

A Study on the Coordination of the Blue Industrial Chain Between Hainan and ASEAN under the Background of Whole-Island Sealing

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Abstract: The operation of the whole-island seal gives Hainan Free Trade Port system reform dividends, which creates a major opportunity for deepening the coordination of the Hainan-ASEAN blue industrial chain. Based on the marine resource endowment and existing cooperation practices between Hainan and ASEAN, this paper analyzes the realistic basis and value orientation of blue industry collaboration, and puts forward the development direction of cross-border industrial chain collaboration around the four key areas of marine fishery, marine cultural tourism, marine emerging industry, and blue ecological industry. From the four aspects of institutional rules docking, industrial division of labor layout, port logistics hardware upgrading, and soft factor agglomeration, the implementation path is proposed, and efforts are made to break down cross-border cooperation barriers, fully release the effectiveness of the closure policy, and build a blue economic hub for ASEAN, providing a reference for the practical cooperation of the marine industry in the South China Sea.

Keywords: Whole-island seal; Hainan Free Trade Port; ASEAN; Blue industry chain; Industrial synergy

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1. Introduction

The ocean is the main channel for regional cooperation between China and ASEAN, and blue industry cooperation has become an important means to promote China-ASEAN economic and trade exchanges. Hainan is a frontier window for China's opening to ASEAN. After the implementation of the whole-island customs clearance operation, Hainan's institutional innovations such as supervision and taxation have continuously released dividends and created favorable conditions for the cross-border factor flow of the blue industry. At present, Hainan and ASEAN have carried out preliminary cooperation in various fields such as fisheries, cultural tourism, and marine scientific research, but they have not yet formed a complete industrial chain and lack deep-seated cooperation. In this case, it is of practical significance to study the synergy path of the Hainan-ASEAN blue industrial chain to fully leverage the advantages of free trade ports and build a regional blue

economic community ^[1].

2. The collaborative reality foundation and cooperation potential of the blue industrial chain between Hainan and ASEAN under the background of the whole island customs clearance

2.1. Endowments and policy advantages: The inherent conditions and institutional opportunities of Hainan-ASEAN blue industry cooperation

Relying on the international shipping route network gradually improved by Yangpu Economic Development Zone, Hainan provides an objective material basis for the cross-border circulation of blue industrial chain elements.

Most ASEAN countries have abundant marine primary resources, but there are few industrial carriers for marine deep processing and marine scientific research transformation. Hainan has the industrial foundation of marine processing and deep-sea technology research and development, which provides congenital feasibility conditions for the division of labor and cooperation in the industrial chain.

On the basis of the objective possibility provided by the resource location endowment, the island-wide seal operation superimposes the institutional arrangement of regional economic and trade agreements, and transforms the cooperation potential at the geographical level into an industrial synergy institutional condition that can be implemented. The implementation of the “first-line opening and second-line control” regulatory model across the whole island can effectively reduce the comprehensive cost of cross-border circulation of marine means of production and provide regulatory system support for the allocation of upstream and downstream factors in the blue industrial chain.

At the same time, the RCEP economic and trade rules continue to be implemented, forming a unified regional economic and trade cooperation framework. Hainan can link the special policy of sealing up with the RCEP regional rules, rely on institutional integration innovation to open up the institutional channel for the cross-border allocation of blue industrial factors, and create an institutional environment different from other provinces in China for the cross-regional layout of the blue industrial chain. In addition to economic and trade agreements, Hainan also has a number of foreign cooperation platforms for Southeast Asia, providing a carrier for blue industry dialogue.

At present, there are two types of regional cooperation platforms located or originated in Hainan, namely the Boao Forum for Asia and the Lancang-Mekong Cooperation Mechanism. The annual meeting of the Boao Forum for Asia, which is held after the two sessions of the National People’s Congress, is the largest cooperation meeting held in Asia. Many international political and business elites gather here to discuss regional cooperation affairs. On the basis of continuing to hold the annual meeting of the forum, Hainan has seized the opportunity to build a platform for exchanges and cooperation between China and ASEAN. The Beibu Gulf-Yangpu Sea Passage is the only outlet of the three main land-sea passages in the new land-sea passage in the west, and it is also the throat and ‘aorta’ of the new land-sea passage in the west. Hainan can play the nodal role of Yangpu Port, actively strive for more ASEAN countries to participate in the construction of new international land and sea trade channels, build the “golden channel” of Lancang-Mekong Cooperation, promote regional connectivity, and expand the global free trade area network. In 2022, East Asian cooperation will enter a new era, and the Regional Comprehensive Economic Partnership (RCEP) will enter into force. Hainan should make full use of the policy advantages of free trade port construction, seize the opportunity, and expand blue

economic cooperation with ASEAN countries.

