

The Impact of Integrated ESG Strategies on Protecting Urban Biodiversity in the Context of Climate Change

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Abstract: In recent years, with the increasing challenges posed by climate change, urban biodiversity is under great pressure. Integrated ESG (Environmental, Social, Governance) strategies, as an important model to enhance corporate sustainability and social responsibility, are gradually playing an important role in urban biodiversity conservation. This article looks at how external factors (like government policies, public awareness, and investor preferences) and internal factors (like corporate governance structures, sustainable innovation concepts, and green infrastructure investments) affect the implementation of ESG strategies in cities that are trying to protect biodiversity in the face of climate change. The paper first reviews the close links between climate change and biodiversity conservation, and then explores the significant role of ESG strategies in policy support, business practices, and market orientation. Based on a review of the existing literature, it is concluded that although today's integrated ESG strategies show some potential to improve biodiversity conservation, they still face challenges such as insufficient data monitoring and conflicts of interest. Last but not least, the paper gives policy suggestions for how to best use ESG strategies so that businesses can do more to stop the loss of biodiversity in cities caused by climate change.

Keywords: ESG Strategy, urban biodiversity, green infrastructure, climate change, sustainable development.

1. Introduction

The concept of ESG was first proposed in 2004 by Kofi Annan, then Secretary-General of the United Nations, in his report "Who Cares Wins", which proposed to incorporate environmental factors (E), social factors (S) and governance factors (G) into investment and financing decisions. It is a new approach to measuring corporate sustainability by measuring the three core elements of investment. Once this concept has been put forward, it has been widely recognized around the world, and has been rapidly disseminated and promoted.

With the proposal of "the overall layout of ecological civilization construction" and the goal of "carbon peak and carbon neutrality" in China, the concept of environmental protection awareness and urban biodiversity has gradually gained popularity. Climate change is a major factor that affects biodiversity change. In recent years, with the global warming, extreme weather has become more and more frequent. Climate warming leads to the rise of global sea level, which indirectly leads to the occurrence of natural disasters such as tropical cyclones, precipitation, drought and forest fires [1].

This paper discusses the role of ESG strategy in coping with climate change and promoting biodiversity conservation, and reveals the direction of future research by reviewing previous articles and employing some case studies.

2. ESG Strategies and Urban Biodiversity

Integrated ESG strategy refers to the organic combination of the three dimensions of environment (E), society (S) and governance (G) to form a comprehensive framework that can be used to measure the sustainable development of enterprises. The environmental dimension we mentioned focuses on resource use, ecological protection and pollution prevention. The social dimension emphasizes community responsibility, equity and social welfare. The governance dimension focuses on transparency, corporate management and ethical standards [2]. When applying ESG strategy to biodiversity protection, enterprises are required to take into account the protection of ecological environment and biodiversity and the sustainable development of ecological environment while promoting their own development, so as to promote sustainable social governance, participate in the protection of urban ecosystems, and promote the realization of low-carbon and green development goals.

ESG strategy can play an important role in urban biodiversity conservation. For example, in the first step, in the environmental dimension (E), enterprises can improve the urban ecological environment (E) and enhance urban biodiversity by constructing green infrastructure, such as rain gardens, urban forest parks and natural ecological corridors. The second step is to use the social (S) dimension of the ESG strategy to raise public awareness of the importance of biodiversity and encourage the public to actively participate in environmental protection actions. The third step is to strengthen the cooperation between enterprises and the government in the governance dimension (G) to promote the promulgation of more effective ecological protection policies [3]. In the process of concrete implementation on a global scale, the application of integrated ESG strategy in urban biodiversity conservation is as follows: First, Singapore, as a representative of a garden city, actively integrates ESG strategy in urban biodiversity conservation. Its design of "Gardens by the Bay" not only provides a habitat for wildlife, but also attracts tourists from all over the world through a diverse design of vegetation and ecological environment, encouraging people to live in harmony with their own heat. Secondly, New York City's "100-year Green Plan" is intended to emphasize the promotion of green building proportion in urban development to increase green space. The restoration of diverse vegetation and habitats in Central Park provides a great deal of habitat for wildlife.

