

Promoting the Export of Shrimp Products from Kien Giang – Vietnam toward Sustainable Development

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Abstract

Vietnam's shrimp exporting industry plays a pivotal role in the structure of the national fisheries economy, generating billions of USD in annual export value. The year 2024 marked a significant milestone as Vietnam's shrimp exports continued to achieve steady growth in key markets such as the United States, the European Union, and China. Alongside major provinces like Ca Mau, Soc Trang, and Bac Lieu, Kien Giang has made substantial contributions to the prosperity of the seafood industry. Shrimp farmed and processed in Kien Giang are primarily exported to Asian and European markets, contributing considerably to the province's income and shaping its local economic development. This study provides an overview of the current state of shrimp product exports in Kien Giang, assesses them based on sustainable development criteria, and proposes strategic solutions to promote the export of local shrimp products toward sustainable development in the coming years.

Keywords: *Shrimp products, export promotion, sustainable development, Kien Giang, Vietnam.*

1. Introduction

Kien Giang is a province located in the southwest of Vietnam, belonging to the key economic region of the Mekong Delta. It occupies a strategic position of great importance in terms of economy, politics, national defense, and security for both the nation and the Mekong Delta region. The province possesses numerous potentials and comparative advantages for the comprehensive development of agriculture, forestry, fisheries, and services—particularly in the maritime economy. In addition to its diverse tropical forest ecosystems, Kien Giang boasts a coastline of more than 200 kilometers and a sea area of over 63,000 square kilometers, with a wide range of high-value marine species. Furthermore, it is home to many unique marine and island tourist attractions, especially Phu Quoc—the first island city of Vietnam. These conditions create favorable opportunities for the province to develop its marine-based economy (tapchicongsan.org.vn, 2023).

The economy of Kien Giang can be developed based on three pillars: high-quality agriculture adapted to climate change; clean aquaculture integrated with advanced processing industries targeting premium segments; and international-class eco-tourism. The marine economy serves as a key driver of growth, together with border-gate economic activities and the breakthrough development of Phu Quoc. This provides a vision for Kien Giang to become one of the most dynamic, innovative, and prosperous provinces in the southwestern region of Vietnam. The province aims to capitalize on its natural comparative advantages, a marine-oriented economy, and distinctive agricultural resources, while promoting international-standard tropical tourism toward sustainable development (vpubnd.kiengiang.gov.vn, 2023).

With a coastline extending more than 200 kilometers, Kien Giang has favorable natural conditions for the development of brackish-water shrimp farming. For many years, the provincial

agricultural sector has planned aquaculture zones and invested in infrastructure to support the expansion of shrimp farming. Coastal districts in the U Minh Thuong region—such as An Bien, An Minh, U Minh Thuong, Vinh Thuan, and part of Go Quao—have developed rice–shrimp rotation models using extensive and improved extensive systems, with a total farming area of about 80,000 hectares. In addition, along National Highway 80, from Hon Dat to Kien Luong, large areas of two-crop rice fields are being converted into rice–shrimp rotation systems, with approximately 20,000 hectares having potential for conversion.

The Long Xuyen Quadrangle area, including Kien Luong, Giang Thanh, and Ha Tien City, has become a center for intensive and high-tech shrimp farming (nguoinuoi.com.vn, 2020). From July 1, 2025, Kien Giang will merge with An Giang to become the largest province in the region, with a population of more than 4.9 million (tuoitre.vn, 2025). Like other provinces in the Mekong Delta, An Giang also has strong potential for giant freshwater prawn farming through diverse models such as rice-field farming, pond farming, and rice–shrimp rotation (thuysanvietnam.com.vn, 2020).

The shrimp export industry holds a crucial position in the global fisheries economy, particularly in Vietnam. Vietnamese shrimp have established a strong reputation in international markets, being exported to numerous countries and regions worldwide. Exported shrimp products are increasingly diversified, ranging from frozen shrimp and peeled shrimp to high-value processed products, catering to a wide spectrum of consumer preferences (tepbac.com, 2024).

The shrimp processing industry has been expanding and diversifying product categories. Vietnam has strong competitiveness in deeply processed shrimp products such as steamed shrimp, breaded shrimp, tempura shrimp, nobashi shrimp, shrimp skewers, shrimp dumplings, and ginger shrimp wontons. In 2024, Vietnam's shrimp exports generated USD 3.9 billion, with deeply processed products accounting for more than 40% of the total export value. Currently, Vietnam and Thailand are the two global leaders in deep-processing technology for shrimp products, providing a competitive edge over other rivals (vneconomy.vn, 2025).

Shrimp export activities in Kien Giang have made a significant contribution to Vietnam's seafood export turnover and local economic development. However, shrimp farming, harvesting, and processing also pose environmental and occupational health challenges for local communities. Therefore, assessing the current situation of shrimp exports in Kien Giang, Vietnam, is essential to identify practical solutions to promote this activity toward sustainable development in the near future.

2. Research Methodology

To serve the objectives of this study, the authors employed two primary research methods: desk research (reviewing published materials and media sources) and sociological investigation (survey-based data collection).

Through the desk research method, the authors conducted a comprehensive review of existing literature and theoretical frameworks related to shrimp products — including general concepts, classifications, characteristics, nutritional composition, and economic value.

For the sociological investigation, the authors designed a structured survey questionnaire aimed at gathering relevant information from respondents in the most convenient and accessible manner. The questionnaire was divided into the following main sections:

1. General information
2. Survey on shrimp products
3. Survey on shrimp exports from Kien Giang toward sustainable development

The research team adopted the convenience sampling method for data collection. The survey was created using Google Forms and distributed via the following link:

https://docs.google.com/forms/d/e/1FAIpQLSdZWf3uQW7bf62YxHX2gOpRyrskIFD0_vfLImGIwQGat63FdG/viewform?usp=sharing&ouid=111695892380525288016

The survey link was distributed to respondents through social media platforms such as Facebook, Zalo, and Email across various locations. A total of 120 questionnaires were collected, among which 5 were invalid. Each question contained multiple-choice or multiple-response options, and certain items were measured using a five-point Likert scale, ranging from 1 (completely unfulfilled) to 5 (completely fulfilled).

For data processing, the research team analyzed 115 valid responses using Microsoft Excel for statistical summarization and quantitative analysis to substantiate the research findings.

Regarding the demographic characteristics of respondents: The majority were aged between 20 and 45 years (87.5%). Females accounted for 76.2% of the total sample. More than 50% of respondents were business owners or engaged in trading, 20.8% were homemakers, and approximately 5% were office employees. In terms of geographical distribution, 87.5% of respondents resided in Southern Vietnam.

3. Overview of Shrimp Products in Kien Giang – Vietnam

Vietnam's Shrimp Industry

Shrimp is one of the two key aquaculture species prioritized in Vietnam's national aquaculture development strategy. Vietnam is recognized as one of the countries with the most advanced shrimp processing technology and a strong competitive advantage in producing high-value-added products (VASEP, 2025).

