Research on Green Barriers and Countermeasures for Chinese Materia Medica Entering ASEAN Countries under the Background of the Belt and Road Initiative

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Abstract: China-ASEAN Free Trade Area is a huge economy covering 11 countries and 1.9 billion people, and has become the largest free trade area among developing countries. Because of the geographical proximity and cultural similarities between China and ASEAN, and the fact that most ASEAN countries have a high recognition of (Traditional Chinese Medicine (TCM) and prefer to use traditional medicine to treat diseases, there is a large market demand for Chinese Materia Medica (CMM). China-ASEAN Free Trade Area has become an important market for CMM exports. However, ASEAN countries have different degrees of green barriers to CMM exports, mainly including technical trade barriers (TTBs) and non-technical trade barriers (NTBs), and these green barriers have caused a certain impact of the entry of CMM into ASEAN countries. This article proposes legal countermeasures for CMM exports to ASEAN countries to deal with green barriers in terms of Chinese government's diplomacy, trade policy, industrial structure, intellectual property protection, quality of CMM, as well as Chinese enterprises' internal management, dispute resolution, communication and cooperation, with a view to developing the market of CMM in ASEAN countries. In order to speed up the pace of "going out" of CMM.

Keywords: Belt and Road, Chinese Materia Medica Export, ASEAN Countries, Green Barriers, Legal Countermeasures

Introduction
The Belt and Road initiative (B&R) is a major national strategy proposed by China to strengthen economic, political, and cultural exchanges with countries along the route, promoting regional economic development and common prosperity. ASEAN countries are one of the important markets for CMM exports, but there are difficulties and challenges for CMM entering ASEAN countries, mainly manifested in the form of green barriers. Green barriers refer to a series of TTBs and NTBs set up under the pretext of environmental protection and sustainable development. These barriers have a certain impact on the entry and development of CMM enterprises. On the one hand, the emergence of green barriers increases the cost and difficulty of importing CMM, which increases the business risk of CMM enterprises. On the other hand, if CMM enterprises cannot comply with local laws, regulations, and environmental requirements when entering the ASEAN market, they will encounter the risk of being expelled or fined. Therefore, by exploring the types, causes and effects of green barriers faced by China in exporting CMM to ASEAN countries, this article proposes China's countermeasures to deal with its green barriers and provides references for China to expand its CMM market in ASEAN.

The Current Situation of CMM Export to ASEAN Countries
According to data released by Chinese Customs, the export volume of Chinese medicinal materials in 2022 was 134,794 tons, an increase of 8,827 tons compared to the same period in 2021, representing a year-on-year growth of 7.2%. The export value of Chinese medicinal materials to ASEAN countries is also increasing. In 2022, the export value of Chinese medicinal materials was 989.159 million US dollars, an increase of 27.119 million US dollars compared to the same period in 2021, representing a year-on-year growth of 2.8%. The average export price of Chinese medicinal materials in 2022 was 7,300 US dollars per ton, while in 2021 it was 7,600 US dollars per ton. (For detailed information on China’s export of Chinese medicinal materials from 2020 to 2022, refer to Figure 1.)

In terms of export volume, in December 2022, the export volume of Chinese medicinal materials and Chinese proprietary medicine was 15,000 tons, which was flat compared to the same period last year. The cumulative export volume from January to December 2022 was 148,000 tons, a year-on-year increase of 7%. In terms of export value, the export value of Chinese medicinal materials and Chinese proprietary medicine in December 2022 was 130.1 million...
US dollars, a year-on-year decrease of 0.1%. The cumulative export value from January to December 2022 was 1.3666 billion US dollars, a year-on-year increase of 7.3%.

From January to August 2022, the total export value of Chinese patent medicine to ASEAN was 628 million US dollars, a year-on-year increase of 13.04%. Among the subcategories of Chinese patent medicine, Chinese medicinal extract had the highest proportion and were the most active, with an export value of 325 million US dollars, a year-on-year increase of 49.87%. Among the subcategories of Chinese patent medicine, it had the largest increase. Chinese medicinal materials and pieces came in second, with an export value of 231 million US dollars, a year-on-year decrease of 15.82%; Chinese proprietary medicine had an export value of 66 million US dollars, a year-on-year increase of 12.63%; and healthcare products had an export value of 5 million US dollars, a year-on-year increase of 1.17%. (For detailed information on the export of Chinese patent medicine to the ASEAN market from January to August 2022, refer to Table 1.)