3. External Influences on ESG Strategies for Biodiversity Protection

3.1. Climate Change Policies and Regulations

Policies and regulations related to climate change have driven companies to adopt ESG strategies, especially in protecting biodiversity. In recent years, the problem of global climate change has become increasingly serious, and the government is promoting the sustainable development of enterprises by formulating more reasonable environmental policies and regulations. In terms of urban biodiversity protection, governments around the world have issued more and more policies on controlling carbon emissions, closing down relevant polluting enterprises, and building ecological wetlands to protect the environment and ecology. For example, the construction of ecological wetland sponge cities in various places can not only help collect and purify urban precipitation, but also improve urban ecological environment and protect biodiversity [4].

3.2. Public Awareness and Social Movements

In recent years, media attention has played a positive moderating role, and the public's attention to environmental issues has gradually increased, prompting enterprises to pay more attention to their social responsibilities in terms of environmental protection and biodiversity. Relevant studies have shown that public concern about environmental issues can improve the ESG performance of enterprises through internal motivation and external pressure. For example, public attention can guide the allocation of government resources and enhance the awareness of sustainable development of enterprises, and have the opportunity to promote their development in the field of biodiversity conservation. Through the robustness and endogeneity test, the conclusion is reproducible. Further analysis shows that in areas with a more perfect legal environment and higher fiscal revenue, public concern has a more significant impact on ESG performance of enterprises [5].

3.3. Market and Investor Influence

Especially for the real economy, the sustainable development of enterprises is the key to the national strategy and is linked to the overall development of the country. Therefore, enterprises must pay attention to sustainable development. In recent years, with the increasing problems of economic growth, resource shortage, ecological environment deterioration and social conflicts, the public and the government are paying more and more attention to the environmental protection (E), social responsibility (S) and governance (G) of enterprises. Enterprises should gradually realize the importance of ESG investment for sustainable development and support their long-term goals.

In this process, investor preference plays an important role, and more and more investors are beginning to include biodiversity conservation and environmental sustainability in their investment decisions, which encourages enterprises to promote these areas. Based on sustainable development theory, stakeholder theory and information asymmetry theory, relevant studies have analyzed the impact of ESG investment on the sustainable development of enterprises, and found that ESG investment can significantly promote the sustainable development of enterprises. Therefore, enterprises should pay attention to ESG investment, especially in biodiversity conservation, to achieve long-term development [6].

4. Internal Drivers of ESG Strategies for Biodiversity Protection

4.1. Corporate Governance and Leadership

Different types of ownership reform have been pushed in state-owned businesses in recent years. Studies have shown that these reforms have greatly improved the ESG performance of these businesses, with governance level and strategic radicalism playing a major role. Mixed-ownership reform, for example, promotes progress in environmental protection (E), social responsibility (S), and corporate governance (G) through compensation, green innovation, better employment, and board activity. Moreover, the obvious effect of mixed ownership reform in enterprises with strict environmental regulations and public welfare shows that the improvement of governance structure can more effectively promote the implementation of enterprise ESG strategy. Studies have shown that foreign shareholders and private shareholders have a strong role in promoting the sustainable development of enterprises to improve ESG performance [7].

4.2. Sustainability Innovations

The sustainable innovation section covers various aspects such as business strategy, management model and technological progress. These innovations can improve resource utilization while reducing

negative impacts on the environment and protecting biodiversity. Companies are gradually implementing innovative measures aimed at restoring ecological balance, reducing pollution and improving their viability and competitiveness in today's increasingly restrictive market policies.

4.3. Green Infrastructure Investment

Investment in green infrastructure can effectively promote the conservation of urban biodiversity. By investing in ecological restoration, urban green space and other projects, enterprises can effectively improve environmental quality, enhance ecosystem functions, and alleviate the pressure on the natural environment brought about by urbanization. Green infrastructure investment can not only shape the environmental characteristics of enterprises, but also create a healthy and livable urban environment, which provides a strong support for the long-term sustainable development of enterprises in the future.

5. Challenges and Opportunities in Integrating ESG Strategies

In today's era of increasing climate change, governments and businesses face many challenges in promoting integrated ESG strategies to protect urban biodiversity. The recent spate of forest fires in Los Angeles, for example, has exposed the serious impacts of climate change on ecosystems. These fires not only destroy large areas of forest and increase air pollution, but also destroy plant and animal habitats and seriously damage biodiversity. This event highlights the vulnerability of businesses to climate change hazards, and shows that emergency response and environmental adaptation are important components of implementing ESG strategies.

