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China-ASEAN Economic Cooperation in Green Development: Opportunities and Challenges

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Abstract: China and ASEAN economic cooperation is moving towards green development, with multiple collaborations underway in the construction of new energy infrastructure such as photovoltaic and hydropower. Meanwhile, both sides have introduced various policy measures to promote cooperation in the new energy vehicle industry and the development of carbon assets. Analysis of the characteristics of green economic development in ASEAN countries reveals that Singapore, Thailand, and Malaysia have become key partners in building a green cooperation framework between China and ASEAN due to their advantages in economy, institutions, and resources. Additionally, given the distinct characteristics of green economic cooperation between ASEAN countries and China, it is necessary to advance cooperation through complementary industrial chain resources, deepening the concept of green development, and strengthening policy support.

Keywords: China-ASEAN; Green development; New energy cooperation.

1. Introduction

The economic cooperation between China and ASEAN is deeply integrated into the concept of green development, with the core aim of achieving synergistic coexistence between economic growth and environmental protection. Rapid economic development is often accompanied by high-intensity energy consumption. To resolve this contradiction, improve energy efficiency, and reduce carbon emissions, China and ASEAN countries are actively working together to establish a regional green cooperation model, where new energy development and carbon asset management have become key issues. As an important pole of global economic growth, ASEAN has seen significant economic growth in recent years. However, most economies in the region are developing countries, and their traditional development models often come at the expense of environmental welfare, contradicting the current global advocacy for a green economy. Against this backdrop, China-ASEAN economic and trade cooperation is increasingly focusing on achieving a win-win situation between economic and environmental benefits, with both sides conducting numerous practical explorations toward this goal. According to Porter's hypothesis, scientifically sound environmental regulations can drive green innovation, thereby generating an innovation compensation effect. [1] Based on this, this paper takes the economic and trade cooperation between China and ASEAN in recent years as a research starting point, systematically reviews the green innovation practices of ASEAN countries under the cooperation framework, and uses case analysis to clearly present the opportunities and challenges in the green transition process of China-ASEAN economic and trade cooperation.

2. Bilateral and Multilateral Policy Support

2.1. China's "Dual Carbon" Goals and the "2026-2030 ASEAN Energy Cooperation Action Plan"

Since the Industrial Revolution, greenhouse gas emissions have triggered global climate change, with extreme weather severely impacting human life and property safety as well as economic and social development. According to the "Global Climate Status Report" released by the World Meteorological Organization (WMO) in 2025,2024 has become the hottest year on record globally, [2] with the global average temperature rising by 1.55°C compared to pre-industrial levels. Addressing climate change has become a common challenge for all humanity, and a green and low-carbon transition is imperative. To reduce greenhouse gas emissions, countries around the world have reached a consensus on carbon reduction through global agreements, and China has also joined in, proposing the goals of achieving carbon peak by 2030 and carbon neutrality by 2060 (hereinafter referred to as the "dual carbon" goals).

Climate warming will simultaneously exacerbate risks in energy infrastructure, thereby forcing regions to accelerate their transition to low-carbon systems. To deepen energy cooperation between ASEAN and its member states, the ASEAN Energy Centre (ACE) released the "ASEAN Energy Cooperation Action Plan (APAEC) 2026-2030," serving as a core strategic blueprint for the region's energy sector. Building on the achievements of previous cooperation cycles, the plan focuses on the long-term theme of "ASEAN's Energy Future 2045: A Secure, Resilient, and Interconnected Low-Carbon Energy Vision." It sets clear quantitative targets, including a 45% share of renewable energy installed capacity and a 30% share of renewable energy consumption by 2030, effectively aligning with China's "dual carbon" goals and providing a clear direction for bilateral cooperation.

2.2. Evolution of Green Clauses in China-ASEAN Economic Cooperation

China-ASEAN economic cooperation is advancing in the direction of green development. Since the beginning of the 21st century, the number of RTAs signed by ASEAN countries has risen rapidly. By the end of 2022,62 RTAs had come into effect, forming a complex network of trade agreements. Among all RTAs, 55 contain at least one environmental clause, accounting for as high as 88.71%, indicating that environmental protection has become an important issue in ASEAN trade agreement negotiations. Meanwhile, the regional economic development between China and ASEAN has shown a trend of gradual deepening. From 2000 to 2020, China's total public investment in renewable energy projects in ASEAN countries accounted for 60% of the foreign public investment received by ASEAN during the same period. China has been ASEAN's largest trading partner for four consecutive years.