<table>
<thead>
<tr>
<th>Category</th>
<th>Export Value (USD billions)</th>
<th>Year-on-Year Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chinese Patent Medicine</td>
<td>6.28</td>
<td>13.04</td>
</tr>
<tr>
<td>Chinese Medicinal Extract</td>
<td>3.25</td>
<td>49.87</td>
</tr>
<tr>
<td>Chinese Proprietary Medicine</td>
<td>0.66</td>
<td>12.63</td>
</tr>
<tr>
<td>Chinese Medicinal Materials and Pieces</td>
<td>2.31</td>
<td>-15.8</td>
</tr>
<tr>
<td>Healthcare Products</td>
<td>0.05</td>
<td>1.17</td>
</tr>
</tbody>
</table>

Table 1: Export Situation of CMM to ASEAN (January 2022 to August 2022)

**Policies and Trends of CMM in ASEAN Countries**

There are both commonalities and differences in CMM policies and situations among the ten ASEAN countries. In terms of commonalities. Firstly, CMM holds an important position and is widely used in all ASEAN countries. Secondly, CMM is the core of many ASEAN countries' traditional medicine and is widely used in the prevention and treatment of human diseases. Thirdly, all ASEAN countries have formulated relevant CMM regulations and policies to ensure the quality, safety, and effectiveness of CMM. Fourthly, ASEAN governments have attached increasing importance to CMM, with many countries establishing specialized CMM research institutions to strengthen CMM research and promotion.

In terms of differences. Firstly, there are significant differences in CMM legislation and management among ASEAN countries. For example, Indonesia and Thailand have more open CMM management, allowing CMM to engage in commercial activities, while Malaysia and Singapore pay more attention to CMM safety and quality management. Secondly, there are differences in CMM use and market supervision. For example, the CMM market in Thailand and Vietnam is relatively chaotic, lacking effective supervision and management, while Singapore and Malaysia place more emphasis on the qualifications and supervision of CMM practitioners. Thirdly, there are differences in CMM
research and innovation. China is at the forefront of CMM research and innovation, while CMM research in some ASEAN countries is relatively limited.

Singapore
Singapore actively participates in international cooperation and exchange in the field of traditional Chinese medicine (TCM) and CMM, but the Market for CMM in Singapore is relatively small and mainly concentrated in CMM clinics and pharmacies. Many CMM practitioners in Singapore are from overseas and provide CMM diagnosis and medicine sales services. Singapore also encourages the development of local CMM enterprises, but the industry remains relatively small due to limited market size. Singapore has established a series of regulations and regulatory measures for the quality and safety of CMM, and CMM products must be approved before they can be sold in the market, and CMM businesses must obtain relevant licenses to operate. In addition, Singapore has set up a CMM Review Committee to review the safety and efficacy of CMM to protect public health, and also participates in international cooperation on the development of international CMM standards and international CMM trade. At the same time, Singapore has some TCM colleges and research institutions that provide TCM education and training for local and overseas students. The Singapore college of TCM collaborates with several TCM colleges in China to carry out education and research projects. The Singapore government has also established a TCM and CMM development department to support the development of the local TCM and CMM industry.

Thailand
The market for CMM in Thailand is relatively extensive, and CMM are widespread. Many CMM stores and pharmacies sell CMM products, and some CMM manufacturers also produce and sell products in Thailand. The TCM and CMM industry is relatively well-developed in Thailand, and TCM and CMM practitioners are widely recognized and respected. The Thai government has implemented a series of regulatory measures for CMM, including quality standards for Chinese herbal medicines and formulations, registration and approval of CMM products, and licenses for CMM production enterprises. The Thai Ministry of Public Health has also established a department for CMM, which is responsible for monitoring the quality and safety of CMM and guiding its clinical application. Thailand actively participates in international cooperation and exchanges in the fields of CMM. The Thai government and CMM enterprises have participated in many international CMM exhibitions and exchange conferences, and Thailand has also conducted cooperation and exchanges with countries and regions of CMM origin such as China. Additionally, Thailand has several TCM colleges and research institutions that provide TCM education and training for local and overseas students. Furthermore, the Thai government and academic community support research and development in TCM and CMM, and organizations such as the Thai Traditional Medicine Association and the Thai Herbalist Association are also promoting the development of TCM and CMM in Thailand.