2.2. Cooperation practice and value orientation: The status quo of blue industry cooperation and the significance of jointly building blue economic hubs

Yangpu Port has normalized the marine catch import business from ASEAN countries. Some ASEAN aquatic raw materials have entered Hainan's local aquatic processing enterprises for deep processing through the customs clearance of free trade ports, and gradually formed a trade pattern of cross-border input of primary raw materials. In terms of marine cultural tourism, Sanya and Haikou cruise homeports in Hainan have carried out preliminary exploration of a multi-station cruise route in the Pan-South China Sea, so that Hainan's coastal cultural tourism resources and ASEAN coastal tourism destinations can achieve mutual flow of tourists. In terms of marine scientific research, the marine scientific research institutions in Hainan Province have carried out normalized academic exchanges with the marine scientific research platforms of ASEAN countries, and carried out joint scientific research activities on marine biological resources investigation and marine ecological observation. In terms of blue ecological cooperation, Hainan has been participating in multilateral exchanges within the framework of the China-ASEAN Blue Economic Partnership, with achievements such as local blue carbon pilot construction, and has carried out multilateral experience learning on the protection and restoration of mangroves and seagrass beds. Most of the above cooperation stays in trade circulation and academic exchanges, and there are still deficiencies in the deep division of labor and cooperation in the industrial chain.

Building on the cooperation practices achieved, it is of great practical significance to continue to promote the coordination of the blue industrial chain for the establishment of Hainan Free Trade Port and the blue economic cooperation between China and ASEAN. From the perspective of Hainan's own development, the cross-regional coordination of the blue industrial chain can give full play to the effectiveness of the island's sealing system, so that Hainan's marine industry can get rid of the shackles of local resources, rely on ASEAN's marine resources to open up the development space of the blue industry, and improve the local blue industry system; from the perspective of regional cooperation, Hainan undertakes the functional positioning of the ASEAN blue economic hub, and can use the industrial chain collaboration to promote the cultivation and construction of the China-ASEAN blue economic common market ^[2].

3. The key development areas of Hainan-ASEAN blue industrial chain under the background of island-wide customs clearance

3.1. Modern marine fishery: Building “ASEAN resources + Hainan processing” division of labor and cooperation model

ASEAN coastal countries have considerable offshore aquaculture and ocean fishing capacity, and can supply primary marine products such as catches and aquatic raw materials to the outside world. Hainan can greatly reduce the comprehensive cost of imported aquatic raw materials and aquatic processing equipment due to the policy advantage of zero tariff after sealing. Yangpu Lingang Industrial Park has formed a certain carrier of the aquatic product processing industry, which has the hardware conditions to undertake the deep processing of ASEAN aquatic raw materials.

According to the different characteristics of the two industrial bases, the industrial chain division mode of “ASEAN Resources + Hainan Processing” can be established; that is, ASEAN countries are responsible for the upstream links such as marine fishing and primary aquaculture, and the aquatic raw materials are

transported to Hainan Lingang Processing Park through the cold chain logistics system of Yangpu Port, and the aquatic products are processed in Hainan. Deep processing, cold chain packaging, brand packaging, and other midstream processes.

The coordination of the industrial chain is not only the import and processing of raw materials, but can also be extended to the exchange of fishery technology. Hainan fishery research institutions and ASEAN fishery entities can exchange experience in aquaculture technology and disease prevention and control, and explore joint marine ranching pilot cooperation.

3.2. Marine cultural tourism industry: Deepening the joint development of Pan-South China Sea cruise and coastal leisure

Marine cultural tourism is an important part of the blue economy in the South China Sea region. The reform of entry and exit facilitation after the closure of the whole island has given Hainan and ASEAN a new development opportunity to build a cross-regional marine cultural tourism industry chain.

The two cruise home ports of Sanya and Haikou in Hainan have good cruise terminal infrastructure, which can carry out large-scale cruise docking and tourist distribution services. There are a large number of characteristic coastal tourism destinations in ASEAN countries. The two can move beyond the simple mode of mutual cooperation of tourists and extend to the direction of the whole industry chain.

