

A Study on Environmental Liability Disclosure in the Context of Dual Carbon Targets: The Case of Jiangzhong Pharmaceutical

Yuxuan Ma^{a*}, Yuxin Guo, Xinlin Huang, Sinan Xie, Jiaxin Huang

Jiangxi University of Finance and Economics, Nanchang, Jiangxi, 330000, China

^am18187781802@163.com

*Corresponding author

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Abstract: The pharmaceutical industry, which is responsible for people's lives and health, brings with it many environmental externalities that cannot be ignored while creating value for the national economy. Nowadays, in the context of the development of a dual carbon economy, there is a growing concern about how companies can properly deal with environmental pollution issues. This project analyses and summarises Jiangzhong Pharmaceuticals' social responsibility reports and related environmental information in recent years, using Jiangzhong Pharmaceuticals as an example. The study concludes that Jiangzhong Pharmaceuticals discloses environmental information in a comprehensive manner and has improved it year on year, and that the disclosure is intuitive and easy to understand. However, the disclosure of negative social responsibility information by Jiangzhong Pharmaceuticals is inadequate, the reference standards for disclosure are not standardised, and the accuracy and authenticity of its disclosures have yet to be verified. Therefore, this topic proposes recommendations on the problems from three aspects: national laws, media and the public, and corporate disclosure mechanisms and incentive systems, in the hope that it can provide reference and development ideas for the whole pharmaceutical industry and other industries.

1. Introduction

With the rapid development of society and the expansion of human socio-economic activities, the damage and impact of human activities on the earth's ecology has become increasingly serious, prompting people to pay more attention to environmental issues. In September 2020, China set a clear “double carbon” target for the world, that is, to reach “peak carbon” by 2030 and “carbon neutrality” by 2060. “As an important measure to strengthen environmental management, environmental information disclosure plays an important role in monitoring and managing corporate behaviour and regulating the market environment, and is highly valued by all sectors of society. Therefore, it is particularly important for major industries to improve the rules of environmental information disclosure, enhance the efficiency and level of environmental management and environmental information disclosure, and improve the environmental problems of enterprises.[1] This paper takes Jiangzhong Pharmaceutical as an example, analyses data and theoretical research on the current situation of environmental information disclosure in the pharmaceutical industry in which the enterprise is located, and proposes reasonable suggestions and improvement measures for the problems of environmental accounting information disclosure in this industry, taking into account the current actual situation of the pharmaceutical industry in China and relevant regulations.[2]

2. Background of the Study

In recent years, more and more attention has been paid to the issue of climate change globally, and the main development goals of the world's economies have evolved into green, low-carbon and sustainable development. 2020, the 15th United Nations Conference, General Secretary Xi Jinping

proposed that “carbon dioxide emissions strive to peak by 2030, and strive to achieve carbon neutrality by 2060. emissions by 2030 and strive to achieve carbon neutrality by 2060”, i.e. the “double carbon” target. “Carbon peaking” refers to the gradual reduction of total CO₂ emissions after reaching the historical peak, while “carbon neutral” refers to the relative emissions of CO₂ being zero.[3] The Central Economic Work Conference listed carbon peaking and carbon neutrality as key tasks, which shows how much importance the country attaches to green development. Enterprises are the core and mainstay of economic and social development. To achieve the “double carbon” target, we need to give full play to the major leading role of enterprises. China is currently facing a severe test of structural transformation, especially at a time of epidemic outbreaks, and we are facing increasing pressure to reduce emissions. China's 'double carbon' target is a visionary and strategic development goal that is in line with the country's economic development.[4]

Currently, independent reporting disclosures and supplementary reporting disclosures are the main ways in which environmental accounting information is disclosed by enterprises in China. The independent report disclosure is a way to disclose systematically outside of annual and financial reports. It is usually disclosed publicly in the form of a social responsibility report or an environmental report in the environmental information disclosure concentration. The disclosures made are more complete and accurate and facilitate the information users to make decisions in their own interest. The supplementary reporting disclosure method is a decentralised environmental accounting content of the enterprise, which is disclosed at the same time when the annual financial statements of the enterprise are made public to the society. The case study of this paper, Jiangzhong Pharmaceuticals, uses independent report disclosure to prepare a special statement of the company's environmental protection work based on its daily production and business activities, and to make it a separate disclosure item rather than attributing it to the company's annual report content. This not only promotes the completeness, accuracy and reliability of corporate disclosure, but also facilitates business managers to grasp the financial status of the company's environmental protection. It is also conducive to the supervision of low-carbon and environmentally friendly production by the relevant state departments, which can accurately grasp the economic development dynamics of society and ensure that the double carbon target is achieved as scheduled[5].