Vietnam
CMM is widely used in Vietnam, and the CMM market is continuously developing. With the continuous economic growth, the demand for CMM among the Vietnamese people is increasing. Many domestic and international enterprises have entered the Vietnamese CMM market, providing various CMM products and services to Vietnamese consumers. The Vietnamese government has been promoting the use of traditional medicine and CMM, considering CMM as an important therapeutic approach and providing related health care services. The Vietnamese government has also issued a series of regulations and policies to standardize the production, sales, and use of CMM. For example, the Vietnamese Ministry of Health issued regulations such as Quality Standards for CMM Materials and Quality Standards for CMM Preparations in 2012 to ensure the quality and safety of CMM.

Indonesia
CMM has a long history in Indonesia and is one of the traditional healing methods for the local people. The CMM market in Indonesia is very active, with many domestic and international enterprises entering the market. More and more CMM manufacturers and sellers are setting up production and sales bases in Indonesia to meet the growing market demand as more people choose CMM to maintain their health and treat diseases. The Indonesian government attaches great importance to CMM and has issued a number of regulations and policies to regulate the production, sales, and use of CMM. For example, the Indonesian Ministry of Health issued the Regulations on the Management of CMM Materials and CMM Preparations in 2006 to ensure the quality and safety of CMM. The Indonesian government has been promoting traditional medicine and CMM, believing that traditional medicine and CMM are an economic, sustainable, and environmentally friendly treatment method. Investment in healthcare has also increased to support and promote the use of CMM.

Malaysia
CMM has a long history in Indonesia and is one of the traditional healing methods for the local people. The CMM market in Indonesia is very active, with many domestic and international enterprises entering the market. More and more CMM manufacturers and sellers are setting up production and sales bases in Indonesia to meet the growing market demand as more people choose TCM and CMM to maintain their health and treat diseases. The Indonesian government attaches great importance to TCM and CMM and has issued a number of regulations and policies to regulate the production, sales, and use of CMM. For example, the Indonesian Ministry of Health issued the Regulations on the Management of CMM Herbal Medicines and CMM Preparations in 2006 to ensure the quality and safety of CMM.
**Philippines**

CMM is widely used in the Philippines for healthcare, wellness, and pharmaceutical purposes. Many Filipinos choose CMM to treat diseases or improve their health. The Philippine government supports the development and application of CMM and has implemented regulations and guidelines to ensure the quality and safety of CMM. The CMM industry in the Philippines is also constantly developing. The country has many CMM plantations and processing factories, and the quality of CMM products has gradually improved. The government has implemented measures to support the development of the CMM industry, such as providing financial and technical support to CMM enterprises. The Philippine government is also promoting the application of TCM and CMM and has provided relevant training and certification to improve the status and application rate of TCM and CMM in the healthcare industry.

**Cambodia**

The market for CMM is rapidly growing and expanding in Cambodia, where it has a long history and extensive tradition. Currently, CMM is widely used in various fields such as healthcare, wellness, and pharmaceuticals in Cambodia. The Cambodian government is highly supportive of CMM and has taken measures to regulate and promote its use and market development. However, the CMM market in Cambodia also faces some problems and challenges. Some businesses sell low-quality CMM without proper regulation and monitoring, posing potential health risks to consumers. In addition, due to insufficient knowledge and understanding of CMM, some consumers may misunderstand its effectiveness and function.