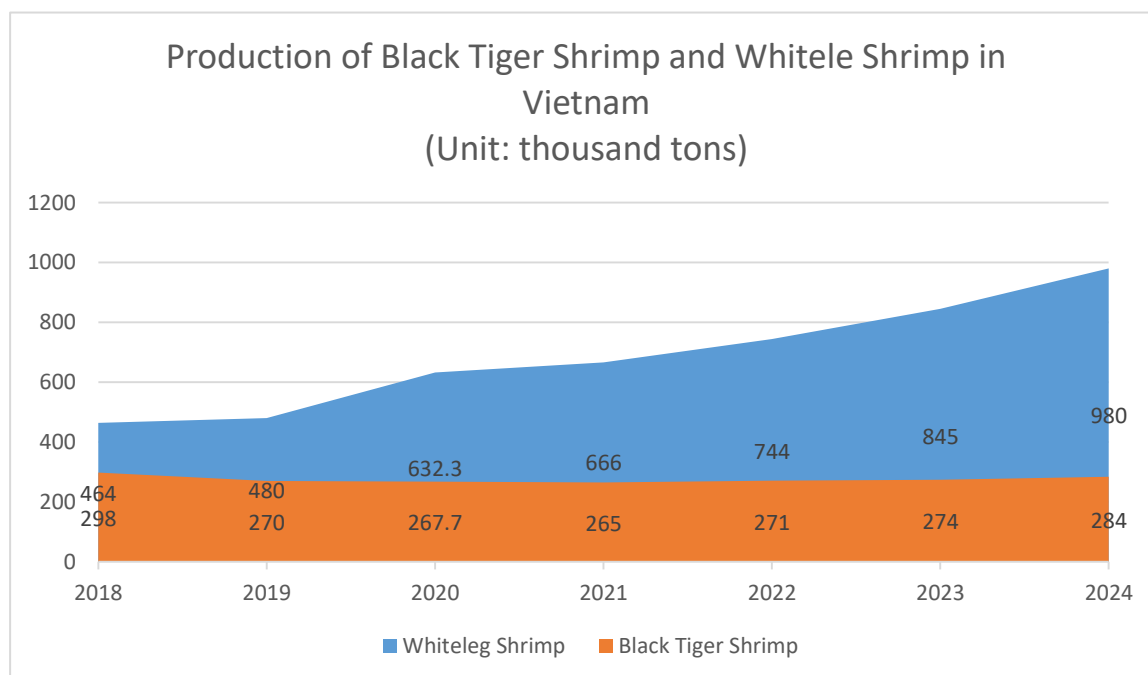


Figure 1. Production of *Penaeus monodon* (Black Tiger Shrimp) and *Litopenaeus vannamei* (Whiteleg Shrimp) in Vietnam

(Source: VASEP, 2025)

Vietnam's shrimp industry is currently dominated by two main species: whiteleg shrimp (*Litopenaeus vannamei*) and black tiger shrimp (*Penaeus monodon*). According to the Vietnam Association of Seafood Exporters and Producers (VASEP, 2024), Vietnam's production reached 980 thousand tons of whiteleg shrimp and 284 thousand tons of black tiger shrimp in 2024.

In addition, survey respondents indicated that Vietnam also produces many other shrimp species, including banana shrimp (66.7% of respondents), greasyback shrimp (75%), speckled shrimp, lobster, giant freshwater prawn (over 91%), mantis shrimp, slipper lobster, sea prawn, rock shrimp, dragon shrimp, and redclaw crayfish.

Shrimp in Vietnam mainly inhabit freshwater and marine environments (75% of respondents) and brackish-water areas (nearly 60%). These species are primarily concentrated in the Mekong Delta, particularly in the Tien River, Hau River, and Vam Co Dong River regions.

According to data from the Directorate of Fisheries, Vietnam exports hundreds of thousands of tons of shrimp annually to international markets, contributing more than 40% of the country's total seafood export value. Major markets such as the United States, the European Union, Japan, South Korea, and China have shown strong demand for Vietnamese shrimp due to their established quality and reputation over the year.

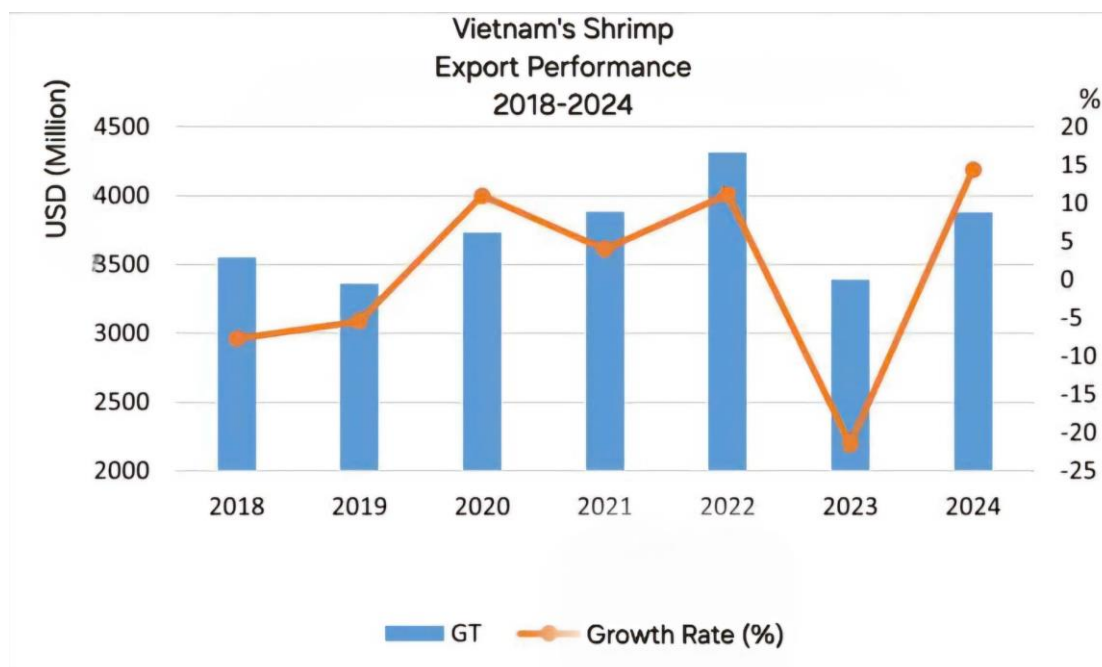


Figure 2. Vietnam's Shrimp Exports

(Source: VASEP, 2025)

In 2024, Vietnam's shrimp exporting reached USD 3.9 billion, with deep-processed shrimp products accounting for over 40% of the total export value. The shrimp processing industry has increasingly diversified its product range. Vietnam's key strengths in deep-processed shrimp include steamed shrimp, breaded shrimp, tempura shrimp, skewered shrimp, nobashi shrimp, shrimp dumplings, and ginger shrimp wontons, among others (vneconomy.vn, 2025).

Shrimp Products in Kien Giang Province

Aquaculture has been identified as a core and strategic economic sector of Kien Giang Province. As of January 2025, the total aquaculture area was estimated at 18,158 hectares, fulfilling 5.59% of the annual plan, and showing an increase of 9.07% compared to the same period last year. Among these, brackish-water shrimp farms covered 8,332 hectares, achieving 6.08% of the plan and rising by 23.88% year-on-year. The total aquaculture output in January 2025 was approximately 17,188 tons, reaching 4.18% of the annual plan — a 37.06% decrease compared to the previous month (due to the end of the harvest season for species such as whiteleg shrimp, freshwater fish, and clams), but still 4.01% higher than the same period of the previous year (thuysanvietnam.com.vn, 2025).

Currently, brackish-water shrimp farming in Kien Giang is concentrated in two key ecological zones:

The Long Xuyen Quadrilateral region, including Giang Thanh, Kien Luong, Hon Dat, and Ha Tien City, where industrial shrimp farming—mainly whiteleg shrimp (*Litopenaeus vannamei*)—is dominant.