However, at present, domestic enterprises' carbon emission management requirements and environmental accounting information disclosure standards are still immature, the related information disclosure system is not perfect, and enterprises lack unified norms and accurate and specific disclosure system requirements. As a result, information about environmental accounting published by enterprises in different industries is varied and not sufficiently standardised. The fragmented disclosure of environmental information makes it difficult for information users to understand environmental information and make reasonable judgements. It can also result in companies not being able to compare themselves systematically with similar or related companies. The pharmaceutical industry is an important part of the social economy, and it is of great importance to the advancement of social progress and development. As a highly polluting chemical industry, the pharmaceutical industry is a key concern for the state in terms of environmental protection. Therefore, improving the quality of environmental accounting disclosure in the pharmaceutical industry plays an important role in developing a green economy in China, promoting high-quality economic development and achieving the double carbon goal as scheduled[6].

3. Analysis of Environmental Accounting Information Disclosure by Listed Companies in the Pharmaceutical Industry

The data related to environmental disclosure of 95 listed companies in the pharmaceutical industry for a total of five years from 2011-2015 were selected, grouped quantitatively and qualitatively and statistically analysed according to the nature of the data. (As shown in Table 1)

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The 13 sets of more easily quantifiable data provide a more intuitive and clear picture of how companies are fulfilling their environmental responsibilities. In terms of time development, the disclosure content of listed companies in the pharmaceutical industry has increased year by year from 2011 to 2015, indicating that listed companies in the pharmaceutical industry are paying more and more attention to environmental information disclosure, which also reflects an overall trend in the future development of enterprises and is in line with China's current dual carbon target. In terms of disclosure content, listed companies in the pharmaceutical industry disclose “the company's environmental policy and objectives”, “the operation of environmental protection facilities”, “the effect of energy saving and emission reduction” and There is more content on “measures to control the three wastes”, which can reflect their own investment and environmental protection effect, and less content on “greening fees or environmental protection training”, “environmental protection litigation fines, compensation, etc. There is less content on “greening fees or environmental training”, “environmental lawsuit fines, compensation, etc.”, and even “contingent liabilities” that have not been disclosed.[8] On the one hand, enterprises are reluctant to disclose negative environmental information and are not active in disclosing it; on the other hand, they are even more reluctant to disclose long-term environmental protection investments, or even to undertake them.

Table 1 Quantitative Analysis

Statistics on the content of (quantitative) disclosure of environmental accounting information					
Content of quantitative analysis	Number of companies				
	2011	2012	2013	2014	2015
Company environmental policy and objectives	36	57	61	59	65
Operation of environmental protection facilities	34	49	52	65	68
Consumption of natural resources	12	15	14	20	24
Greening fees or environmental training	10	9	12	12	14
Sewage charges	17	25	30	34	39
Three waste management expenses	23	40	42	50	52
Environmental litigation fines, damages, etc.	2	5	2	1	1
Energy saving and emission reduction effect	40	67	70	69	72
Environmental incentives, grant aid, subsidies	21	25	24	33	33
Emission of pollutants in compliance with standards	29	48	55	55	63
Three waste management measures	31	52	55	57	64
Environmental Protection and Pollution Control Programme	33	58	62	62	69
Contingent environmental liabilities	0	0	0	0	0

Source: Based on public data from the SSE, SZSE, Sina Finance and Oriental Fortune websites