**Laos**

The CMM market in Laos is relatively small, and most of the Chinese herbal products need to be imported. The Laos government encourages domestic enterprises to improve their local production capacity of CMM through technology cooperation or technology transfer, in order to reduce their reliance on imported CMM and improve the quality and safety of CMM. The Laos government has implemented policies and measures to ensure the quality and safety of imported CMM. All CMM importers in Laos are required to obtain an import license issued by the Lao Food and Drug Administration. This license requires the submission of relevant product inspection and quality certification documents to ensure that the imported products comply with Laos' regulations and standards. Meanwhile, the Laos government has strengthened its supervision of imported CMM, including inspections and reviews of the quality, packaging, and labeling of imported products. The government also takes action against enterprises that violate import regulations, such as imposing penalties and closing down operations, to ensure the health and safety of consumers.

**Myanmar**

Myanmar is a country with a long history and a strong culture of traditional medicine, where CMM is widely used among local people. The government of Myanmar has a relatively open and supportive policy towards CMM, recognizing its therapeutic efficacy and value and placing it on an equal footing with western medicine within the national health care system. Moreover, the government encourages the development and promotion of TCM and CMM in the country, including supporting and promoting research, education, training, and clinical practice in these fields. Regarding the CMM market, the government of Myanmar mandates that all CMM must comply with the standards and regulations of its national drug regulatory agency and obtain relevant licenses before being sold on the market. Furthermore, the government regularly conducts quality checks on CMM in the market to ensure their safety and quality.

**Brunei**

Brunei is a small country with a relatively small market for CMM. However, the Brunei government is relatively supportive towards CMM. All CMM must comply with the standards and regulations of the National Drug Administration of Brunei and obtain relevant licenses before they can be sold on the market. The government also conducts regular quality checks on CMM in the market to ensure their safety and quality. The Brunei government actively encourages the development and promotion of TCM and CMM in the country, including support and encouragement for research, education, training, and clinical practice in TCM and CMM. The government also actively cooperates with other countries to introduce high-quality CMM and technologies to improve local CMM capacity and quality.

**Green Barriers" Encountered by CMM Export to ASEAN Countries**

TBTs and NTBs are two different types of trade barriers. They differ in their purposes and implementation methods. TBTs mainly restrict trade through measures such as technical standards, while NTBs restrict trade through a series of trade restriction measures.

**Technical Trade Barriers (TBTs)**

TBTs refer to trade barriers created by technical measures such as technical standards, regulations, certifications, and inspections. For example, a country may establish specific quality, safety, and environmental standards for a certain imported product, which are difficult to meet, thus limiting the import and sale of that product. TBTs are often related to produce health, safety, and environmental protection, and their purpose is to protect the interests of the domestic market and consumers.

TBTs can generally be classified into the following categories. Firstly, technical standard barriers, including mandatory technical standards and voluntary technical standards. Mandatory technical standards refer to mandatory technical
specifications for products, and products that do not meet the requirements cannot enter the market. Voluntary technical standards refer to technical specifications for products based on voluntary compliance, and only products that meet the requirements can be certified. Secondly, certification and inspection barriers refer to situations where products cannot enter the market if they do not meet the certification and inspection requirements established by the importing country. Certification and inspection barriers can be achieved through technical standards, product quality, and health and safety requirements. Thirdly, technical licensing barriers refer to situations where only products with a specific technical license can enter the market in certain technical fields. This type of barrier mainly targets high-tech and new technology products to protect domestic industry development. Fourthly, intellectual property barriers, including the protection of intellectual property such as patents, trademarks, and copyrights. If legal intellectual property protection is not obtained in the importing country, the product will not be able to enter the market. Intellectual property barriers are a means of protecting innovation and creativity and can also prevent the influx of counterfeit and substandard products. Finally, other technical trade barriers, including technology transfer requirements, technical difficulties, and technical thresholds. These barriers typically occur in specific areas to protect the interests of domestic enterprises and industries.

TBTs are a trade barrier for exporting enterprises, often leading to increased costs of exported products and affecting the profitability and market share of exporting enterprises. Moreover, TBTs may lead to unfair market access and affect the fairness and efficiency of international trade.

**Non-technical Trade Barriers (NTBs)**

NTBs refer to trade barriers other than tariffs, such as import restrictions, licenses, quotas, subsidies, anti-dumping measures, and other measures that do not involve technical standards. These measures are often implemented to restrict or prohibit the import or sale of specific goods for the purpose of protecting domestic businesses and industries.