Kien Giang primarily cultivates whiteleg shrimp, black tiger shrimp (*Penaeus monodon*), and giant freshwater prawns (*Macrobrachium rosenbergii*) through industrial, improved extensive, and rice–shrimp rotation models.

Shrimp products in Kien Giang include various processed forms, such as fresh shrimp, frozen shrimp, peeled shrimp, and ready-to-eat products like breaded shrimp, butterflied shrimp, steamed shrimp, grilled shrimp, and seasoned shrimp, which cater to diverse food demands and export markets. In addition, by-products such as shrimp shells, heads, and meat fragments are utilized as raw materials for other industries, including animal feed and bioproduct manufacturing.

According to survey results, the current shrimp products from Kien Giang include the following categories:

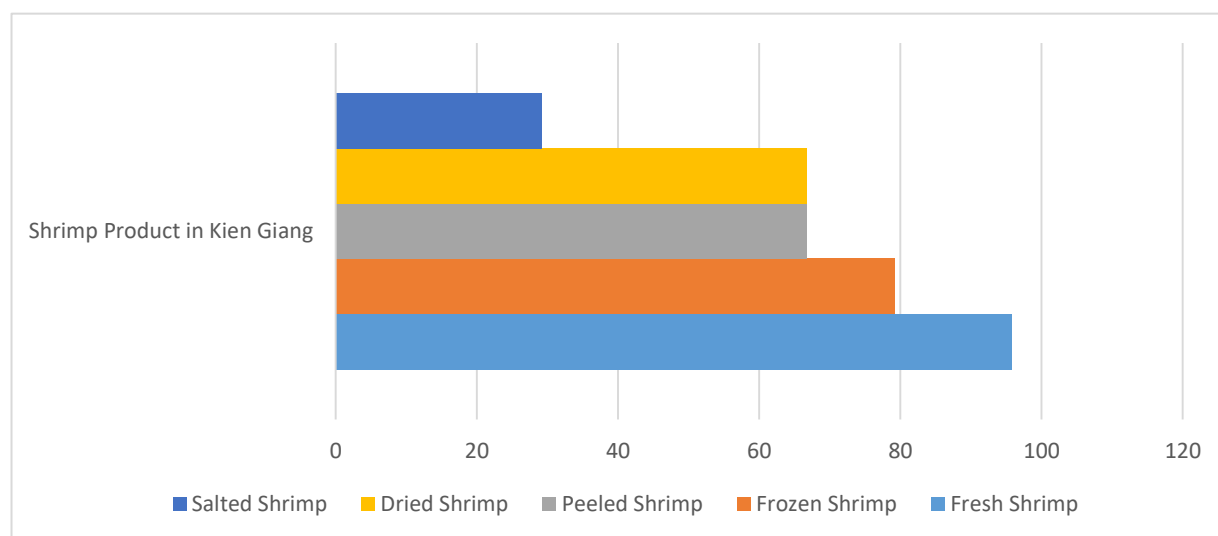


Figure 3. Types of Shrimp Products in Kien Giang Province

(Source: Survey Result)

According to the survey results, fresh shrimp products from Kien Giang accounted for the largest proportion (95.8%), followed by frozen shrimp (79.2%), while peeled shrimp, dried shrimp, and especially salted shrimp were consumed less frequently, with only 29.2% of respondents indicating familiarity with or preference for them.

Overall, shrimp are low in calories yet rich in nutrients. On average, the nutritional composition of 100 grams of cooked shrimp includes:

Calories: 99 kcal

Fat: 0.3 grams

Carbohydrates: 0.2 grams

Cholesterol: 189 milligrams

Sodium: 111 milligrams

Protein: 24 grams

Shrimp offer several health benefits, including weight management, antioxidant properties, and disease prevention. Shrimp products are high in protein, omega-3 and omega-6 fatty acids, and contain essential vitamins and minerals such as vitamin B12, D, E, iodine, phosphorus, copper, zinc, magnesium, calcium, iron, potassium, and selenium. Additionally, shrimp shells contain chitin, a natural form of dietary fiber (tepbac.com, 2025).

Based on survey feedback, respondents provided their assessments of the values and benefits associated with shrimp products as follows:

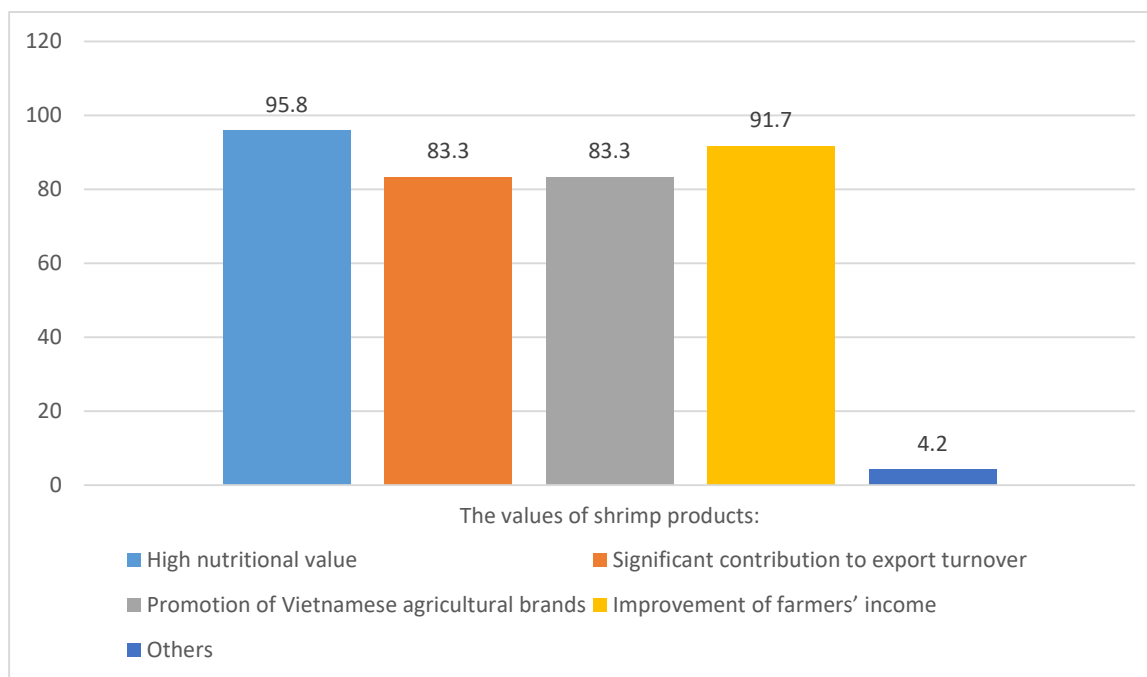


Figure 4. Survey Results on the Perceived Values of Shrimp Products

(Source: Survey Results)

Survey respondents highly appreciated the nutritional value of shrimp products (with 95.8% selecting this option). Additionally, 91.7% of respondents agreed that shrimp products, when sold or exported, help increase farmers' income. Moreover, 83.3% of the surveyed participants believed that shrimp products make a significant contribution to export turnover and promote the brand image of Vietnamese agricultural products.