2.3. The practical driving role of the Belt and Road Green Development International Alliance

Under the Belt and Road Initiative, China and ASEAN countries have achieved substantial progress in cooperation in areas such as financial trade, international production capacity, and environmental protection. [3] Furthermore, under the Belt and Road Initiative, China and ASEAN are deeply integrating the concept of green development into regional cooperation. The two sides have not only signed multiple strategic documents at the policy level but also made substantial progress in specific areas such as energy transition, digital ecosystems, and low-carbon investment. The deepening of the Belt and Road Initiative has not only significantly expanded the investment scale of Chinese enterprises in countries along the route but also vigorously promoted comprehensive and pragmatic cooperation between China and ASEAN countries such as Indonesia, Laos, Malaysia, and Vietnam in five major areas: policy communication, infrastructure connectivity, trade facilitation, financial integration, and people-to-people bonds, injecting sustained momentum into bilateral economic and trade exchanges and cultural exchanges.

3. Seizing the Opportunity-An Analysis of the Opportunities in China-ASEAN Economic Cooperation

3.1. Carbon Assets

Green development in economic cooperation not only lies in promoting carbon reduction through the construction of new energy infrastructure, but also in whether enterprises can effectively utilize carbon assets for investment to promote their sustainable development. In previous cooperation, China-ASEAN has formulated and implemented multiple measures to promote the implementation of green development concepts. Since 2018, ASEAN has successively formulated policies such as the "Green Bond Standards", "Sustainable Capital Markets Roadmap", and "ASEAN Sustainable Banking Principles", defining the principles of information disclosure and access for green assets, laying the institutional foundation for regional connectivity in the carbon market. The sustainable development of enterprises cannot be separated from the guidance and support of macro policies. To promote policy coordination and standard alignment between the two sides, China has also jointly launched the "Belt and Road Green Development Partnership Initiative" with multiple ASEAN countries and led the implementation of the "China-ASEAN Environmental Cooperation Strategy and Action Framework (2021-2025)". These measures demonstrate the determination of both sides in advancing energy conservation, emission reduction, and market-based emission reduction.

In a narrow sense, carbon assets refer to legally obtained carbon emission entitlements with economic value under the carbon emission trading system. In a broader sense, Liyan and Gubo (2015) [4] categorized all carbon-reduction production and commercial activities into four types of carbon assets: carbon fixed assets (low-carbon equipment), carbon intangible assets (low-carbon technology), carbon biological assets (vegetation), and tradable carbon financial assets (carbon quotas and financial products). The role of carbon fixed assets and intangible assets in promoting corporate development is most evident in the new energy vehicle sector. Powered by electricity, new energy vehicles embody green economy characteristics. They not only significantly support reducing transportation-related pollutant emissions, achieving carbon peak, and decreasing oil dependence, but also make crucial contributions to global energy restructuring and climate change mitigation.

The cooperation between China and ASEAN in the new energy vehicle industry not only brings mutual benefits to both sides but also contributes to global carbon reduction. According to data from the China Association of Automobile Manufacturers, the penetration rate of new energy vehicles in China has reached 27.6%, marking the entry of the Chinese new energy vehicle market into a stage of explosive growth. In 2022, China's auto exports to ASEAN increased by 48% year-on-year, accounting for 26% of ASEAN's auto imports. Among them, new energy vehicles have become a new growth point in China-ASEAN auto trade. From January to October 2022, China's new energy vehicle exports to ASEAN reached 128,000 units, a year-on-year increase of 194.8%, with the export value reaching $540 million, a growth of 229.6%.