NTBs can be classified into several categories depending on their implementation methods. First, import restrictions, which include quota restrictions, licenses, import bans, import tariffs and tax rate differences, and sanitary and phytosanitary standards, aim to limit the import of certain goods. Second, export restrictions, which include export licenses, export quota restrictions, export bans, and export subsidies, aim to limit the export of certain goods. Third, origin restrictions, which include requirements for imported goods to meet specific origin requirements, origin labeling, and unfair trade practices, aim to protect domestic products and services. Fourth, trade distorting measures, including anti-dumping measures, countervailing measures, and other measures, aim to suppress trade distortion behavior and prevent market imbalances. Fifth, trade finance measures, including payment restrictions and foreign exchange controls, aim to restrict the flow of cross-border transactions.

There are a variety of types of NTBs with different purposes and implementation methods, which pose challenges to the export of CMM to ASEAN countries. For exporting enterprises, they are a trade barrier that often increases the cost of exported products and affects the profitability and market share of exporting enterprises. In addition, NTBs may lead to unfair market access and affect the fairness and efficiency of international trade.

**Reasons for Green Barriers Encountered by China’s CMM Exports to ASEAN Countries**

There are multiple reasons why Chinese herbal medicine exports to ASEAN countries encounter green barriers, including food safety issues, market protectionism, product certification, and cultural differences.

**Food Safety Issues**

There are various reasons for the green barriers encountered by the export of CMM to ASEAN countries, including food safety issues, market protection, product certification, and cultural differences.

Food safety issues mainly include the following aspects. Firstly, pesticide residues: Chinese medicinal materials produced in China may contain pesticide residues that can be harmful to human health. Some ASEAN countries, such as Indonesia, the Philippines, and Thailand, require imported CMM to comply with their maximum residue limits. Secondly, heavy metal pollution: Some Chinese medicinal materials may be contaminated with heavy metals due to factors such as production environment and cultivation methods. Some ASEAN countries, such as Indonesia and Malaysia, require imported CMM to meet their heavy metal limit standards. Thirdly, authenticity identification: Some ASEAN countries conduct authenticity identification on imported CMM to ensure their quality and efficacy. For example, the Ministry of Health in Indonesia requires authenticity identification of imported CMM and requires pharmaceutical factories to indicate information such as the source and production date of medicinal materials on product packaging. Fourthly, differences in CMM usage: Differences in CMM usage methods and scope among some ASEAN countries may result in some CMM being restricted in the ASEAN market.

To avoid these food safety issues, Chinese enterprises can strengthen product quality management, establish a sound production environment and cultivation methods, use pollution-free production materials and technologies to ensure that CMM comply with relevant standards and requirements in ASEAN countries. At the same time, strengthening communication and understanding of local market demands and cultural backgrounds with ASEAN countries can improve the competitiveness of CMM in the ASEAN market.
Market Protection

ASEAN countries combine traditional and modern medicine in their healthcare systems and have certain protections and restrictions on imported CMM. For example, Indonesia and Malaysia require registration of CMM before they can be sold locally. Market protection is mainly manifested in several ways. Firstly, import licensing requirements: some ASEAN countries have import licensing systems for CMM, requiring import licenses before entering the market. Additionally, some ASEAN countries require importers to have local distribution or agency qualifications. Secondly, local production preferential policies: some ASEAN countries adopt preferential policies for locally manufactured products to protect their domestic pharmaceutical industry. For example, Indonesia encourages local pharmaceutical industry competitiveness by reducing tariffs. Thirdly, state-owned pharmaceutical enterprise monopolies: in some ASEAN countries, state-owned pharmaceutical enterprises dominate the local CMM market, making it difficult for imported products to enter the market. Fourthly, intellectual property protection: ASEAN countries have strengthened their protection of intellectual property, taking anti-counterfeiting measures against unauthorized CMM to protect the interests of their local pharmaceutical industry.

To address these market protection measures, Chinese enterprises can strengthen communication with ASEAN governments and relevant departments, understand local policies and standards, actively seek out partners, and increase their market share in ASEAN countries. At the same time, they can increase research and development investment, improve product quality and research and development levels, expand product lines, and enhance competitiveness to further develop the ASEAN market.