From the perspective of cruise operation industry chain, we can jointly plan cross-border cruise tourism routes in the Pan-South China Sea, promote cruise enterprises to carry out cross-border joint operations, coordinate the allocation of cruise capacity, and integrate coastal scenic spots and leisure and vacation projects along Hainan and ASEAN to form integrated tourism products; From the perspective of the cruise supporting industry chain, relying on the zero tariff policy of ship maintenance equipment in Hainan Free Trade Port, the cruise maintenance supporting industry is cultivated to provide maintenance services for international cruise ships sailing to and from the South China Sea. From the perspective of co-construction of service standards, we will promote the exchange and mutual learning of industry standards between Hainan and ASEAN in the fields of coastal resort services and cruise visitor services, and gradually form a service standard suitable for the development of cultural tourism in the Pan-South China Sea region.

3.3. Marine emerging industries: Promoting the collaborative innovation of deep-sea science and technology and marine biopharmaceuticals

The marine emerging industry is the future development direction of the blue industry. The implementation of a zero-tariff policy for scientific research equipment and experimental consumables across the whole island can significantly reduce the R & D investment cost of the marine frontier industry and promote the collaborative innovation of the marine science and technology innovation industry chain in Hainan and ASEAN ^[3].

Hainan has laid out a scientific and technological innovation platform for deep-sea equipment research and development and marine biological medicine research and development, and has the basic conditions for marine technology research and development and achievement transformation. The waters of ASEAN countries contain a large number of characteristic marine biological resources, which can provide rich natural material samples for the research and development of marine biological medicine. The two sides can achieve cooperation by building a cross-border collaborative innovation chain.

Hainan sea-related universities, scientific research institutes, and ASEAN marine research institutions have jointly built a joint laboratory to tackle key issues in the exploration of deep-sea resources and the extraction of

marine active substances, and rely on the sealing system to facilitate the cross-border circulation of scientific research instruments and experimental samples.

The achievement transformation link makes use of the advantages of the industrial incubation carrier of Hainan Free Trade Port to industrialize the marine biological medicine, deep-sea equipment, and other related technologies jointly developed, and some technical achievements suitable for the local development of ASEAN can be transferred to the ASEAN market.

3.4. Blue ecological industry: Expanding blue carbon trading and marine ecological cross-border cooperation scenarios

The blue ecological industry combines marine ecological protection with industrial value creation, which is the direction of cooperation under the framework of China-ASEAN blue economic partnership. The institutional conditions of the whole island closure can further broaden the possible space for cross-border blue carbon industry cooperation ^[4].

Hainan has completed a number of mangrove blue carbon project developments and accumulated local practical experience in blue carbon project accounting, project development, and carbon sink trading. Many coastal countries in ASEAN have a large area of mangroves, seagrass beds, and other blue carbon ecosystems, which have great resource potential for developing cross-border blue carbon projects. The two sides can cooperate across all aspects of the blue carbon industry chain.

At the end of ecological restoration, both scientific research institutions and market players can participate in the protection and restoration projects of mangroves and seagrass beds along the South China Sea, and rely on joint ecological management to increase marine carbon sinks. At the project development end, explore ways to develop cross-border blue carbon projects, work together to promote the exchange of blue carbon measurement and accounting methodologies, and promote the experience of blue carbon project development to learn from each other. At the trading and circulation end, with the help of the open trade system environment of Hainan Free Trade Port, explore the way of cross-border transfer and docking of blue carbon credits, and transform the carbon sink value generated by marine ecological protection into tradable industrial products.

4. The collaborative implementation path of the blue industrial chain between Hainan and ASEAN under the background of the whole-island customs clearance

4.1. Give full play to the advantages of integrated innovation of the customs clearance system and promote the docking and mutual recognition of cross-border industrial rules

Institutional barriers belong to the practical factors that cannot be ignored in cross-regional industrial chain coordination. Hainan should fully release the reform authority of the island's first trial, and promote the rule docking and standard mutual recognition with ASEAN in the related fields of blue industry, so as to clear the institutional obstacles for the cross-border circulation of industrial chain elements ^[5].

Based on the authority of the integrated innovation reform of the free trade port system, this paper attempts to connect the rules in key areas such as modern marine fisheries, marine cultural tourism, and blue carbon ecological cooperation. In terms of marine fisheries, we will use the innovation of the customs supervision model after the closure to optimize the inspection and quarantine process of imported aquatic raw materials from ASEAN, actively communicate with the corresponding competent authorities of ASEAN on the inspection standards of aquatic products, promote mutual recognition of some inspection and test results, and reduce the

institutional time cost of cross-border circulation of aquatic raw materials.

