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Research on the High-quality Development Strategy of Logistics Industry based on Green and Sustainable Development

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Abstract: The logistics industry is a fundamental industry that supports economic development and an important link in the supply chain. With the gradual expansion of the development scale of the logistics industry, a series of environmental problems such as excessive energy and resource consumption caused by the logistics industry have become more prominent, and the impact on the ecological environment has gradually deepened. The pursuit of green transformation in the logistics industry has become an inevitable choice for the industry to break through difficulties and achieve green and sustainable development. Therefore, this article analyzes the current development status of the logistics industry based on green and sustainable development, which is conducive to identifying and solving the problems in the process of green and sustainable development of the logistics industry. Starting from key links such as logistics industry planning, warehousing, transportation and distribution, it proposes the main path for high-quality development of the logistics industry based on green and sustainable development, thereby promoting the green transformation of the logistics industry, to achieve green and sustainable development and high-quality development of the logistics industry.

Keywords: Logistics Industry; Green and Sustainable; High-quality Development; Strategy Research.

1. Introduction

The logistics industry runs through all aspects of social and economic life. With the rapid progress of global industrialization and the increasing frequency of online transactions, the logistics industry has rapidly developed globally, becoming an important driving force supporting national economic development and playing a crucial role in global trade and economic development [1]. With the continuous expansion of the market size, the world is highly dependent on fossil fuels in production, transportation, and other aspects, and various energy consumption issues have become prominent. As a fundamental industry supporting the national economy, the logistics industry is also an energy intensive industry, with relatively large emissions of polluting gases during transportation and distribution, resulting in low resource recycling efficiency and high energy consumption, resulting in more prominent environmental pollution problems, It is one of the high energy consuming industries [2,3]. As an important carrier for promoting the development of the logistics industry, logistics enterprises have to consider the increase in logistics costs caused by green transformation in actual operations. Under the premise of cost control, logistics enterprises often overlook pollution issues due to increased burden, and urban pollution will also worsen.

At present, ecological and environmental issues have become a key issue around the world, and the negative impact of environmental issues has become an obstacle to global sustainable development. In this context, it is urgent to promote the green development model, and low-carbon and green development, and energy conservation and emission reduction have reached a global consensus. The third industry is given priority to with services has become the main driving force of economic development, the current economic growth pattern is from extensive, development to high quality development, the logistics industry as an important hub of the new era of economic development, traditional logistics influence on environmental pollution, has, cannot meet the requirements of the sustainable development of modern society. With the concept of green and sustainable development deeply rooted in people, it lays the foundation for the concept of sustainable logistics development and high-quality development [4], The green transformation of the traditional logistics industry has been the inevitable choice of the industry development.

Based on this, this article starts from the perspective of green and sustainable development, with the aim of proposing strategies that can promote high-quality logistics development. Conduct in-depth analysis on the three key links of warehousing, transportation, and distribution, analyze the current status of high-quality development of green and sustainable logistics industry, and propose targeted paths to promote green and sustainable development and high-quality development of the logistics industry. The aim is to accelerate the green and low-carbon process of the logistics industry, so that "greening" covers all aspects of the logistics process, It provides development direction and goals for the green transformation and upgrading of the logistics industry, in order to achieve the goals of energy conservation, emission reduction, and environmental protection.

2. The Development Status of the Logistics Industry based on the Green and Sustainable Development

2.1. The Transformation of Green Logistics is Slow

Traditional logistics development model is still relatively extensive, difficult to meet the present low carbonization, greening of modern logistics industry quality development

needs, on the one hand, because more logistics enterprises did not set up the concept of green development, no concept of green sustainable development applied to the whole process of logistics management and logistics development planning, and for the negative impact of the ecological environment lack of attention, in the perspective of one-sided pursuit of short-term benefits, ignored the enterprise sustainable development and high quality development., On the other hand, due to the logistics enterprises will use green technology to warehousing, transportation and distribution of the key links of enthusiasm is low, and for the logistics industry green transformation also has a lack of understanding and attention, lead to low carbon technology and equipment in the process of logistics management input utilization rate is still low, energy consumption, high pollution equipment caused the material energy consumption, make the green transformation of the logistics industry stagnation.