Among ASEAN countries, Thailand, Malaysia, and Indonesia have significant potential for new energy vehicle development. Singapore, despite its strong economic power, has implemented measures to restrict private cars and actively promote public transportation due to land scarcity and environmental pollution. Less economically developed countries like Cambodia, Laos, and Myanmar lack the economic capacity to promote new energy vehicles, with their national policies leaning more towards other livelihood sectors. The Philippines and Vietnam, while possessing the economic strength to promote new energy vehicles, lack corresponding fiscal policies. Finally, Brunei, primarily dependent on fossil resources, is also not inclined to promote new energy vehicles. As the automotive manufacturing hub of Southeast Asia [5] and the world's tenth-largest automobile producer, Thailand has attracted investments from Chinese new energy vehicle manufacturers to set up factories. The market share of Chinese car brands in Thailand surged from about 5% in 2022 to about 11% in 2023, particularly in the new energy vehicle market, where Chinese companies hold a market share as high as 80%. [6] In terms of infrastructure construction, the Thai government has proposed an investment incentive plan to encourage joint expansion of

new energy vehicle charging stations by state-owned enterprises, government departments, and private companies, and to lead investments in new industrial parks, attracting numerous new energy vehicle enterprises such as BYD and Leapmotor. Thailand also plans to invest 200 billion baht to expand fast-charging interfaces for new energy vehicles, building 137 charging stations covering 75 provinces. In April 2022, the Thai Investment Promotion Board proposed an investment incentive policy for charging stations, offering charging service providers a 3-5 year tax exemption period.

At the policy and institutional level, Thailand's new energy vehicle industry has the earliest and most comprehensive policies. The government has set specific policy targets for both the scale of the industry and the market, i.e., supply and demand, and established four sub-committees to refine these targets. It encourages state-owned enterprises and public transportation departments to take the lead in promoting the application of new energy vehicles. The Thai government has proposed the "30·30" target, aiming for new energy vehicles to account for 30% of total vehicle production by 2030. To achieve this goal, the Thai government has implemented multiple measures, including reducing import tariffs on vehicles and components, providing purchase subsidies, and exempting corporate income tax, [7] to attract Chinese new energy vehicle enterprises to invest in factories and local production. Cooperation between Chinese enterprises and ASEAN countries in the new energy vehicle sector mainly focuses on technical support and industrial chain integration. Automakers such as BYD, SAIC, and Great Wall have established local production bases in Thailand and Malaysia, deeply participating in the development of the new energy vehicle industries in these countries through local procurement of components and local sales. CATL has collaborated with Indonesian enterprises to promote the localization of power battery production, reducing transportation costs and improving supply chain efficiency. Cooperation between China and Malaysia in the new energy vehicle sector also manifests in technology sharing and talent cultivation. The establishment of the China-ASEAN New Energy Vehicle Industry Education and Training Integration Community, which brings together 89 member units including schools, research institutions, and upstream and downstream enterprises, aims to promote technological collaboration and international talent development.

From the above analysis, it can be seen that China and ASEAN have established a green cooperation framework of policy demonstration and carbon asset trade exchange to further promote regional green economic development through market-oriented mechanisms such as carbon assets. Within this framework, the mature carbon quota accounting and MRV (Monitoring-Reporting-Verifying) system of China will be packaged and exported, facilitating the early entry of emission reductions generated by new energy vehicles, power batteries, and renewable energy projects into the regionally interconnected carbon asset pool. This provides Chinese enterprises with green cash flow that can be mortgaged and repurchased, transforming short-term trade dividends into long-term regional green capital circulation.

3.2. Construction of New Energy Infrastructure

With the rapid economic development of ASEAN, the demand for new energy has been steadily increasing year by year, indicating significant room for growth. [8] ASEAN countries have all provided their own answers to promoting carbon reduction through new energy construction. The economic cooperation between China and ASEAN also reflects the concept of green development in many aspects, with collaborative projects continuously contributing to carbon reduction.

In terms of infrastructure development, China and ASEAN have leveraged China's technological and production capacity advantages, as well as ASEAN's energy demands and resource endowments, to establish an efficient and collaborative cooperation model. This has not only promoted the energy structure transformation of ASEAN countries but also achieved a win-win situation in ecological and social benefits, demonstrating the profound potential and positive development momentum of China-ASEAN new energy cooperation. The table below systematically outlines representative cooperation projects between China and multiple ASEAN countries in the field of new energy infrastructure, covering diverse types such as photovoltaic power stations and hydropower stations.