4. Current Situation of Shrimp Product Exports from Kien Giang – Vietnam

Overview of the Shrimp Product Market in Kien Giang – Vietnam

According to the survey, when asked about the main distribution markets of shrimp products, nearly 85% of respondents indicated that Vietnamese shrimp products are currently distributed in both domestic and export markets. However, regarding shrimp products specifically from Kien Giang, nearly 92% of the surveyed participants stated that these products are mainly distributed through export channels.

Survey respondents identified the United States, the European Union, Japan, South Korea, and China as the primary import markets for shrimp products from Kien Giang, with the following detailed observations:

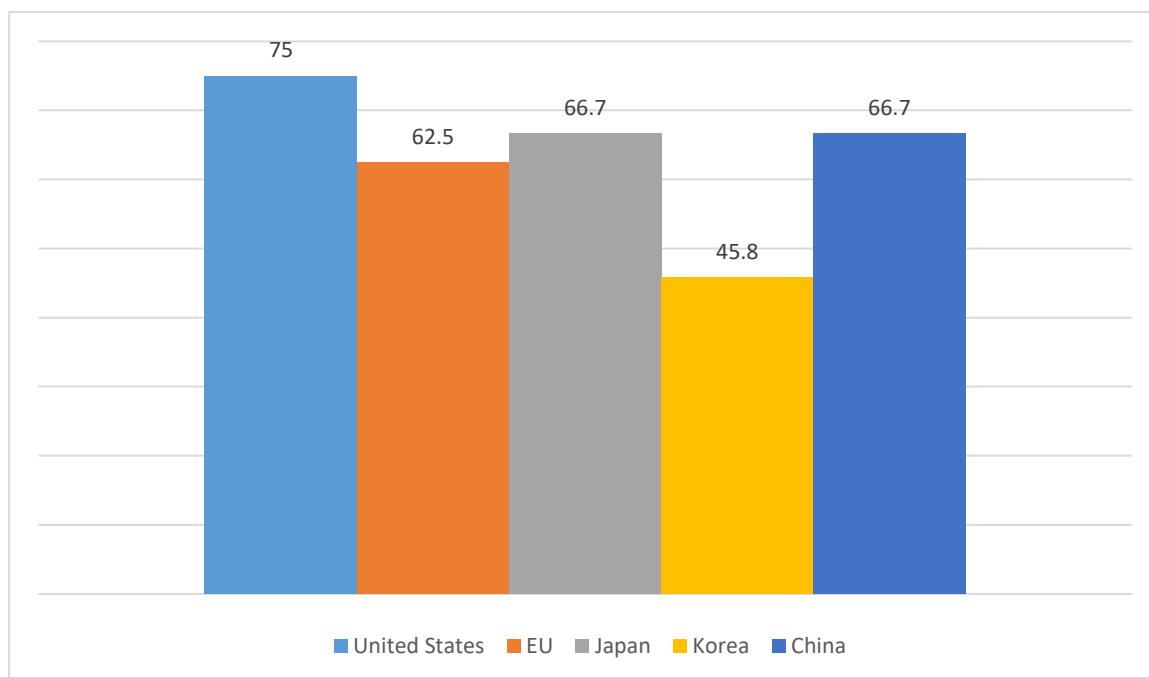


Figure 5. Survey Results on Major Import Markets for Shrimp Products from Kien Giang
(Source: Survey results)

The majority of respondents indicated that the United States remains the primary import market for shrimp products from Kien Giang, accounting for 75% of survey responses. Meanwhile, Japan and China were identified as the second-largest markets, with nearly 70% of respondents selecting them. South Korea was perceived as the least significant market among the surveyed countries.

Regarding the export structure of shrimp products in 2024, whiteleg shrimp increased by 8%, representing 70.2% of total export value; black tiger shrimp declined by 3%, accounting for 11.5%; and other shrimp species rose by 71%, making up 18.3% of total export value. The sharp increase in other shrimp exports (71%) was largely attributed to a 127% rise in live/fresh/frozen shrimp products, mainly lobsters. Additionally, exports of processed whiteleg and black tiger shrimp showed stronger growth compared to fresh/frozen shrimp products (*tepbac.com*, 2025).

Despite facing numerous challenges, in 2024, Vietnam's shrimp industry exported to 107 markets, adding five new markets compared to 2023. The top five major destinations included China and Hong Kong (China), the United States, Japan, the European Union, and South Korea, which together accounted for 76% of Vietnam's total shrimp export value.

Entering 2025, shrimp continues to be the fastest-growing export commodity in January 2025, with an export value of USD 273.349 million, representing 35.3% of the total seafood export turnover.

From the beginning of 2025 up to the present, the total aquaculture area in Kien Giang Province has reached 276,126 hectares, achieving 85% of the planned target. Among these, 134,000 hectares are used for shrimp farming, with the remaining dedicated to other aquatic species. The harvested output exceeded 134,480 tons, a 25% increase compared to the same period last year, including more than 50,170 tons of shrimp (*vietnamnet.vn*, 2025).

The main reasons behind Kien Giang's development of shrimp products include its advantageous water surface area, technological and technical capacity, skilled labor force, expanding consumer market, and modern distribution system. These factors were also highly rated by survey respondents, as presented below:

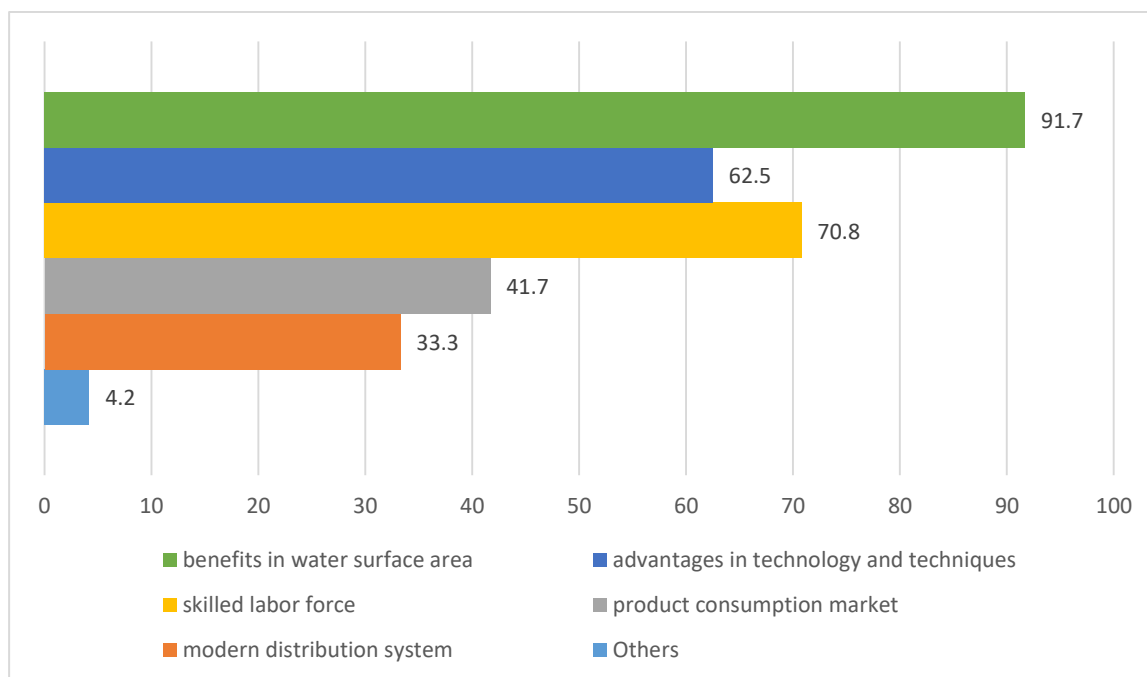


Figure 6. Survey Results on the Reasons for the Development of Shrimp Products in Kien Giang, Vietnam

(Source: Survey results)

When asked about the reasons behind the development of shrimp products in Kien Giang, the majority of respondents indicated that with nearly 150,000 hectares of shrimp farming area, Kien Giang possesses the largest advantage in water surface resources, accounting for 91.7% of survey responses. The availability of a skilled labor force was identified as the second most significant factor, with 70.8% of respondents selecting this reason. In practice, Kien Giang hosts over 113 cooperatives operating in the aquaculture sector, including shrimp farming (*baomoi.vn*, 2024).

