

Dr. Geeta Bhardwaj

Abstract

Climate change is one of the most significant global challenges of the twenty-first century, affecting ecosystems, economies, public health, and sustainable development. Rising temperatures, extreme weather events, biodiversity loss, and environmental degradation require coordinated policy responses. This review paper examines the policy challenges associated with climate change and discusses practical solutions for achieving environmental sustainability at the global and national levels.

Keywords

Climate Change, Environmental Sustainability, Sustainable Development, Environmental Policy, Renewable Energy, Climate Governance

1. Introduction

Human activities, including the burning of fossil fuels, deforestation, industrialization, and unsustainable consumption, have accelerated climate change. Governments, international organizations, businesses, and communities are increasingly adopting sustainability strategies to reduce greenhouse gas emissions and improve environmental resilience.

2. Major Policy Challenges

Key challenges include increasing greenhouse gas emissions, dependence on fossil fuels, biodiversity loss, inadequate climate finance, weak policy implementation, rapid urbanization, water scarcity, waste management, and balancing economic growth with environmental protection.

3. Environmental Sustainability Solutions

Effective solutions include expanding renewable energy, promoting energy efficiency, sustainable agriculture, afforestation and reforestation, circular economy practices, green infrastructure, climate-smart urban planning, sustainable transportation, and improved waste management systems.

4. Role of Government and International Cooperation

Governments play a central role by implementing environmental regulations, carbon reduction strategies, climate adaptation plans, and green investment policies. International cooperation through climate agreements, technology transfer, and financial support is essential for addressing global environmental challenges.

5. Future Prospects

Future sustainability efforts will increasingly rely on clean technologies, artificial intelligence for environmental monitoring, carbon capture technologies, climate-resilient infrastructure, and stronger public-private partnerships to achieve long-term environmental goals.

6. Conclusion

Achieving environmental sustainability requires integrated policy frameworks, scientific innovation, responsible governance, and active public participation. Long-term commitment to climate action will support economic development while protecting natural resources for future generations.

References

Intergovernmental Panel on Climate Change (IPCC). Assessment Reports. United Nations. (2015). Transforming Our World: The 2030 Agenda for Sustainable Development.

United Nations Environment Programme (UNEP). Emissions Gap Report.

World Bank. Climate Change Knowledge Portal.