Table 1. China and ASEAN countries (partial) new energy infrastructure construction projects

Cooperation Parties	infrastructure project	Key contributions
China-Singapore	Shengke Tengge Floating Solar Power Plant	1. The electricity generated annually could power five water treatment plants in Singapore; 2. Reduce carbon emissions by approximately 32,000 tonnes per year.
China-Thailand	Kongjingfu Ubon Ratchathani Floating Photovoltaic Power Station	1. As the first demonstration project by Thailand Electricity Authority integrating floating solar panels, clean hydropower, high-efficiency energy storage, and a smart energy management system; 2. Promote the diversification and intelligent development of Thailand's new energy projects.
China-Indonesia	Karawan 100 MW PV Project	1. Provide over 150 million KWH of clean electricity per year, meeting the annual electricity needs of approximately 112,000 households; 2. Reduce carbon dioxide emissions by approximately 114,700 tons per year; 3. Effectively reduce local electricity costs.
China-Cambodia	The Dam of the Lower Re Sai Hydropower Station (BOT Model)	1. The installed capacity is 338,000 kilowatts; 2. Undertake important energy supply tasks during major sports events and Cambodian New Year celebrations in Cambodia.
China-Laos	Interconnected Clean Energy Base Project in Northern Laos (spanning three provinces)	1. Support the energy transition in northern Laos; 2. Promote the upgrading of local new energy industry chain.

In terms of investment and development in the new energy sector, from 2000 to 2020, China's total public investment in renewable energy projects in ASEAN countries accounted for 60% of the foreign public investment received by ASEAN during the same period, indicating that China has played a significant role in promoting energy transition in ASEAN countries. Meanwhile, China and ASEAN countries have also strengthened cooperation in the field of hydrogen energy, such as Mingyang Hydrogen and Suhydrogen Hydrogen production companies collaborating with Thailand, Vietnam, and other countries to accelerate the development of local hydrogen energy industries. China-ASEAN has also actively promoted grid interconnection. Since the 110 kV China Hekou-Vietnam Lao Cai transmission line was put into operation in 2004, China Southern Power Grid Company has interconnected with the power grids of Vietnam, Laos, and Myanmar through multiple 110 kV and above lines, with cumulative traded electricity exceeding 65.5 billion kWh, of which clean energy accounted for over 90%, strongly supporting coordinated economic development and civilian electricity supply in the Lancang-Mekong region.

From the above analysis, it can be seen that China-ASEAN bilateral cooperation has made active explorations in areas such as new energy infrastructure construction, the development of a green and innovative talent system, and new energy investment. Under the consensus of global climate governance, green economic cooperation between China and ASEAN countries not only directly concerns the interests of China and ASEAN countries but may also share the achievements of carbon reduction globally through a ripple effect. Therefore, international capital will show more inclination towards green projects, which will also help encourage the green development of China-ASEAN economic cooperation and form a virtuous cycle of green cooperation and capital flow. However, the flow of capital is both an opportunity and a challenge for the low-carbon development of China-ASEAN economic cooperation. On one hand, the flow of capital can promote the quality and quantity of the economy, drive industrial structure adjustment and upgrading, and support the realization of the "dual carbon" goals. On the other hand, it may also fuel industry bubbles, trigger inflation, disrupt market order, hinder the steady development of manufacturing, and endanger economic security [9].

4. Characteristics and Risks of Green Transformation in China-ASEAN Economic Cooperation

4.1. Characteristics of Green Development in ASEAN Countries

Through the construction of infrastructure and institutional arrangements, China and ASEAN have initially explored a green cooperation model in economic cooperation, which relies on replacing some high-pollution power generation methods such as fossil fuels with clean energy sources like photovoltaic and clean hydropower, and uses low-carbon products such as new energy vehicles as the driving force for economic growth. However, due to differences in economic strength and resource endowment, ASEAN countries also exhibit distinct characteristics in resources and development. Specifically, the new energy vehicle industries in Thailand, Indonesia, and Malaysia have developed well, while Singapore's carbon market is more mature. China's photovoltaic technology has a market share of over 75% in Vietnam but less than 30% in the Philippines. The differences in development models within ASEAN also bring challenges such as policy coordination difficulties, insufficient industrial chain linkage, and uneven promotion of green technologies.