The main challenges facing enterprises are as follows. The first is insufficient data and monitoring capacity: enterprises often lack effective data and monitoring equipment for environmental management when natural disasters suddenly occur, which makes it impossible for them to respond in the first place. Accurate environmental data and continuous monitoring of ecosystem health are important factors in the success of ESG strategies.

The second factor to consider is the conflict of interests. In the face of the cost problem, the short-term economic interests of enterprises may conflict with the long-term biodiversity conservation goals, and some enterprises will give up environmental management for their own short-term interests, which will be detrimental to the protection of urban biodiversity. From the case of the Los Angeles forest fire, it can be learnt that ignoring environmental management and causing damage to the ecological environment often brings higher management costs.

In the face of these challenges, the ESG strategy provides us with ideas to respond, and brings new opportunities for businesses and governments. First, invest in green infrastructure: Enterprises can improve the resilience of urban ecosystems by investing in green infrastructure such as urban forest parks and ecological restoration projects. From the ecological restoration work after the Los Angeles fire, we can learn that green infrastructure plays an important role in post-disaster reconstruction and ecological restoration.

Secondly, this can be achieved by enhancing public awareness of environmental protection. As the public's attention to environmental issues continues to increase, investors also gradually pay attention to the sustainable development performance of enterprises, which promotes the implementation of ESG strategy. The widespread coverage of the Los Angeles fires both brought more public attention to the effects of climate change and prompted companies to do more to protect the environment.

In addition, through policy support and regulations, the government can formulate environmental protection related policies and regulations to provide enterprises with a clear action framework and incentives to encourage enterprises to actively fulfill their environmental protection responsibilities.

For example, the Los Angeles area government has begun to increase investment in fire protection equipment and forest restoration work, and companies are actively participating in these environmental projects to promote ecological protection and sustainable development.

6. Conclusion

This paper discusses the impact of integrated ESG strategies on urban diversity conservation in the context of climate change. Studies have shown that ESG strategies can not only improve the performance of enterprises in environmental protection, social responsibility and governance, but also play a huge role in urban biodiversity conservation. With the increasingly severe climate change in recent years, it is necessary to combine market demand, government policies and corporate internal governance to jointly promote the implementation of ESG strategies.

First of all, the policies and regulations on environmental protection formulated by the government, as well as the widespread concern of the public on environmental protection issues, provide external impetus for enterprises to implement ESG strategies. At the same time, investors' preference for sustainable investment is also driving companies to integrate biodiversity conservation into their development strategies. Secondly, leadership and corporate governance structure also play an extremely important role. An effective governance mechanism can not only enhance the environmental awareness of enterprises, but also increase their investment in green facilities.

In implementation, the ESG strategy still faces some challenges, such as conflicts of interest, lack of effective data and monitoring, which can affect the implementation of the ESG strategy. The recent Los Angeles forest fire and other natural ecological disasters are also reminding companies to strengthen emergency preparedness and equipment investment in response to natural disasters and climate change in the future.

Based on these findings, this paper makes the following recommendations. First, strengthen data support. improve data transparency, provide standardized reporting for sustainability, and provide more scientific support for enterprises to evaluate and optimize ESG strategies.

The second step is to enhance the sense of social responsibility. Through various forms, the public's awareness of environmental protection can be improved and they can participate in environmental protection actions, so as to improve the concern of enterprises for environmental protection.

The third step is to formulate relevant policy support. The government should formulate and improve relevant policies and regulations, encourage enterprises to invest in green facilities, and clarify the responsibility of enterprises in biodiversity protection.

The fourth step is to improve the corporate governance system. The ESG concept is deeply rooted in the heart of the enterprise, so that the senior management of the enterprise has the determination to promote sustainable development strategy, promote green environmental protection and green innovation.

Through these measures, enterprises can not only enhance their own sustainable development capacity, but also contribute to the conservation of urban biodiversity. In the future, ESG strategy will gradually become a strategic tool for the long-term development of major enterprises, enabling enterprises to promote the coordinated development of economic, social and environmental aspects while facing the pressure of environmental change.

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