resources: Overconsumption of natural resources, such as oil, natural gas, minerals, and more, leads to resource depletion and increased costs for extraction and utilization.

5. Decreased Crop Yield and Food Insecurity: Climate change and soil degradation can reduce agricultural crop yields, threatening food security.

6. Loss of Natural Habitats and Disasters: Destruction of natural habitats, such as forests and mangroves, increases vulnerability to natural disasters like floods and hurricanes.

7. Human Health Threats: Environmental pollution and biodiversity loss can increase the risk of various health problems.

8. Economic Losses: The environmental crisis results in significant economic losses associated with mitigating its consequences and recovering after disasters.

9. Social Conflicts: Competition for limited natural resources can lead to social conflicts and migrations.

All of these consequences underscore the urgent need to transition to sustainable methods of natural resource management and a more responsible approach to the environment to ensure the preservation of the planet and the future of humanity.

3. Natural Disasters and Their Dynamics. Causes of Climate Change on Our Planet in the Short and Long Term

Natural disasters such as hurricanes, floods, and droughts are becoming more intense and frequent. This is linked to changes in climate conditions, which,

in turn, are caused by anthropogenic factors such as greenhouse gas emissions, deforestation, and environmental pollution. As a result, our planet is becoming less resilient to natural disasters.

In the modern world, we are witnessing a growing trend in natural disasters and an unstable climate that has a significant impact on life on Earth. This process threatens both human safety and the ecological stability of the planet. In this essay, we will explore the causes of climate change on our planet in the short and long term and their connection to natural disasters.

### Long-term Climate Changes:

1. Greenhouse Gas Emissions: One of the key factors in long-term climate change is anthropogenic emissions of greenhouse gases, such as carbon dioxide (CO<sub>2</sub>), methane, and nitrous oxide. Primarily, this is associated with the burning of fossil fuels, deforestation, and industrial processes. These gases trap heat in the atmosphere, leading to global warming.

2. Land Use Changes: Alterations in land use, such as deforestation for agriculture and urban development, also impact climate conditions by changing the interaction with nature and ecosystems.

3. Biodiversity Loss: The reduction of biodiversity, including ecosystem destruction and species

extinction, disrupts natural processes and can exacerbate climate change.

4. Politics and Economics: Political and economic factors, such as insufficient measures to reduce emissions and low efficiency of environmental standards, can also influence long-term climate changes.

### Short-term Climate Changes:

1. Natural Variability: Earth's climate undergoes natural fluctuations, such as El Niño and La Niña events, which can cause short-term climate changes, including heavy rains, droughts, and temperature anomalies.

2. Volcanic Activity: Volcanic eruptions can temporarily impact climate by releasing particles and gases into the atmosphere that can create a temporary cooling effect.

3. Solar Activity: Periods of changes in solar activity can influence climatic conditions on Earth.

### CONCLUSION

Global changes and sustainable progress are closely tied to natural resource management and respect for nature. We must strive for sustainable natural resource management to prevent further environmental crises and preserve our planet for future generations. This requires collaborative efforts from governments, society, and the scientific community to develop and

implement more effective strategies and solutions for balancing the needs of humanity with the preservation of nature.

### Glossary:

1. Ecology - The study of the interactions between living organisms and their environment.
2. Ecological Factor - Any element of the environment capable of directly influencing living organisms.
3. Habitat - The combination of specific abiotic and biotic conditions in which a particular organism, population, or species lives.
4. Biodiversity - The variety of living organisms, including plants, animals, and microorganisms, in an ecosystem or region.
5. Natural Resource Management - The process of managing and utilizing natural resources such as land, water, forests, and minerals within the framework of sustainability and environmental integrity.
6. Climate Change - Long-term changes in average climate conditions on Earth, partially driven by human activities such as greenhouse gas emissions.
7. Social Justice - The principle of ensuring equality and fairness in the distribution of resources and opportunities among all members of society.
8. Green Growth - Economic growth based on sustainable technologies and methods with minimal negative impact on the environment.

9. Sustainable Development - Development that meets the needs of the present generation without compromising the ability of future generations to meet their needs.

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