Overall, ASEAN countries possess abundant natural resources such as solar energy, geothermal energy, and biodiversity, which provide a foundation for the development of a green economy. ASEAN holds one-quarter of the world's geothermal reserves and has a solar energy development potential exceeding 1TW, offering large-scale application scenarios for China's green technology exports. This also indicates that ASEAN countries have certain growth potential in the green economy, although their development levels vary. The total green GDP of ASEAN countries shows an increasing trend, with Indonesia leading in green GDP, Thailand ranking second, Malaysia, the Philippines, and Singapore remaining relatively stable, followed by Vietnam, and Cambodia ranking last.

Carbon sink assets such as forests and wetlands, which possess carbon absorption and fixation capabilities, are now gaining increasing recognition in valuation. This trend presents promising opportunities for carbon sink business development in ASEAN countries with advanced forestry sectors. Malaysia, Laos, Brunei, and Indonesia boast abundant forest resources with significant carbon sequestration potential. Malaysia, in particular, stands out with 55.3% forest coverage and tropical rainforest reserves. The nation has also implemented mandatory ESG disclosure requirements for enterprises and possesses mature forest management expertise, making it an ideal candidate for carbon sink project development.

To better understand the differences among ASEAN countries, they can be categorized into three tiers based on their potential for green economic development. The first tier includes Singapore, Malaysia, Thailand, and Indonesia; the second tier comprises the Philippines, Vietnam, and Brunei; while the third tier consists of Cambodia, Laos, and Myanmar. Among the first-tier countries, Singapore stands out as the only developed nation in ASEAN, boasting a mature financial market and sound institutional frameworks. Malaysia, Thailand, and Indonesia, on the other hand, are rich in natural resources and human capital, offering significant potential for development. In terms of carbon market development, Singapore and Malaysia have implemented mandatory ESG disclosure systems for businesses. Brunei, despite its high per capita GDP, is classified in the second tier due to weaker resource endowments and greater pressure in green transition. Vietnam is currently advancing the establishment of a carbon market framework. The third-tier countries—Cambodia, Laos, and Myanmar—remain in the stage of building environmental standards systems due to their less developed economies.

Table 2. Comparison of economic conditions of ASEAN countries in 2023

ASEAN countries	Income Category	population	GDP (One billion)
Singapore	high income	5,917,648	501.43
Brunei	high income	458,949	15.13
Malaysia	Middle to high income	35,126,298	399.71
Thailand	Middle to high income	71,702,435	514.97
Indonesia	Middle to high income	281,190,067	13700.00
the Philippines	Low to middle income	114,891,199	437.15
Vietnam	Low to middle income	100,352,192	429.72
Cambodia	Low to middle income	17,423,880	42.34
Laos	Low to middle income	7,664,993	15.84
Burma	Low to middle income	54,133,798	66.76

4.2. Risk and Challenge in Green Economic Cooperation

As an important force in regional economic integration, ASEAN has established a relatively sound coordination mechanism. However, the significant differences in economic development stages and institutional maturity among member states, as well as the diversity of natural resource endowments, have created multiple structural challenges for China-ASEAN green economic cooperation. These risks exist not only in the core aspects of cooperation but are also constrained by both internal and external environments.

4.2.1. The problem of Compatibility of The Core Links of Cooperation

In the three key dimensions of technology, institutions, and practice, the differences between China and ASEAN directly lead to reduced cooperation efficiency and increased risks. [10] At the technological level, the mature solutions developed by China in large-scale energy projects are significantly mismatched with the widespread demand for distributed power grids in ASEAN island countries—the former emphasizes the stability of centralized energy supply, while the latter requires smaller, modular technologies that can flexibly adapt to the geographical characteristics of islands. This supply-demand mismatch increases the cost of technology implementation.

At the institutional level, the fragmentation of carbon pricing mechanisms has led to market disorder. China's carbon trading system has entered a phase of routine operation, while the development of carbon pricing mechanisms in ASEAN countries is uneven. Although Singapore and Malaysia have launched relevant pilot programs, most countries are still in the policy exploration stage, and some have not even established clear carbon pricing standards. This has resulted in significant price differentials in carbon within the region, which may not only trigger carbon asset arbitrage but also hinder the coordinated development of cross-regional green industrial chains.