Listed companies in the pharmaceutical industry have made qualitative disclosures of environmental accounting information, and from the content of the disclosures (as shown in Table 2), listed companies in the pharmaceutical industry have made more disclosures of “environmental measures taken by the company in accordance with environmental protection regulations”, “environmental responsibilities and obligations of the company, and environmental public welfare”, which can help build up a good image of the company. The disclosure of “environmental measures taken by the company in accordance with environmental protection regulations”, “environmental responsibilities and obligations of the company, environmental protection public welfare”, which can help build a good image of the company, is more frequent, while the disclosure of “timely disclosure of major environmental issues” and “the impact of national environmental protection policies on the company” is less frequent. In a sense, the disclosure of environmental accounting information in the environmental responsibility reports of pharmaceutical companies is highly subjective. In 2019, China Resources Jiangzhong was selected by the Ministry of Ecology and Environment as the “Advanced Group of China's Ecological Civilisation”, the first manufacturing company in China to receive this award to date. In 2020, it was selected by the National Development and Reform Commission in the “List of National Ecological Civilisation Pilot Zone Reform and Experience Promotion”, which shows its outstanding achievements in environmental ecology. It also demonstrates that it is somewhat representative in terms of environmental information disclosure.

Table 2 Quantitative Analysis

Statistics on the content of (qualitative) disclosures of environmental accounting information					
Disclosure	Number of companies				
	2011	2012	2013	2014	2015
Environmental measures taken by the company in accordance with environmental regulations	45	67	73	75	79
Impact of the national environmental protection policy on the company	7	8	10	8	9
Environmental quality monitoring and pollution source monitoring	18	26	32	29	36
Environmental certification status such as ISO14001 or GBT24001	10	21	21	22	27
Environmental protection risk management	28	37	44	45	53
Energy saving engineering processes and technologies	26	42	47	50	57
Construction of circular economy and cleaner production systems	27	52	56	54	59
Corporate Environmental Responsibility and Obligations, Environmental Good	41	65	72	74	80
Description of major environmental incidents	13	17	21	22	18
Timeliness of disclosure of significant environmental issues	4	7	8	6	8
Establishment and implementation of an environmental internal control system	21	26	29	31	35
Clear process for generating environmental information or information quality assurance statement	24	25	26	27	29

Source: Based on public data from the SSE, SZSE, Sina Finance and Oriental Fortune websites.

4. Jiangzhong Pharmaceutical Case Study

4.1 Introduction to Jc Pharmaceuticals

Ltd., an A-share listed company, is mainly engaged in the research, development, production and sales of Chinese patent medicines and health care medicines. Its main products include Jiangzhong Brand Gastrointestinal Tablets, Compound Jiangzhong Brand Grass Coral Contained Tablets and Jiangzhong Lactobacillin Tablets.

The number of pharmaceutical companies in China is large and the competition is fierce. Jiangzhong Pharmaceutical, as the leader in the OTC pharmaceutical industry, focuses on the improvement of research and development technology, and invests more in the production costs of medicinal materials each year, and it is difficult to carry out comprehensive pollution control as well as environmental protection of the pharmaceutical sites.

4.2 Analysis of Environmental Accounting Disclosures of Jiangzhong Pharmaceutical

4.2.1 Method of Disclosure

Environmental information disclosure by JZ Pharma is mainly in the form of annual reports and social responsibility reports. In its annual report, Jiangzhong Pharmaceuticals provides a detailed description of its environmental protection projects. This mainly includes information on the progress of the three waste projects and the results of improvements in pollution prevention and treatment in the discharge information, and contingency plans for unexpected environmental incidents. The government grants section indicates the amount of subsidies as well as incentives regarding various government policies for environmental protection. Quantitative amounts of total investment in environmental protection, clarification of the company's energy saving and environmental protection projects, data on pollution reduction and emission reduction, and green advocacy appear in the social and environmental reports.

4.2.2 Disclosure of Content

The main contents of JCPC's social responsibility reports from 2012 to 2020 (hereinafter referred to as the reports) were analysed by studying and analysing their disclosures. The report describes in detail the renovation of environmental protection projects, lists the exhaust emissions that met the standards in each year, and provides a qualitative description and quantitative description of data for projects such as photovoltaic power generation (e.g. Table 3). In particular, quantitative disclosure is provided only for the comprehensive energy consumption of industrial output in 2015 and for emissions of exhaust pollutants from 2018 onwards.

