

Study on Global Environmental Governance under the Belt and Road Initiative

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Abstract: Global environmental governance under the Belt and Road Initiative is one of the current global concerns. The initiative aims to promote economic cooperation and development in the Asia-Europe-Africa region, but at the same time, it has also triggered a series of environmental challenges. This paper takes the global environmental governance under the Belt and Road Initiative as the research object and discusses its impact on the global environment and countermeasures. It is hoped that it can promote the process of China's sustainable development and global environmental governance.

Keywords: Global Environmental Governance; Belt and Road; Sustainable Development

1. Introduction

The Belt and Road Initiative, as a global economic cooperation and development initiative advocated by China, continues to expand its influence on the world. While implementing the initiative, the governance of environmental issues has also become a focus of attention. Against the backdrop of insufficient growth momentum in the world economy, the joint efforts of the international community have further emphasized the importance of the Belt and Road global environmental governance.

1. Impact of the Belt and Road Initiative on Environmental Governance

1.1 Promoting Green Development and a Sustainable Economy

The Belt and Road Initiative emphasizes green development and a sustainable economy, and encourages countries to adopt a low-carbon and clean development model. As the Initiative advances, more and more countries are focusing on environmental protection and sustainable development, placing greater emphasis on energy conservation, emission reduction and resource recycling. For example, China, as one of the main promoters of the Belt and Road Initiative, has taken a series of environmental and climate policy measures, including measures to strengthen carbon emissions monitoring, promote renewable energy and foster energy efficiency^[1].

1.2 Provide Opportunities for Sharing Environmental Technologies and Experiences

The full implementation of the Belt and Road Initiative provides a platform for countries to share technology and experience and to promote international cooperation and exchange. Through technology transfer and experience sharing, countries can work together to address global environmental issues. Such cooperation can help to accelerate the research and development and diffusion of environmental technologies and promote international cooperation in environmental governance.

1.3 Promote the Development of Environmental Norms and Standards

The Belt and Road Initiative requires countries to comply with environmental norms and standards in their development and to strengthen environmental management and monitoring. By emphasizing environmental norms, the Initiative has helped

to push countries to improve environmental governance and strengthen the formulation and enforcement of environmental regulations. For example, in promoting the Belt and Road Initiative, China has already strengthened environmental assessment and risk management and promoted the standardization of environmental monitoring and governance.

2. Environmental governance challenges under the Belt and Road Initiative

China proposed the Belt and Road Initiative (BRI) in 2013, and as of 2019, its total investment in the program exceeds \$500 billion. However, in the course of the Belt and Road project, it often passes through many places with fragile ecological environments, such as the tropical rainforests in Malaysia and the steppes and forests in Russia. Therefore, this also brings certain challenges to global environmental governance^[2].

2.1 Carbon Emissions and Climate Change Challenges

Economic growth in the countries along the route has resulted in significant carbon emissions, which have a clear impact on global climate change. Many developing countries are still dependent on high-carbon sources of energy, such as coal, which makes it more difficult to reduce carbon emissions. At the same time, economic growth in the countries along the route has led to increasing energy demand and transportation, which further increases the pressure on carbon emissions.

2.2 Water Resources Management and Pollution Control Challenges

Most of the countries along the Belt and Road are located in Asia and Africa, where water scarcity and water pollution are common. Economic development, industrialization and urbanization have exacerbated the demand for water resources, resulting in serious water pollution and over-exploitation of water resources. In addition to this, the issue of sharing water resources in transboundary rivers and lakes is also a challenge.

2.3 Land use and Biodiversity Conservation Challenges

The Belt and Road Initiative covers vast areas of land, including ecosystems such as forests, grasslands and wetlands. Activities such as infrastructure development, agricultural expansion, mining and exploitation of biological resources may lead to land degradation, habitat destruction and biodiversity loss. Countries along the route should develop land-use planning and implement sustainable land management and conservation measures to ensure the health of ecosystems and the preservation of biodiversity.