At the implementation level, disparities in environmental assessment standards directly hinder project progress. Given varying legislative timelines and ecological priorities across ASEAN nations, Chinese-funded green energy projects frequently face delays due to divergent interpretations of EIA criteria. A notable case involved a photovoltaic power plant project where the host country abruptly raised ecological impact assessment thresholds, resulting in an 8-month delay beyond the original schedule. This not only increased corporate capital costs but also undermined confidence in international cooperation.

4.2.2. Deep Blockage of Industrial Chain Coordination and Resource Complementarity

The lack of synergy in transnational industrial chains is a major bottleneck constraining the deepening of green cooperation. Taking the new energy vehicle sector as an example, China's exports to ASEAN are still dominated by fuel-powered vehicles, with new energy vehicles accounting for less than 5% of exports, far below the 32% exported to Europe. This phenomenon stems from two factors: on one hand, some ASEAN countries like Brunei and Indonesia have a high dependence on the oil and gas industry, with deeply ingrained habits of using fuel-powered vehicles, and the market demand for new energy vehicles has not been fully activated; on the other hand, countries such as Thailand and Malaysia have prioritized new energy vehicles as a key industry, forming potential competitive relationships with China in the consumer market. This "competition over collaboration" pattern contradicts the overall goal of regional green economic development.

The release of complementary resource potential also faces coordination challenges. ASEAN's green economy investments are concentrated in four major sectors, with infrastructure construction accounting for over 60%, while food and agriculture, energy efficiency, and renewable energy each account for 13.3%. In contrast, China's green economy layout sees energy efficiency and renewable energy investments combined at 45%, forming a stark complementarity with ASEAN. However, this complementarity has yet to be effectively translated into cooperative momentum—China's advantages in renewable energy technology lack precise alignment with ASEAN's abundant solar and wind resources, with some cooperation still remaining at the level of traditional infrastructure, and the depth of green industry collaboration remains insufficient.

4.2.3. Double Pressure of Development Positioning and External Environment

As the main cooperative entities primarily from developing countries, China and ASEAN (excluding Singapore) both face the balancing challenge of "economic growth and low-carbon transition". Traditional industries remain the core pillar of economic growth for most member states, while the high carbon emissions generated during industrial production present a phased contradiction between "development" and "green". This reality has sparked a central controversy in cooperation: how to balance the intensity of carbon reduction measures when per capita GDP has not yet reached high-income levels? Should low-carbon development be prioritized through industrial upgrading, or should carbon emissions be gradually reduced while ensuring economic growth? This uncertainty in development positioning has led to difficulties in reaching consensus on some green cooperation policies.

The external environment's pressure has further intensified cooperation risks. To maintain their dominant position in the global green economy, European and American countries have adopted multiple measures to restrict China-ASEAN green technology cooperation. The EU Carbon Border Adjustment Mechanism (CBAM) imposes additional tariffs

on high-carbon products such as steel and cement, directly increasing the export costs of China and ASEAN-related industries. Some Western countries, under the pretext of "environmental standards," force ASEAN member states to take sides in green industry trade, attempting to fragment the green supply chain between China and ASEAN. These external interventions not only hinder the advancement of bilateral green finance cooperation but also pose a threat to the regional green economic integration process.

In summary, the risks and challenges of China-ASEAN green economic cooperation exhibit "multi-level and compound" characteristics. It is necessary to improve coordination mechanisms to address internal compatibility issues, while also responding to external pressures while maintaining the status of developing countries, thereby building a more stable development environment for regional green economic cooperation.

5. Exploration of Green Development Path in China-ASEAN Economic Cooperation

5.1. Complementarity of Resources in Industrial Chain Cooperation

China-ASEAN economic cooperation features multifaceted complementarity. Firstly, ASEAN possesses abundant natural resources, with most ASEAN countries having high forest coverage and rich renewable energy resources such as solar, wind, hydro, and geothermal energy. Most ASEAN regions are near the equator, offering abundant solar energy resources, particularly in high-altitude and coastal areas of countries like Thailand, Vietnam, and the Philippines, where solar energy development holds tremendous potential. Myanmar, Vietnam, and Laos are rich in hydroelectric resources, with significant potential for hydropower development. Indonesia and Malaysia are among the countries with the richest geothermal energy reserves globally, accounting for a quarter of the world's geothermal resources. China's full industrial chain advantages in photovoltaic and energy storage complement ASEAN's abundant renewable energy resources well. [11] Therefore, it is essential to expand cooperation between the two countries in the green industrial chain and fully leverage the complementary advantages of resources.