Technological and technical advantages in shrimp farming were rated as the third most important factor, also chosen by 62.5% of respondents. Shrimp farming techniques in Kien Giang are diverse, including extensive, improved extensive, and intensive methods, depending on shrimp species such as black tiger shrimp, whiteleg shrimp, and giant freshwater prawn. The province is also implementing two-stage shrimp farming as well as industrial-scale shrimp farming.

Analysis of the Recent Export Status of Shrimp Products from Kien Giang, Vietnam

The total value of aquaculture and fisheries production in Kien Giang during the 2021–2023 period averaged approximately VND 32,860 billion. Among this, the province’s average seafood export turnover reached over USD 250 million, equivalent to approximately VND 6,000 billion (*nongnghiepmoitruong.vn*, 2024).

Although the seafood export turnover of Kien Giang fluctuated during 2020–2024, the overall trend shows gradual growth.

Table 1. Seafood Export Turnover of Kien Giang Province, 2020–2024

Year	Seafood Export Turnover (million USD)
2020	500
2021	251.57
2022	798
2023	860

Year	Seafood Export Turnover (million USD)
2024	920

(Source: *tapchicongthuong.vn*)

Shrimp produced in Kien Giang is primarily exported to markets in Asia and Europe, contributing significantly to the province's income and playing an important role in shaping local economic development (*nguoينوitom.vn*, 2024).

Shrimp exports from Kien Giang are typically conducted via direct exports, intermediaries, or through chain-linked contracts. According to the survey on export methods, the most frequently selected approach was direct export, accounting for 79.2% of responses, as detailed below:

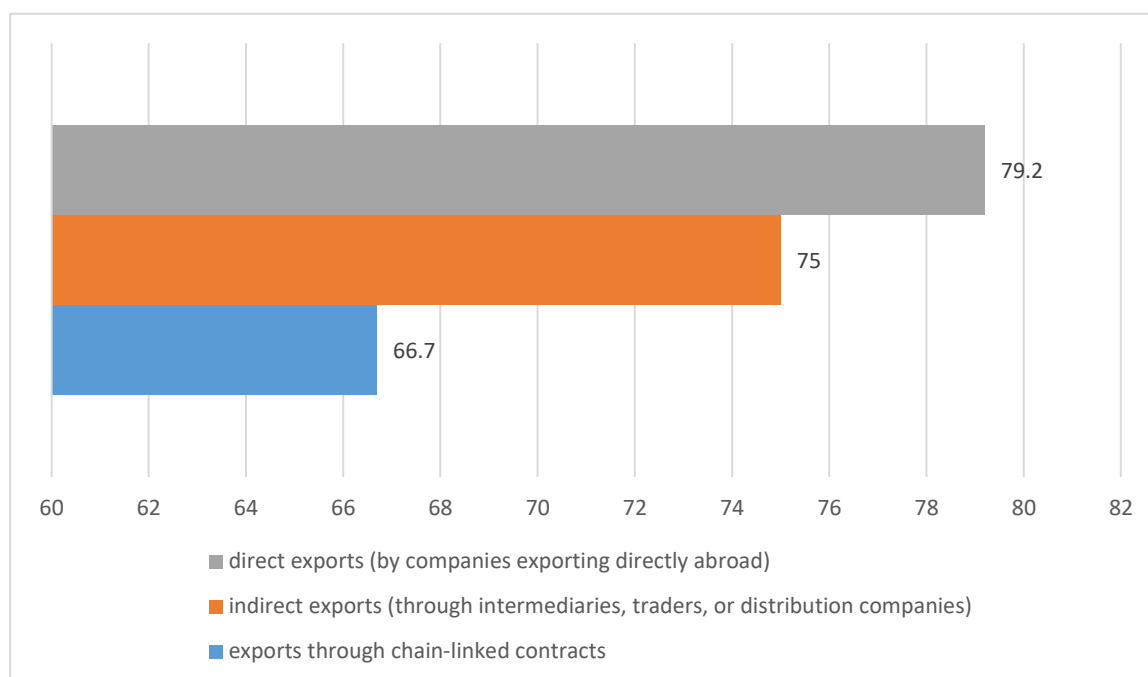


Figure 7. Survey Results on Export Methods for Shrimp Products from Kien Giang

(Source: *Survey results*)

Seafood products with specific characteristics, such as shrimp (including fresh shrimp, frozen shrimp, peeled shrimp, processed shrimp, and dried shrimp), can be transported either by air (suitable for fresh shrimp and high-value products) or by sea (the common transportation method for frozen or processed shrimp, which helps reduce costs).

The export methods for shrimp products from Kien Giang were assessed as follows:

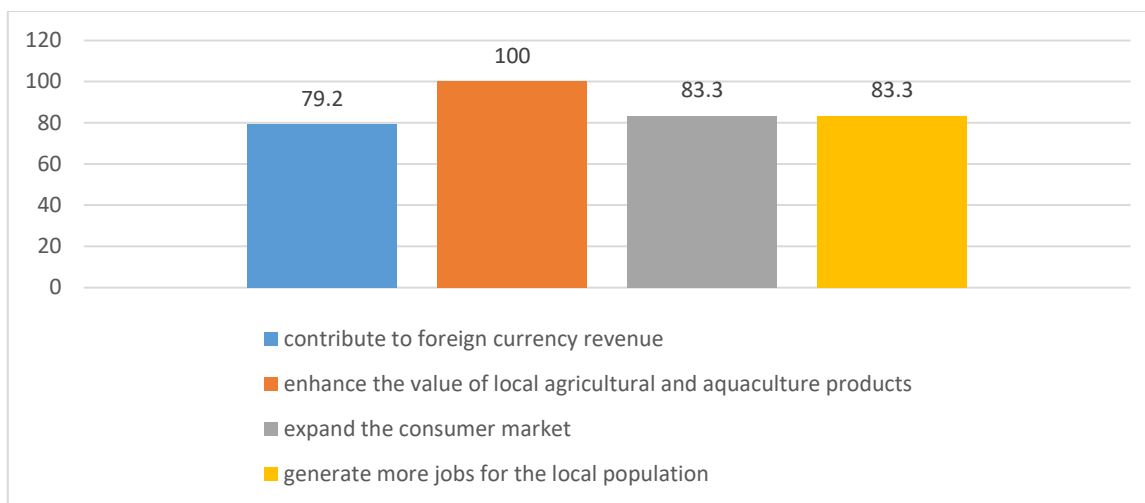


Figure 8. Survey Results on the Reasons for Exporting Shrimp Products from Kien Giang
(Source: Survey results)

The export of shrimp products from Kien Giang is primarily driven by the goal of enhancing the value of local agricultural and aquaculture products, as indicated by 100% of survey respondents. Export shrimp prices are generally significantly higher than those for domestic retail shrimp.