Table 3 Environmental Abatement Results Data

Data disclosure of environmental reduction results						
Year	2015	2016	2017	2018	2019	2020
Comprehensive energy consumption of 10,000 yuan of industrial output value (tonnes of standard coal per 10,000 yuan)	0.0415	0.0405	0.0393	0.035	0.047	0.0489
Investing in photovoltaic power	Undisclosed	1250	1260	1260	Undisclosed	Undisclosed
Photovoltaic power generation	Undisclosed	150	163	162	Undisclosed	Undisclosed
NOX emissions (tonnes)	Undisclosed	Undisclosed	Undisclosed	25.1426	19.1419	10.4548
SO2 emissions (tonnes)	Undisclosed	Undisclosed	Undisclosed	33.9087	0.9402	0.219
CO2 emissions (tonnes)	Undisclosed	Undisclosed	Undisclosed	31685	28488	28570

(Source: Juxun Information Network, China Resources Jiangzhong Social Responsibility Report 2012-2020)

Environmental inputs are disclosed in aggregate form (e.g. Table 4). disclosure of financial inputs for disclosure of energy efficiency and wastewater treatment began in 2016. There is basically no financial input for emission reduction in the subsequent years. However, from 2012 to 2020, the social responsibility report basically discloses the public welfare investment of enterprises.

Table 4 Environmental Inputs

Environmental input data disclosure					
Projects	Energy saving	Emission reduction	Sewage	Sewage treatment	Public investment
Year					
2012	Undisclosed				562
2013	Undisclosed				185
2014	Undisclosed				Undisclosed
2015	Undisclosed				132.74
2016	1250	345	390	1985	43
2017	10	Undisclosed	Undisclosed	10	152.36
2018	150		10	160	65.2
2019	Undisclosed		Undisclosed	Undisclosed	248.2
2020	81		81	81	611

(Source: Juxun Information Network, China Resources Jiangzhong Social Responsibility Report 2012-2020)

The total amount invested and the effluent reused are described quantitatively in the disclosures for the wastewater treatment project (e.g. Table 5.) There are few disclosures about environmental investments prior to 2016 and in subsequent years only the total investment in this project is disclosed in 2016 and 2018, with the addition of disclosures about the tonnage of water reused after 2016.

Table 5 Sewerage Project Data

Sewerage treatment	Inputs (RMB million)	Water reuse (tonnes)
2012	Undisclosed	Undisclosed
2013		
2014		
2015		
2016	390	365000
2017	Undisclosed	1095000
2018	10	52100
2019	Undisclosed	150,000
2020	Undisclosed	1100000

(Source: Juxun Information Network, China Resources Jiangzhong Social Responsibility Report 2012-2020)

It also discloses the accolades received by JC Pharma in terms of environmental protection (as shown in Table 6). The accolades received each year demonstrate that Jiangzhong Pharmaceuticals has fulfilled its social responsibilities well.

Table 6 Environmental Related Awards Received

Year	Related honours
2012	Leading product awarded “People’s Trusted Drug Brand”
	Implementation of the “Stars of Tomorrow for Jiangzhong Students” branded student support programme (for the tenth consecutive year)
2013	100% pass rate for monitoring of finished products outside units (including pharmacovigilance department)
2014	The company’s production base, Jiangzhong Valley, was selected as the “most beautiful factory in China”, a “breathing factory” and one of the “top five ecological buildings in the world”.
2015	The manufacturing base Jiangzhong Medicine Valley is designated by the Ministry of Foreign Affairs as “QIHUANG National Medical Center for Foreign dignitaries to experience Jiangzhong”
2016	The company won the title of “Jiangxi Province Energy Saving and Emission Reduction Science and Technology Innovation Demonstration Enterprise”.
	Awarded the title of “Pilot Demonstration of Intelligent Manufacturing” by the Ministry of Industry and Information Technology of China
2017	Luoting Base Receives the Honor of “Extracting New Model of Intelligent Manufacturing” from the State Ministry of Industry and Information Technology
	The company was awarded as “High-tech Enterprise”
	Nominated for “Jiangxi Jinggang Quality Award
2018	Awarded National “Green Factory”
2019	Awarded the “China Ecological Civilization Award Advanced Group” by the Ministry of Ecology and Environment of China
	Wanli manufacturing site was awarded the Gold Award in the Hong Kong Green Business Award for Excellence in Environmental Management by the Hong Kong Green Council
2020	Awarded the People’s Corporate Social Responsibility Award for “Green Development”
	Selected for the National Development and Reform Commission’s List of National Ecological Civilization Pilot Zone Reforms and Experiences and Practices for Promotion