Product Certification

ASEAN countries generally require imported CMM to obtain relevant certifications and approvals. For example, Indonesia requires HALAL certification for CMM while Malaysia requires GMP certification. Product certifications are mainly manifested in the following aspects. Firstly, HALAL certification: ASEAN countries have a relatively high Muslim population, so there may be HALAL certification requirements for imported TCMMs to ensure that products comply with Islamic doctrine and food safety standards. For example, Indonesia and Malaysia require imported CMM to pass HALAL certification. Secondly, GMP certification: ASEAN countries certify CMM enterprises with GMP certification to ensure that the production process meets international standards. Some ASEAN countries, such as Malaysia, Thailand, and the Philippines, require imported CMM to comply with GMP certification standards. Thirdly, import food registration: ASEAN countries manage imported food through registration and approval, requiring importers to register and apply for approval locally to ensure that products comply with local regulations and standards. Some ASEAN countries, such as Indonesia and Thailand, implement registration management for imported CMM. Fourthly, specific herbal certifications: ASEAN countries have higher certification requirements for some specific herbs. For example, in Malaysia, imported Chinese herbal medicines such as Szechuan lovage rhizome, Lycium barbarum, and Gorgon fruit must be certified by the National Medical Products Administration.

To meet the product certification requirements of ASEAN countries, Chinese enterprises can actively obtain and understand the regulations and standards of ASEAN countries, strengthen product quality management and GMP certification, seek products and production processes that comply with HALAL certification standards, actively participate in local food registration management, and obtain certifications for specific herbs to meet the needs of the ASEAN market.

Cultural Differences

There are differences between ASEAN countries and China in terms of the usage methods, treatment scope, and herb utilization of CMM, which may result in restrictions on some Chinese herbal products in the ASEAN market. Cultural differences are mainly manifested in the following aspects. Firstly, concepts of medication: there are differences between China and ASEAN countries in terms of the composition of Chinese herbal medicines, medication methods, and the theory of pharmacological effects, which may affect the acceptance and market share of products in the ASEAN market. Secondly, packaging design: the cultural background and aesthetic concepts of China and ASEAN countries are different, so there may be differences in packaging design of CMM, which need to be targeted to local cultural characteristics to enhance the attractiveness and sales in the local market. Thirdly, language translation: due to the language difference, product instructions and labels need to be translated while considering local language habits and cultural differences to ensure the product's use and safety. Fourthly, regional culture: there are many ASEAN countries, and the differences in regional cultures among them are significant. Therefore, Chinese enterprises need to adopt differentiated strategies and marketing strategies based on local cultural and customary habits when entering the ASEAN market to increase market share and consumer loyalty.

To cope with cultural differences, Chinese enterprises can adopt the following strategies: strengthen research and analysis of the ASEAN market, understand local culture and market demand, design products and marketing strategies that are targeted accordingly; strengthen language translation and localization, ensure that product labels and instructions conform to local cultural and language habits; actively leverage local distributors and agents to understand local market conditions and cultural characteristics to better adapt to local market demand.
Legal Countermeasures for Green Barriers Encountered by China's CMM Exports to ASEAN Countries

Legal Countermeasures for Responding to TBTs

Firstly, gain a thorough understanding of technical standards: the Chinese government should delve into the technical standards of other countries and strive to participate in the process of international technical standard development to ensure that Chinese technical standards comply with international standards.

Secondly, strengthen the protection of intellectual property rights: the Chinese government should intensify efforts to protect intellectual property rights, prevent infringement of intellectual property rights, and safeguard the technology and intellectual property of domestic enterprises.

Thirdly, strengthen cooperation with ASEAN countries: the Chinese government should collaborate closely with ASEAN countries to promote technology exchange and cooperation, and facilitate technological innovation and development.

Fourthly, adopt countermeasures: if ASEAN countries implement technical trade barriers, the Chinese government may adopt countermeasures such as lodging a complaint with the WTO and implementing retaliatory measures.

Fifthly, enhance domestic technological research and development: the Chinese government should boost domestic technological research and development, improve the technological level and innovation capability of enterprises, and fundamentally enhance the competitiveness of Chinese products in the international market.