According to the Vietnam Association of Seafood Exporters and Producers (VASEP), in the first six months of the year, Vietnam's shrimp exports exceeded USD 2 billion, representing a 27% increase compared to the same period last year. In particular, exports of black tiger shrimp reached over USD 341 million, an increase of nearly 13% year-on-year.

In May, shrimp exports to the United States surged by 66%, but declined sharply by 37% in June. Nevertheless, in terms of value, Vietnamese shrimp demonstrated strong growth. The average export price of Vietnamese shrimp to the U.S. in May reached USD 5.1/pound, the highest among major supplying countries, reflecting the high quality and premium positioning of Vietnamese shrimp.

During the first five months of the year, the U.S. imported 340,955 tons of shrimp, valued at USD 2.84 billion, representing respective increases of 15% and 24% compared to the same period last year (*znews.vn*, 2025).

5. Assessment of Kien Giang – Vietnam Shrimp Exports in Terms of Sustainable Development

Kien Giang is one of 28 coastal provinces and cities in Vietnam, with a marine area of 63,290 km², a coastline of 200 km, and over 143 islands, 43 of which are inhabited. Phu Quoc is the largest island, covering 593 km².

The marine area of Kien Giang is among the most potential-rich fishing grounds, offering significant advantages for aquaculture development. This sector has progressively developed in a comprehensive and sustainable manner, contributing substantially to the province's socio-economic development.

Provincial leaders reported that during 2021–2025, with a vision toward 2030, Kien Giang aims to develop marine aquaculture in an industrial and modern manner, ensuring ecological sustainability while promoting tourism and safeguarding national defense and maritime security. These efforts align with Vietnam's Marine Economic Development Strategy through 2030, with a vision toward 2045, thereby contributing to the restructuring of the provincial agricultural sector, enhancing competitiveness, promoting marine economic growth, and increasing residents' income (*tepbac.com.vn*).

At the beginning of 2025, the Vietnamese government issued a resolution on implementing the National Marine Spatial Plan (2021–2030), with a vision to 2050. This resolution requires that the development of marine-linked industries adhere to sustainable development principles.

Sustainable development has become a global objective, defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. This concept emphasizes a harmonious balance among three main pillars: economic, social, and environmental sustainability.

5.1. Economic Requirements

The economic sustainability criteria for Kien Giang shrimp exports include: Stable export revenue growth, ensuring profitability for farmers and enterprises, diversifying export markets, increasing the added value of products, and other relevant criteria

Survey respondents identified these as the key criteria for assessing economic sustainability in shrimp exports from Kien Giang. Among them, “ensuring profitability for farmers and enterprises” was the most frequently selected criterion (87.5%), while “enhancing product added value (deep processing)” received the lowest selection rate (75%).

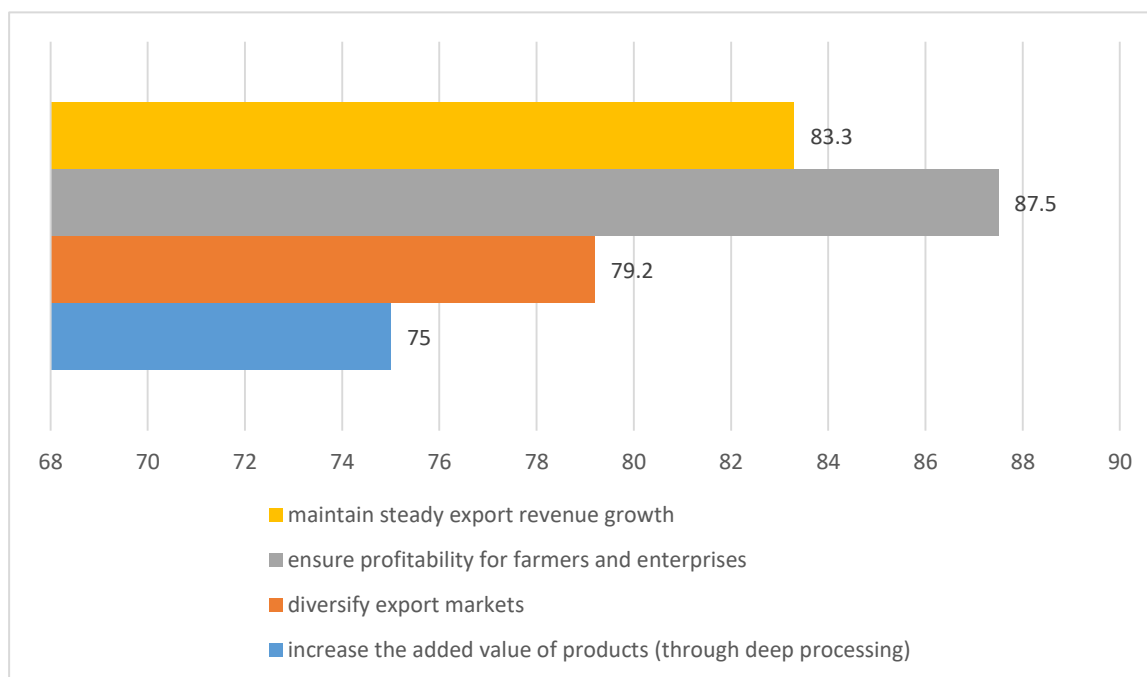


Figure 9. Survey Results on Economic and Social Sustainability Criteria in Kien Giang Shrimp Exports

(Source: Survey results)

According to Vietnam Customs data, as of August 15, 2025, Vietnamese shrimp exports to China and Hong Kong reached nearly USD 767 million, representing a 76% increase compared to the same period last year, and accounting for approximately 29% of the country’s total shrimp export value. In the first half of August alone, export value reached nearly USD 57 million, indicating an unprecedented growth rate.

Within the product structure, live lobsters, river shrimp, and other shrimp varieties held a large share, recording triple-digit growth. Black tiger shrimp also showed stable growth, while frozen whiteleg shrimp declined; however, processed whiteleg shrimp products increased significantly. This trend reflects a shift in Chinese consumer preferences toward high-quality, convenient, and ready-to-cook shrimp products, presenting an opportunity for Vietnamese exporters (*nguoينوitom.vn*, 2025).

Industrial shrimp farming and export activities are currently common in Kien Giang. For instance, one shrimp farm invested in a three-phase electrical system for high-tech shrimp farming, costing nearly VND 1.4 billion to operate 30 shrimp ponds, each 1,200 m². On average, the farm sells about 80 tons of shrimp per year (size 30 shrimp/kg), favored by Cambodian traders, generating annual profits exceeding VND 1 billion. This illustrates that shrimp exports from Kien Giang ensure profitability for farmers and enterprises, which corresponds with survey respondents’ evaluation

that this criterion is the highest-achieved economic sustainability measure. The next most frequently selected criterion was “stable growth in export revenue”, chosen by 83.3% of respondents.

5.2. Social Sustainability Requirements

The social and political sustainability criteria for Kien Giang shrimp exports include: Creating additional employment and income opportunities for local workers, ensuring social equity and labor rights, enhancing national image and reputation, contributing to local political and social stability, other relevant criteria.

According to survey respondents, the highest-rated social sustainability achievement is “creating additional employment and income for local workers” (95.8% of respondents), followed by “enhancing national image and reputation” (75% of respondents).