3. Environmental Protection Measures and Policies under the Belt and Road Initiative

3.1 Development of Sustainable Energy Sources and Cleaner Technologies

Among the environmental protection measures and policies under the Belt and Road Initiative, the development of sustainable energy and clean technology is key. The following are three specific measures: (1) Promote the development of renewable energy. Countries along the Belt and Road Initiative are rich in renewable energy resources, such as solar energy, wind energy and hydro energy. In order to promote the development of sustainable energy, it is necessary to establish corresponding policy frameworks and regulations to provide support and incentives for renewable energy projects. At present, China has formulated the provisions of the Belt and Road Ecological and Environmental Protection Cooperation Plan and the Guidelines for Chinese Enterprises' Overseas Sustainable Infrastructure Projects to promote the reuse of renewable energy^[3]. At the same time, technological research and development and innovation should be strengthened to promote renewable energy technologies and enhance their efficiency and reliability. (2) Promote energy efficiency: In countries along the Belt and Road, improving energy efficiency can not only reduce energy consumption and carbon emissions, but also improve economic efficiency. Therefore, energy management and monitoring should be strengthened, energy efficiency policies and standards should be formulated, advanced energy-saving technologies and equipment should be promoted, and optimization of production processes and energy systems should be promoted. (3) Encourage innovation and application of clean technologies: The government can provide financial support and tax incentives to encourage enterprises to conduct R&D and promote clean technologies. In addition, promoting international cooperation and knowledge sharing can accelerate the

dissemination and application of clean technologies. By establishing cooperation platforms and exchange mechanisms, countries can work together on the research and development of clean technologies and provide innovative solutions to countries along the Belt and Road.

3.2 Promote Low-Carbon Development and Energy Conservation and Emission Reduction

(1) Establishment of a policy framework for low-carbon development: In order to promote low-carbon development, countries along the route need to establish a sound policy framework, including setting low-carbon development goals and formulating corresponding regulations and standards. These policies can include restrictions and limitations on high-carbon industries, incentives for low-carbon technologies and products, and pricing mechanisms for carbon emissions. (2) Promote energy-saving and emission reduction technologies and measures: Low-carbon development cannot be separated from energy-saving and emission reduction support. Countries along the route can promote advanced energy-saving technologies and measures, such as energy management systems, energy efficiency standards and energy-saving investments. Governments can provide financial support, tax incentives and subsidies to encourage enterprises and individuals to adopt energy-saving equipment and solutions. (3) Create low-carbon demonstration projects and regional cooperation mechanisms: Establishing regional cooperation mechanisms is also an effective way to promote low-carbon development and energy conservation. Through regional cooperation, countries can share resources, technical knowledge, and work together to promote low-carbon technologies and energy-saving and emission reduction measures along the Belt and Road.

3.3 Strengthening Environmental Monitoring and Assessment

(1) Establishment of a sound environmental monitoring network: In countries along the Belt and Road, the establishment of a sound environmental monitoring network is the basis for strengthening environmental protection. This includes monitoring key indicators such as air pollution, water quality conditions and soil pollution. Government departments should invest funds and human resources to provide advanced monitoring equipment and technical training to ensure the accuracy and reliability of monitoring data. (2) Reinforce the importance of environmental assessment: Environmental assessment is an important tool for considering environmental impacts when formulating policies and projects. The government can formulate relevant laws and regulations to require project parties to conduct environmental impact assessments before undertaking large-scale development. The environmental assessment should focus on the project's impact on resources such as air, water and soil, and should also consider biodiversity conservation and ecosystem health. Governments should strengthen the regulation and review of environmental assessments to ensure their independence and scientific validity.

4. Conclusion

The Belt and Road Initiative is a huge international cooperation platform of great significance for global environmental governance. However, global environmental governance under the Initiative also faces serious challenges, and attention needs to be paid to solving such difficult issues as carbon emissions and biodiversity conservation in cooperation in order to realize common development and prosperity. In the future, we expect the international community to strengthen cooperation and jointly promote global environmental governance and realize sustainable development.

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