5.2. Deepening the Concept of Green Development and Promoting Development Through Green Development

The deepening cooperation between China and ASEAN is not only a counteraction to unilateralism and hegemonism in the current international situation, but also a powerful practice of implementing the Belt and Road Initiative. China and most ASEAN countries, as developing nations, should demonstrate the concept of green development in economic cooperation, which should prioritize economic growth and be based on sustainable development as the foundation throughout the entire process. Therefore, the focus of so-called green development should not be on enhancing green image, but on abandoning face-saving projects and establishing a green development concept that promotes economic growth through green industrial chain cooperation, green technology cooperation, and other means.

5.3. Enriching Policy Incentives and Enhancing Publicity for Carbon Neutrality Initiatives

The green development between China and ASEAN cannot be achieved without the support of relevant policies. Policy support not only provides a clear path for the development of green industries but also enhances the confidence of enterprises in participating in the green economy. Initiatives such as the Belt and Road, the signing of RCEP, and Guangxi's opening of its financial gateway to ASEAN have created historic opportunities for green finance cooperation between China and ASEAN. Policy support has also driven the innovation of green financial products, such as green bonds and green funds, providing more financing channels for the green economy.

References

[1] M.E. Porter. America's green strategy Sci. Am., 264 (4) (1991), p.168

[2] Wen, H. Dong. Global warming accelerates: 2024 becomes the hottest year again [J]. Ecological Economics, 2025, 41(02):1-4.

[3] Liang Jian. China-ASEAN forestry exchange and cooperation mechanism from the perspective of the community with a shared future for mankind [J]. Western Forestry Science, 2020, 49(1):162-166.

[4] Liyan, H, & Gubo, H. (2015). Attributes and pricing of technology's carbon asset. Statistical Research, 32(2), 0–15 (in Chinese).

[5] Editorial Department. China's plan empowers ASEAN automotive industry transformation [J]. Automobile and Parts, 2025, (11):56-57.

[6] [1] Qiu Qixuan, Duan Xuying, Wang Yutong. China and ASEAN New Energy Vehicle Cooperation Research: Taking BYD as an Example [J]. Logistics Technology, 2025,48(12): 106-110. DOI:10.13714/j.cnki.1002-3100.2025.12.021.

[7] Cui Wei Yi. Chinese Enterprises Help Thailand Green Travel [N]. Economic Daily, 2024-11-01(004). DOI:10.28425/n.cnki.njjrb.2024.007653.

[8] Chen Jiping. Leveraging the Integrated Full Industrial Chain to Facilitate the Green Transition of ASEAN's Energy and Power Sector: A Case Study of the Philippines [J]. International Engineering and Labor, 2023(11):50-52.

[9] Xiao Jianzhong, Xiao Yutong, Shi Wenyu. The Promoting Effect of the Belt and Road Initiative on Energy Investment in Countries Along the Belt and Road: A Three-Dimensional Difference-in-Differences Test Based on China's Outward Investment Data [J]. World Economic Research, 2021, (07):107-119+137. DOI:10.13516/j.cnki.wes.2021.07.008.

[10] Chen Jiangying, Ge Shunqi. China's new energy vehicles internationalization: characteristics, challenges and countermeasures [J/OL]. International Theory, 1-35 [2025-06-28]. http://kns.cnki.net/kcms/detail/11.3799.f.20250625.1345.002.html.

[11] Wu Chongbo, Wu Yuhe. Policy measures and paths for the development of the new energy vehicle industry in ASEAN countries [J]. Southeast Asian Studies, 2024, (03):1-22+153-154. DOI:10.19561/j.cnki.sas.2024.03.001.

[12] Li Yuanying. Resilience in ASEAN and Climate Governance in Southeast Asia [J]. Southeast Asian Studies, 2025, (03):27-51+155. DOI:10.19561/j.cnki.sas.2025.03.027.