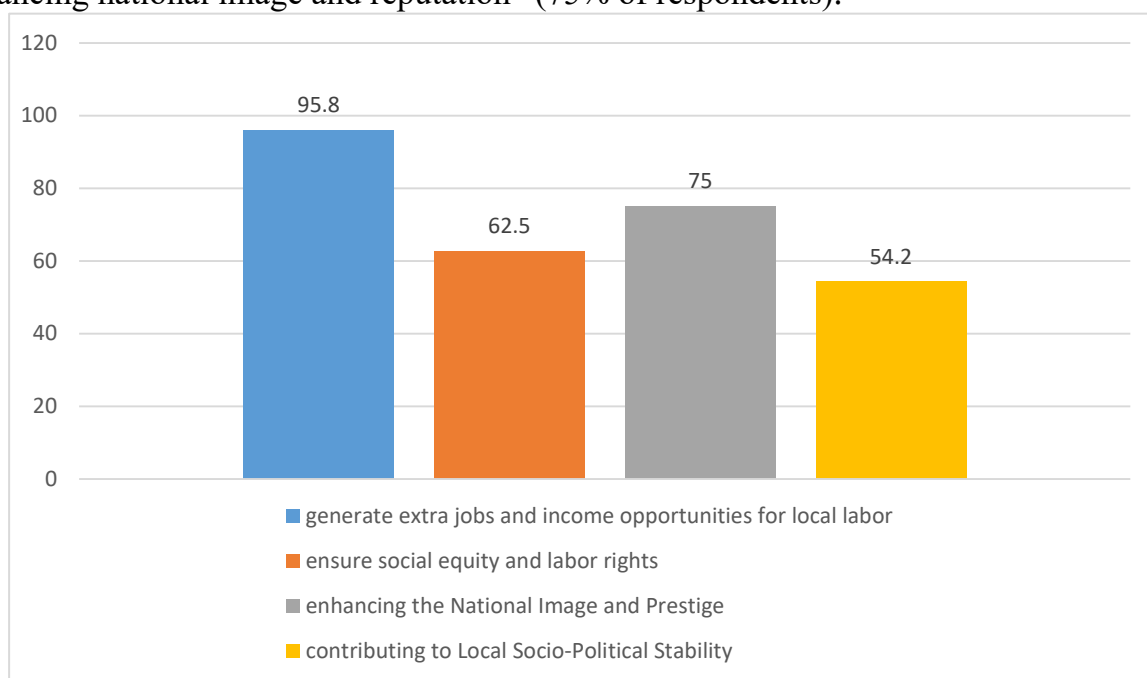


Figure 10. Survey Results on the Criteria for Assessing Political and Social Sustainability in Shrimp Product Exports from Kien Giang

(Source: Survey Results)

Kien Giang currently has over 200 seafood processing enterprises, including 25 large-scale seafood processing and export companies equipped with advanced production technologies that meet the requirements for exporting seafood to countries worldwide.

Through activities such as harvesting, aquaculture, and seafood export, the sector has created jobs for over 200,000 unskilled workers in the province, including more than 70,000 direct offshore workers, significantly contributing to economic development and stabilizing social life (nongnghiepmoitruowng.vn, 2024).

The development of the seafood sector has had a strong impact on all areas and industries in society. The growth of this sector also means the creation of numerous job opportunities for unskilled labor, providing income and improving the living standards of local residents. Additionally, the sector’s development contributes to increasing the province’s export turnover, enhancing trade and exchange with many countries and regions around the world; it also serves as a driving force for related sectors such as agriculture, forestry, industry, and commerce. The growth of the seafood industry leads to regional planning, balancing rice production with aquaculture; it strengthens investment in the establishment of production and processing plants within the province, changes the production structure of the industry, and contributes to a more reasonable and efficient redistribution of production (tepbac.com).

Seafood exports in general, and shrimp exports from Kien Giang in particular, not only create additional jobs and income for local labor and enhance national image and prestige, but also ensure social equity and labor rights (62.5% of survey respondents) and contribute to local socio-political stability (54.2% of survey respondents).

5.3. Environmental Requirements

The criteria for assessing environmental sustainability in shrimp product exports from Kien Giang include: sustainable use of water and land for aquaculture; minimizing chemicals and antibiotics in shrimp farming; compliance with international environmental standards (ASC, BAP, etc.); integration with ecological farming models (shrimp–forest, shrimp–rice); and other criteria. According to the survey, the criterion “minimizing chemicals and antibiotics in shrimp farming” received the lowest selection rate (62.5% of respondents), while the two criteria “compliance with international environmental standards (ASC, BAP, etc.)” and “integration with ecological farming models (shrimp–forest, shrimp–rice)” were selected the most frequently (83.3% of respondents).

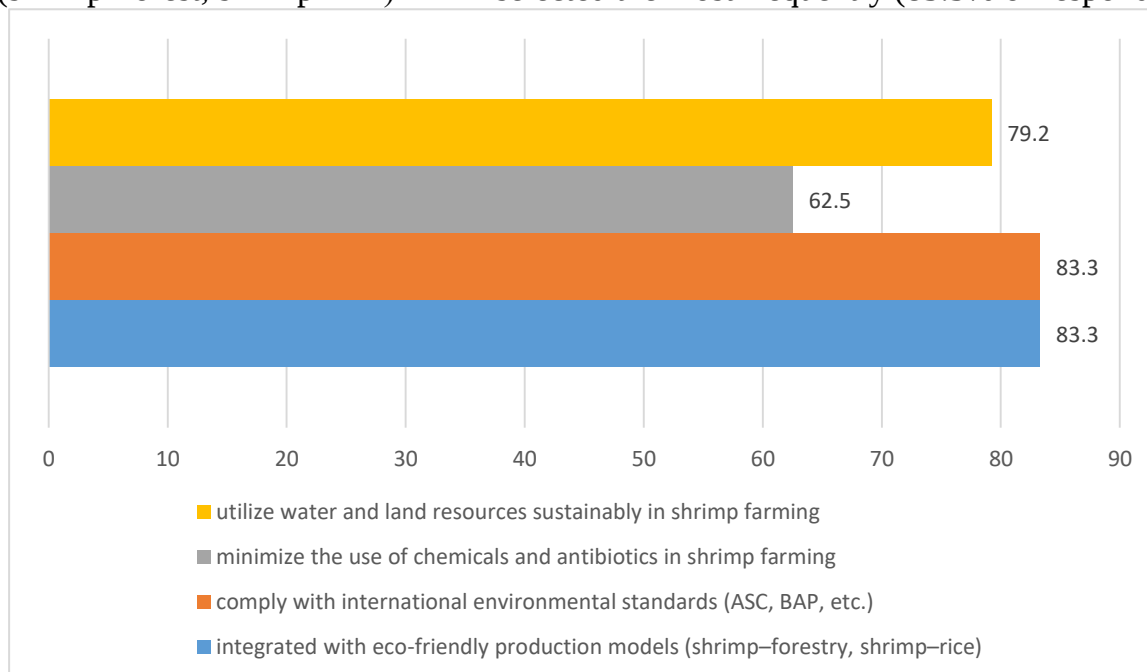


Figure 11. Survey Results on Environmental Sustainability Criteria in Kien Giang’s Shrimp Export

(Source: Survey Results)

Global consumers, particularly in Vietnam’s top three shrimp export markets – Japan, the EU, and the United States – are increasingly attentive to sustainable seafood consumption, and seafood certification standards are evolving to meet these diverse demands. Consumers in the U.S., EU, and Japan have mandatory requirements regarding food safety. Over 90% of North American retailers and 75% of EU retailers require seafood to meet environmental sustainability standards.