2.2. Improper Storage Layout and Resource Allocation

Traditional storage mode is often due to the unreasonable storage location and layout, resulting in the increase of transportation times or transportation detour problems, resulting in the increase of logistics and transportation costs, reduced benefits and other problems. Among them, if the warehouse layout is too loose, the handling distance will be far, and the handling time will increase, the increase of empty load rate makes the resource allocation improper, reduce the transportation efficiency, and cause the waste of resources; if the layout is too dense, the energy consumption will increase after increasing the transportation times, and the environmental pollution problem will increase. In addition, the logistics infrastructure in some areas is relatively weak, and the storage facilities are relatively backward. Storage equipment with high energy consumption and low green technology may also cause improper storage, such as damage and deterioration of goods. Therefore, the unreasonable storage layout and the improper allocation of resources restrict the efficiency of logistics operation, but also cause the waste of resources or the increase of pollutant discharge.

2.3. High Energy Consumption in the Transportation and Distribution Stage

The transportation and distribution process are an important part of the logistics industry that consumes resources and damages the environment. In the transportation and distribution stages, the current order of transportation and distribution route planning is poor. Due to the lack of a common distribution system, there are also long-term scattered and disorderly problems in the logistics and distribution process, such as small cargo volume, scattered distribution, and large quantity, which cause many negative impacts on the environment due to disordered logistics. Disordered logistics not only reduces the operation and sorting rates of goods, but also continuously exposes the disadvantage of high energy consumption. Moreover, the transportation process of logistics also involves storage and loading issues. The utilization rate and porosity of storage space are still existing problems. High losses caused by improper storage during transportation and distribution need to be paid attention to [5], and the harm to the environment is also constantly increasing. In addition, fuel vehicles are still the main force in the transportation process among the current transportation vehicles, and the transportation energy of the transportation and distribution facilities is not low carbonized enough, resulting in a relatively high environmental load.

3. High-quality Development Path of Logistics Industry based on Green and Sustainable Development

3.1. Planning Stage

In order to develop the green, sustainable and high-quality development of the logistics industry, it is necessary to integrate green factors into all links of logistics when planning the logistics management mode in the early stage, so as to reduce the impact of logistics enterprises on the environment from the source, which is crucial to the green and sustainable development of the logistics industry. At the same time, logistics enterprises should also be on the premise of environmental protection management, rational allocation and make full use of all kinds of resources, strengthen science and technology in logistics link can assign, optimize the traditional logistics link and management mode, through the integration of resources and scientific planning to improve all kinds of resource utilization efficiency and logistics efficiency, reduce the pollution level, guarantee green logistics effective connection of each link and efficient operation. In addition, actively promote the green regional logistics infrastructure, the logistics enterprises should enhance the level of green logistics construction, or by reducing logistics link, to minimize the pollution of logistics each link, the implementation of green sustainable development concept, improve the ability of sustainable development of logistics industry, speed up the green transformation of the logistics industry [6].

3.2. Storage Stage

First, the warehouse operation management is an important part of the logistics management, and the location and layout of the warehouse are the key to the warehouse operation. Inefficient storage mode will lead to more energy consumption and waste, and reasonable warehouse layout can improve efficiency. Therefore, the logistics parks and storage centers need to pay attention to efficiency in the planning and site design stage, so as to avoid energy waste caused by low efficiency as much as possible. Second, the rational allocation and make full use of storage resources, on the basis of maximizing the use of storage area to take full account of warehouse operations and supporting facilities affect the environment, reduce the warehouse internal redundant operation, optimize and improve warehouse management activities such as material handling strategy, improve the operational efficiency of warehouse, warehouse space utilization and energy, realize warehouse internal carbon reduction. In addition, use energy-saving and environmental protection technologies and equipment with little environmental pollution as much as possible, and lead the storage process through big data and the Internet of Things [7] In the process of storage, reduce the loss of goods as much as possible, improve the level of green management, and build a low-carbon and green "green storage center".