(Source: Juxun Information Network, China Resources Jiangzhong Social Responsibility Report 2012-2020)

The content of environmental information disclosure shows that Jiangzhong Pharmaceutical has continued to achieve good results in pollutant emissions through a series of strategic environmental decisions, and has focused on the implementation of environmental strategies while developing its business scale, which has implications for other companies in the pharmaceutical industry.

5. Problems with Information Disclosure of Jc Pharmaceuticals

5.1 Fragmented Disclosure

The disclosure of environment-related accounting information by Jiangzhong Pharmaceuticals is relatively fragmented. Prior to 2014, the social responsibility report only presented the fixed eight sections in textual form, and from 2015 onwards, sections such as development history, chairman’s micro-talk, and party building were added, and correspondingly, refinements to stakeholders, an employee chapter with an increased employee structure chart, and an increased management structure chart were added. The disclosure of total investment in environmental projects is not made every year and tends to be disclosed intermittently, without a uniform content format, and the content disclosed varies from year to year, making it difficult to form a vertical comparison.

5.2 Inconsistent Forms of Disclosure

The disclosure of environmental accounting information by Jiangzhong Pharmaceuticals is mainly reflected in the social responsibility report and the annual corporate report, and no separate environmental report has been prepared. In the social responsibility section of the annual report, Jiangzhong Pharmaceuticals provides a detailed description of the company’s environmental projects, including the progress of the three waste projects and the results of improvements in

pollution prevention and treatment, and contingency plans for unexpected environmental incidents. The government grants section of the annual report indicates the amount of government subsidies and incentives for various environmental protection policies. The Environmental Responsibility module of the Social Responsibility Report sets out the company's environmental management system, energy saving and environmental protection projects, data on pollution reduction and emission reduction, and the company's green initiatives. Quantitative amounts on total environmental investments appear in the Social and Environmental Report. JCG also lacks a uniform standard for disclosure content and does not have a relatively complete set of formats, resulting in an unfocused and difficult to collect environmental accounting information disclosed in each period and a lack of comparability.

5.3 Incomplete and Subjective Disclosure of Information

The social responsibility report disclosed by Jiangzhong Group mainly discloses the capital investment and effectiveness of environmental protection projects such as photovoltaic power generation, “coal to gas” projects and sewage treatment, but no other environmental accounting information is mentioned. The disclosures made by the Jiangzhong Group in relation to Jiangzhong Pharmaceuticals are basically qualitative disclosures of environmental protection concepts, achievements and awards received, but not of the risks and fines associated with environmental pollution.

There is insufficient disclosure of negative environmental accounting information for the Jiangzhong Group. For reasons of the company's social image, disclosure of relevant information would help investors to better understand the company's prospects, and would also be more conducive to promoting effective environmental protection. Companies use a lot of space to disclose positive content and very little to cover negative content, such as information on the remediation of environmental pollution caused by the company prior to the implementation of green projects, the fines that the company has to pay and the number of public complaints about environmental protection. This goes against the principle of completeness of information disclosure and tends to result in a one-sided evaluation of the fulfilment of corporate social responsibility.

6. Reasons Why Companies Need to Disclose Information

6.1 External Causes

6.1.1 Government Regulations

The government exerts direct pressure on enterprises to disclose environmental information, and governments at all levels of the country have enacted a series of laws and regulations in order to restrain enterprises that only seek to produce and do not pay attention to environmental protection. For example, the Law of the People's Republic of China on Environmental Protection clearly stipulates that the public has the right to be informed of environmental information and the right to supervise environmental protection work, and that key emission units should disclose information and accept social supervision.