Sixthly, promote international cooperation for mutual benefit: the Chinese government should actively advocate and promote the concept of win-win international cooperation, strengthen mutually beneficial cooperation with other countries, and facilitate the development of international technology trade.

Legal Countermeasures for the Chinese Enterprises to Address TBT

Firstly, strengthen intellectual property protection: Enterprises should strengthen the protection of intellectual property, including registering patents, trademarks, and copyrights, to prevent infringement of their own intellectual property.

Secondly, improve the technological level: Enterprises should strengthen their technological research and development and innovation capabilities, improve their technological level and product quality, and thus enhance their market competitiveness.

Thirdly, seek international certification: Enterprises can seek international certification, such as ISO certification, to increase the recognition of their products in the international market.

Fourthly, strengthen international cooperation: Enterprises should strengthen their technical cooperation and exchanges with enterprises in ASEAN countries, jointly promote technological innovation and development, and enhance their market competitiveness.

Fifthly, utilize WTO rules: Enterprises can utilize WTO rules, such as filing complaints through WTO mechanisms against ASEAN countries, to seek international justice and solutions.

Sixthly, seek government support: Enterprises can seek government support and assistance, such as providing technical and financial support, to help them deal with technical trade barriers.

Legal Countermeasures for Responding to NTBs

Legal Countermeasures for the Chinese Government to Address NTBs

Firstly, actively seek negotiations: The Chinese government should actively seek negotiations with other countries to eliminate non-technical trade barriers.

Secondly, develop anti-dumping measures: If other countries implement non-technical trade barriers, the Chinese government can take anti-dumping measures, such as filing complaints with the WTO and conducting anti-dumping investigations.

Thirdly, promote the establishment of free trade zones: The Chinese government can strengthen cooperation with ASEAN countries in free trade zones, promote bilateral and multilateral trade development through open trade and lowering trade barriers.

Fourthly, strengthen domestic industrial restructuring: The Chinese government should strengthen domestic industrial restructuring, improve the competitiveness and quality of domestic industries, and fundamentally reduce the impact of non-technical trade barriers on exports.

Fifthly, strengthen intellectual property protection: The Chinese government should strengthen the protection of intellectual property rights to improve the innovation and technological level of domestic enterprises, thereby improving the quality and competitiveness of their products and services.

Sixthly, improve the quality of CMM: by improving the domestic environment and enhancing the quality of labor, China should improve the quality of its products and increase their competitiveness in the international market.

Legal Countermeasures for the Chinese Enterprises to Address NTBs

Firstly, understanding relevant laws and regulations: Enterprises should understand the relevant laws and regulations of ASEAN countries in order to be aware of local trade barriers. At the same time, enterprises should also understand international trade rules in order to better respond to non-tariff trade barriers.

Secondly, strengthening compliance management: Enterprises should strengthen internal compliance management to ensure that their products comply with relevant laws and regulations in ASEAN countries, and comply with
interational trade rules. Enterprises can establish compliance management systems and strengthen training and supervision of employees to ensure compliance with relevant regulations. Thirdly, seeking legal support: When encountering non-tariff trade barriers, enterprises can seek legal support. They can hire local lawyers or consult professional legal service organizations in order to better deal with non-tariff trade barriers from a legal perspective. Fourthly, actively participating in trade dispute resolution mechanisms: Enterprises can actively participate in trade dispute resolution mechanisms, such as the ASEAN Free Trade Area. Through these mechanisms, enterprises can express their opinions and suggestions on non-tariff trade barriers and communicate with local governments and other enterprises. Fifthly, strengthening communication and cooperation: Enterprises should actively strengthen communication and cooperation with ASEAN authorities and other enterprises in order to better respond to non-tariff trade barriers. Enterprises can participate in local trade promotion activities and industry associations, and establish good cooperative relationships with local governments and enterprises.

Results and Discussion
The advancement of B&R has brought historic opportunities for the development of CMM in ASEAN countries. The prospects for CMM in the ASEAN market are increasingly broad, but at the same time, it also faces the challenge of green barriers. The Chinese government and enterprises should seize the opportunity, actively respond to green barriers, strengthen cooperation, and promote the healthy and sustainable development of CMM in the ASEAN market.

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