3.3. Transportation and Distribution Stage

First of all, starting from the selection of transportation outlets and transportation routes, the platform operation mode can be adopted. The platform freight mode has high resource integration and operation efficiency, and gradually changes

from disorderly logistics to orderly logistics, so as to realize the integration and matching of scattered supply and demand [8]. It is necessary to design a more low-carbon and green transportation scheme, find a more reasonable route planning, and improve the transportation efficiency as the focus, and realize the energy saving and emission reduction in the transportation process through path optimization. Among them, to promote the shared transportation and joint distribution mode, enterprises can adopt multimodal transportation, pallet recycling and other ways to reduce the waste of resources and reduce the transportation energy loss on the basis of improving the distribution efficiency. Second, optimize the transportation and distribution process of warehousing and loading process, improve the utilization rate of storage space, improve loading rate, reduce void, reduce due to the storage and loading loss rate, larger complete green storage demand, finally, optimize the structure of transport, at the same time to realize clean energy transformation optimization, limit the use of highly polluting transport vehicles while promoting the low carbon transformation of transport, using zero emissions strategy for the last mile delivery of green logistics solutions[9].

4. Conclusion and Countermeasures

4.1. Conclusion

In recent years, the fierce contradiction between energy supply and demand has made the importance of green and sustainable development in the logistics industry more prominent. With the continuous improvement of a series of policies and regulations, the concept of green and low-carbon living has been continuously promoted and popularized. The green and sustainable development and high-quality development of the logistics industry are the trend and direction of modern logistics development, and the green and sustainable logistics industry will achieve high-quality development. Based on the current development status of the logistics industry based on green and sustainable development, it can be seen that there are still problems such as slow progress in the green transformation of logistics, improper storage layout and resource allocation, and high energy consumption in the transportation and distribution stage, involving multiple links such as transportation, warehousing, and distribution. It can be seen that the green transformation of the logistics industry has a relatively large span and difficulty, However, accelerating the green and low-carbon transformation of logistics enterprises is a requirement of their sustainable development strategy. Logistics enterprises should explore the low-carbon development path of the logistics industry around the planning and design of logistics management models, the location layout and reasonable resource allocation of warehousing links, as well as energy-saving and efficient transportation and distribution. In order to improve the efficiency of resource allocation in warehousing, transportation and distribution, and minimize transportation pollution emissions, The specific path includes fully utilizing various resource elements and simplifying the logistics distribution process through resource integration to optimize the connection of various logistics links; Reasonably plan transportation networks and routes, combine multiple transportation methods or facilities, and divide labor reasonably. Scientifically and efficiently dispatch transportation tools to optimize traditional logistics business processes and management methods, thereby improving logistics efficiency and achieving self-emission reduction. At the same time, drive relevant industries to achieve carbon reduction and green development, and promote widespread and profound systemic changes in sustainable development.

4.2. Countermeasures

First, through the macro policy continues to guide the necessity of green sustainable development, logistics enterprises to firmly establish a green development concept, enterprises only firmly establish a low carbon development concept, and the green sustainable development model through each link of logistics management, change the traditional energy-intensive, high pollution, high emissions of extensive development mode, attaches great importance to green logistics development, through various ways to save energy, emission reduction, can truly achieve green development. From the perspective of logistics supply chain, strengthen the government's leading role in the development of green logistics, strengthen the construction of logistics infrastructure, encourage logistics enterprises to develop green warehousing, the construction of green logistics park, distribution center, such as infrastructure, guide logistics enterprises increase investment in green logistics new technology research and development, widely application of green energy.

Second, strengthen the research and development of green technology in the logistics industry, take green technology as the power, coordinate the green transformation mode within the logistics industry, improve the efficiency of green transformation of logistics, and then improve the green and sustainable development ability and high-quality development ability of the logistics industry [10]. On the one hand, increase the investment in capital. Only with abundant funds can logistics enterprises better face the cost pressure brought by green transformation and invest in the process of green transformation of logistics as soon as possible. On the other hand, for the logistics industry infrastructure, storage equipment and transportation equipment, and packaging production, such as electronic data exchange, distribution planning, green packaging, and many other applications of advanced technology, using the Internet of things technology guide warehousing, transportation and distribution process, for the green sustainable transformation of logistics industry to provide technical support.

Thirdly, the level of information construction is the key to determining the efficiency of links. Actively building a logistics supply chain information platform and improving the digitalization level of various logistics links. The development of logistics enterprises is also inseparable from the construction of the Internet and intelligent systems. By fully utilizing green and advanced digital technology to establish an information platform, scheduling algorithms and operational optimization technology are used to optimize the delivery tasks of transportation facilities and promote the green and high-quality development of logistics. In addition, it is necessary to establish a logistics enterprise data management system and facilitate information exchange between various systems, forming a comprehensive big data center system, providing underlying data support for the green and sustainable development and high-quality development of the logistics industry.

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