In addition, in 2022, the Ministry of Ecology and Environment issued and implemented the Guidelines on the Format for the Legal Disclosure of Environmental Information of Enterprises, which came into effect on 8 February 2022. The guidelines regulate the content and format of the annual environmental information disclosure report in accordance with the law and the interim environmental information disclosure report in accordance with the law. The promulgation of the guidelines strengthens the standardization of environmental information disclosure, requiring that information should be truthful, accurate and objective, and that the language and presentation used should be easy to understand and accessible to the public.

6.1.2 Public Opinion

The public exerts indirect pressure on companies to disclose environmental information, mainly through public opinion and market behaviour. Particularly in the context of the national drive to

achieve the “double carbon” target, people are increasingly concerned about environmental issues and are increasingly demanding that companies prevent and control environmental pollution and disclose environmental information. Some environmentally conscious citizens have started to boycott products produced by companies with relatively poor environmental performance, which has put pressure on companies that have not fulfilled their environmental responsibilities or have done so to a lesser extent. In order to build up a good corporate image, many companies, including the Jiangzhong Group, are gradually becoming more aware of environmental information disclosure, and the content of disclosure is being improved year by year.

6.1.3 Stakeholder Requirements

In large enterprises, the information asymmetry in the principal-agent model leads investors to take into account a variety of factors when investing in a company. Some investors will take into account the social responsibility of the company and tend to invest in companies with a good level of social responsibility. The pressure brought about by investors' investment value orientation inadvertently makes enterprises consciously assume social responsibility, and gradually becomes the driving force for sustainable operation.

6.2 Internal Causes

6.2.1 Improving Market Competitiveness

Generally speaking, the market competitiveness of an enterprise is closely related to the internal management level of the enterprise, among which cost management has an important positive effect on enhancing and improving the management level of the enterprise, which can reduce energy consumption, improve efficiency and increase the profit of the enterprise's production and operation. At the same time, relatively complete environmental information disclosure can effectively help enterprises grasp environmental risks, develop targeted environmental risk prevention measures, effectively respond to the enterprise's external competitive environment and establish an environmental management plan system that is more advanced than that of competitors.

6.2.2 Ensuring Sustainable Business Development

According to the principle of sustainability, development and environmental protection are interlinked and form an organic whole. Inevitably, in the production and operation of an enterprise, there is an interaction with natural resources and the environment. Therefore, it is an inherent requirement for sustainable development that an enterprise pursues economic profit maximisation while harmonising with the natural ecological environment.

7. Effective Measures to Promote the Development of Environmental Information Disclosure by Enterprises in China

7.1 Improving the Corporate Environmental System

7.1.1 Improve Scientific Legislation on Environmental Accounting

A sound legal system is the fundamental guarantee for enterprises to fulfill environmental information disclosure, and the government should exert its authority to determine the legal status of environmental information disclosure. Therefore, China should actively promote the construction of environmental responsibility accounting disclosure laws with industry characteristics, establish a more complete legal system, and at the same time, clarify the legal responsibilities to be borne by the parties responsible for problems in the process of social responsibility information disclosure, improve the corresponding reward and punishment regulations, implement strict system management for enterprises, and strengthen the fulfilment of corporate social responsibility through compulsory means, so as to create a good social environment.

7.1.2 Sound Environmental Information Disclosure Regulations

At present, China has not yet formed a set of standards that can play a role in regulating and

rectifying the disclosure of corporate responsibility accounting information, thus resulting in uneven disclosure in the market. Therefore, it is necessary to establish a set of disclosure standards that are not only applicable to the development of social responsibility accounting information in China, but also a more complete and specific standard that can regulate and standardise the more confusing disclosure situation in the current market. In the guidelines, a clear reference for the specific content of social responsibility accounting information disclosure should be formed.

7.2 Establishment of a Corporate Environmental Information Disclosure Mechanism

7.2.1 Establishing a Talent Development System

At present, there are many important reasons for the lack of good environmental accounting personnel in the environmental responsibility reports of enterprises. It is difficult for enterprises to effectively collect, audit and process environmental information, and even more difficult to quantify environmental assets, liabilities and costs. Therefore, it is necessary for enterprises to establish a comprehensive talent training system for environmental accounting, and under certain conditions, accounting staff can be sent to learn environmental accounting methods and go out for further training. At the same time, a competition mechanism should be introduced among the accounting staff and the corresponding rewards and punishments should be linked to the staff's performance appraisal to motivate the accounting staff to learn environmental accounting and apply environmental accounting. Through the talent training system, the working ability and professionalism of the accounting staff of enterprises will be improved, and the environmental information disclosure system of enterprises will be gradually improved.