In the field of marine culture and tourism, we will conduct communication and consultation on cruise tourism entry and exit supervision, cross-border tourism service standards and other matters, optimize the customs clearance supervision process of cross-border cruise tourists, strengthen the exchange of experience with ASEAN countries on blue carbon accounting standards and project development standards in the blue carbon industry, and explore the blue carbon project reference standards that fit the characteristics of the South China Sea region. Relying on the communication and coordination of multi-field institutional rules, the institutional dividend of the island's customs clearance is transformed into an institutional guarantee for the coordination of the blue industrial chain.

4.2. Optimize the layout of industrial division of labor and build a multi-level Hainan-ASEAN blue industry cooperation system

After the institutional constraints are broken through, it is necessary to continue to rationalize the cross-regional industrial division of labor, rely on differentiated resource endowments to establish a multi-level blue industry collaboration system, so that the industrial chain of various key areas can be coordinated to the industrial layout level.

Marine fisheries continue to strengthen the division of labor mode of “raw material supply in the upstream of ASEAN, deep processing in the middle reaches of Hainan, and two-way market distribution,” and promote the construction of a stable raw material supply channel between the port processing park and the ASEAN fishery subject. Promote the coordinated development of cruise home port, cultural tourism products and supporting services, and support domestic cruise enterprises to carry out equity and project cooperation with ASEAN cultural tourism enterprises.

The construction of a cross-border science and technology innovation collaboration network in the field of marine emerging industries promotes the participation of scientific research institutions, industrial parks, market enterprises, and other subjects in the innovation chain. With the investment and development of blue carbon projects as the link, the joint market entities participate in the investment and development of cross-border blue carbon projects. Taking into account the participation of large leading enterprises and small and medium-sized market players, we will create a situation of multi-subject participation and multi-level industrial collaboration.

4.3. Upgrade the energy level of Yangpu hub port and open up the cross-border logistics circulation channel of blue industry

Logistics infrastructure belongs to the hardware support for the cross-border circulation of materials and products in the blue industrial chain. As an important international hub port for Hainan to connect with ASEAN, Yangpu Port's service level directly affects the actual speed of the coordinated operation of the blue industrial chain.

Based on the overall layout of the island's sealing operation, we will continuously improve the comprehensive service capacity of Yangpu Port, continuously optimize the international shipping routes of Yangpu to the main coastal ports of ASEAN, expand the coverage of the shipping network, and ensure the normal transportation and supply of fishery raw materials, marine equipment, and processed products.

According to the special logistics needs of the blue industry, we will improve the port supporting infrastructure, build large-scale cold chain storage facilities, improve the supporting conditions for the loading and unloading of large-scale marine equipment, and provide services for the transfer of large goods such as

deep-sea equipment and cruise parts.

We will simultaneously promote the construction of port and port industry supporting facilities, and open up the collection and distribution system between port terminals and port aquatic product processing parks and sea-related industrial parks.

4.4. Gathering scientific and technological innovation, finance, and human resources, and strengthening the support of industrial chain coordination factors

In addition to institutional guarantees, industrial layout, and hardware infrastructure, soft production factors such as science and technology innovation, blue finance, and compound talents are also indispensable elements to maintain the long-term stability and coordination of the blue industrial chain. From the perspective of science and technology innovation elements, Hainan's existing marine-related scientific research platform is used to build a docking platform for the transformation of marine scientific and technological achievements for ASEAN, and to promote the transformation of joint R & D technological achievements to the industrial end. From the perspective of financial elements, financial institutions in the province are encouraged to develop new blue financial products according to the development characteristics of the blue industrial chain.

In terms of talent factors, according to the practical needs of Hainan-ASEAN blue industry coordination, we should cultivate compound talents with professional knowledge of the marine industry, understand ASEAN economic and trade rules, know foreign languages, and establish talent exchange channels to promote mutual visits and exchanges with ASEAN marine industry talents. Relying on the continuous agglomeration of various production factors, we will consolidate the basis of the coordinated development of the blue industrial chain between Hainan and ASEAN in an all-round way, and ensure the smooth progress of various cooperation projects.

5. Conclusion

Relying on the institutional advantages of the whole island seal, Hainan has better resource conditions and policy basis for carrying out the blue industrial chain coordination with ASEAN. To promote the in-depth cooperation of the blue industry between the two sides, we can not only rely on a breakthrough in a certain field, but also need to make concerted efforts in various aspects, such as mutual recognition of systems, industrial layout, logistics hardware, scientific and financial talents. In the future, Hainan should continue to give full play to the institutional advantages of the pilot free trade port, promote the two-way flow of factors, continuously deepen the blue economic cooperation, and strive to build a closer China-ASEAN marine industry cooperation pattern.

Disclosure statement

The authors declare no conflict of interest.

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