7.2.2 Strengthen the Oversight of Independent Third-Party Audits

As a profit-making organisation, an enterprise aims to maximise its own economic interests and may not pay attention to or fulfil its own social responsibilities. Third-party auditors are not only more professional, but also independent from the enterprises, and all audit reports issued by them are more authentic and reliable. In this regard, the government should increase incentives for third-party auditors and establish a corresponding auditing system, and actively encourage third-party auditors to conduct truthful and effective assessments of the relevant enterprises. At the same time, it is important to prevent third-party audits from covering up corporate failures through falsification, and to explore the establishment of an information-sharing mechanism between companies, third-party audits, government oversight departments and practitioners, so as to improve the standardisation and professionalism of the oversight market.

7.2.3 Encourage the Public to Exercise Their Right to Monitor and Give Feedback

Firstly, the government can make use of the media and other social forces to positively publicise enterprises that have performed their environmental responsibilities well, so as to further motivate them to disclose information on their environmental responsibilities; on the other hand, through the media and other social forces, it can strengthen the supervision of public opinion on the environmental failures of enterprises, so as to exert social pressure on enterprises and prompt them to fulfil their corresponding environmental responsibilities. Secondly, the public is encouraged to actively fulfil their right to monitor and give feedback. The public can participate in the environmental management of enterprises by expressing their environmental demands and supervising the behaviour of enterprises in fulfilling their environmental responsibilities, helping enterprises and beneficiaries to establish a relationship of information exchange and jointly pulling enterprises to fulfil their social responsibilities.

7.3 Strengthening Corporate Social Responsibility Awareness

It is only when the consciousness of enterprises is raised that they will pay attention to the disclosure of socially responsible accounting information, so it is necessary to cultivate the consciousness of enterprises through actions. The first step is to raise awareness of the importance and significance of third-party assurance, and the second step is to give attention and appreciation to

enterprises that accept third-party assurance, so that more enterprises can raise their awareness of social responsibility and make their social responsibility disclosure information more truthful. At the same time, environmental responsibility can be linked to the social awards of enterprises, and enterprises with outstanding performance can be given certain rewards.

7.4 Promoting the Integration of Environmental Responsibility and Corporate Development

In the context of today's times, incorporating environmental responsibility into the strategic planning of enterprise development is an inevitable requirement for achieving sustainable development. Firstly, under the dual carbon goal, enterprises should accelerate the transition from a high energy consumption and high pollution development path to a low energy consumption and low pollution development path. This will not only help enterprises to fulfil their environmental responsibility obligations, but also to gain some positive feedback and achieve sustainable economic returns. Secondly, environmental responsibility is integrated into the company's mission and culture, so that it is reflected in the company's values. At the same time, systematic training on low-carbon environmental protection is provided to employees at all levels of the organisation to enhance their awareness of their responsibilities. Finally, establish a management system within the company that matches the implementation of environmental responsibility, and link implementation to the performance appraisal of employees to further promote the standardisation of the implementation of corporate environmental responsibility.

8. Conclusion

To sum up, under the background of double carbon, Jiangzhong Pharmaceutical, which is at the leading level of green development in the pharmaceutical industry, actively undertakes environmental protection responsibilities but also suffers from the shortcomings of fragmented environmental accounting information disclosure, little quantitative disclosure, more reflection of historical information, lack of environmental cost data, etc. This is due to the lack of a sound legal system by the government, the lack of scientific and flexible accounting standards and the low level of supervision by the market and the public. In view of this, improving the quality of environmental accounting information disclosure by pharmaceutical companies requires the joint efforts of the government, society and pharmaceutical companies. The government should pay attention to the training of environmental accounting professionals and provide a talent base for the continuous improvement of environmental accounting standards, while increasing the supervision of the industry to form a good industry standard and reduce the false information disclosure caused by malicious competition; the enterprises themselves also focus on the improvement of product quality, saving environmental costs and effectively bringing true social responsibility reports to the enterprises.

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