Various standards have been applied in aquaculture in Vietnam, including SQF, GlobalGAP, ASC, BAP, Naturland, AquaGAP, and VietGAP. However, the most widely adopted standards for shrimp exports are ASC, GlobalGAP, and BAP. These standards commonly focus on: food safety and hygiene; disease control; environmental safety; social responsibility; and traceability of products (thuysanvietnam.com.vn, 2023).

Kien Giang is actively restructuring its aquaculture sector, focusing on large-scale, high-quality production, technology application, enhanced productivity, value addition, and market competitiveness. Additionally, the province promotes safe and sustainable farming models that adapt to climate change. The province effectively implements the marine aquaculture development plan through 2030.

Currently, intensive to semi-intensive shrimp farming using high technology, pond lining, two- to three-stage farming, biofloc technology, minimal water exchange, and recirculating systems has become widespread across Kien Giang. Several farms in Giang Thanh District report that Semi-biofloc and Biofloc technologies increased productivity from 10–12 tons/ha to 30–50 tons/ha. Two- to three-stage farming ensures better environmental control, reduces disease risk, and enhances economic efficiency. Pond lining improves water quality, reduces pollution, and supports shrimp growth.

Kien Giang also strongly promotes integrated shrimp–rice farming, with approximately 106,000 ha operating under “smart production models.” This approach allows farmers to harvest both shrimp and rice, producing clean products with high economic efficiency while restoring ecosystems and adapting to climate change. These models are mainly concentrated in An Minh, An Biên, U Minh Thượng, Gò Quao, and Hòn Đất districts, which offer favorable natural conditions for shrimp–rice farming.

The application of international standards has improved product quality and value, gaining attention from farmers and enterprises. To date, over 800 ha operated by 259 households have achieved ASC certification under international standards. These models minimize environmental impacts and contribute to sustainable aquaculture development in Kien Giang.

Shrimp–rice systems utilize natural feed for shrimp, reduce production costs, and achieve average shrimp yields of 300–350 kg/ha, with some areas reaching 400–500 kg/ha. Farmers stock shrimp at the beginning of the dry season, and shrimp reach market size of 30–40 individuals/kg after 4–5 months. Crab polyculture is sometimes integrated. After harvesting shrimp, rice is sown using nutrients from shrimp waste, promoting healthy crop growth. This approach eliminates excess organic matter, limits pollution, reduces disease outbreaks, stabilizes ecosystems, and produces high-quality shrimp and rice.

Regarding marine cage farming, the province has supported the adoption of new technologies, transitioning from traditional wooden cages to Norwegian-style round HDPE cages with higher durability, resistance to storms, and larger volume capacity. To date, 69 cages (~3,531 m³) have been converted, resulting in improved technical and financial outcomes, reduced risk for farmers, and effective implementation of Kien Giang’s marine aquaculture development plan through 2030. Policies focus on developing the blue economy and attracting large-scale offshore aquaculture investors.

Exporting countries, including China, have tightened import standards regarding quarantine, antibiotic testing, packaging, and labeling. Non-compliance risks product rejection and significant economic loss, presenting both challenges and opportunities for Vietnam to standardize its production chain sustainably and professionally (thuongtruong.com.vn, 2025).

Unstable weather and disease outbreaks have historically led farmers to overuse pesticides, crustacean inhibitors, and growth stimulants to boost shrimp yield. Overuse of chemicals in aquaculture poses serious environmental risks and threatens both farmer safety and local ecosystems. Antibiotic residues in shrimp products also endanger consumer health. Vietnamese shrimp exports have repeatedly raised alarms regarding antibiotic residues, especially in the EU and Japan, which maintain stringent limits.

The Vietnamese aquaculture sector faced a “yellow card” warning on October 23, 2017, due to insufficient control over IUU fishing (illegal, unreported, and unregulated) in international waters and inadequate fisheries management, reflecting gaps in sustainable aquaculture and resource protection practices.

5.4. Overall Assessment

Through its efforts to meet sustainability criteria, Kien Giang’s shrimp exports have achieved certain successes. Survey respondents rated the province’s compliance with sustainable development criteria in shrimp exports predominantly at 4/5 (37.5% of responses).

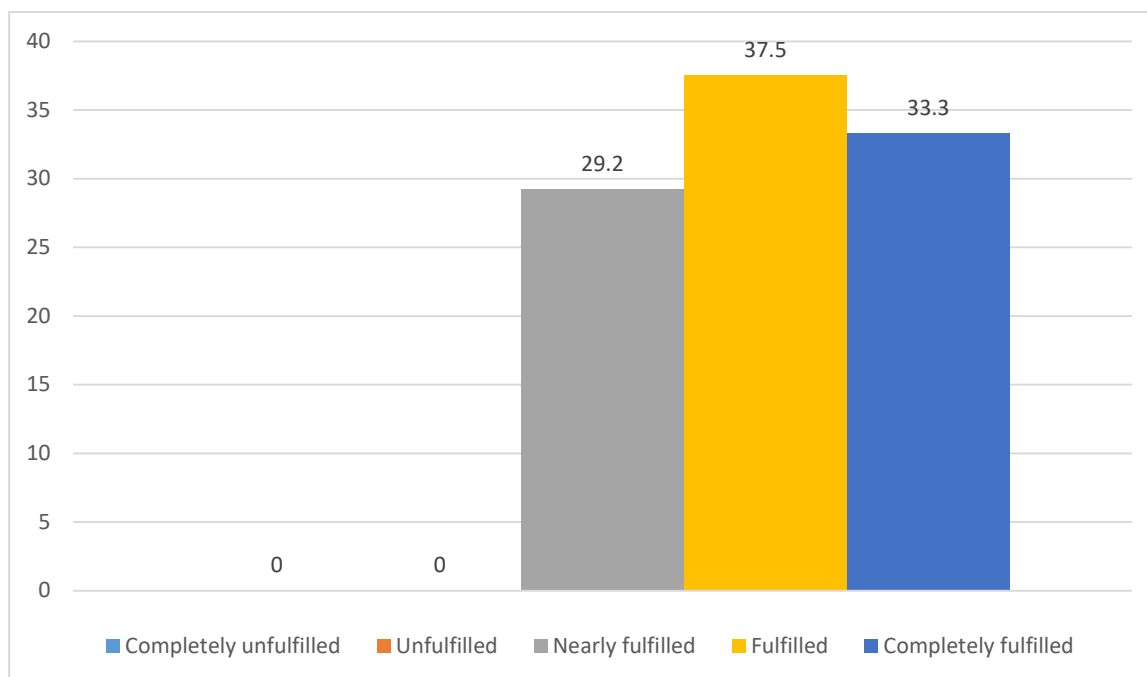


Figure 12. Survey Results on the Compliance with Sustainability Criteria in Kien Giang's Shrimp Exports

(Source: Survey Results)

The successes in sustainable shrimp exports in Kien Giang can be attributed to several facilitating factors. These include farmers' awareness and implementation of sustainability criteria, shrimp processing companies adopting processing and storage procedures that comply with sustainability standards, distribution and export enterprises understanding and implementing sustainability criteria, government agencies providing support and creating favorable conditions for stakeholders to comply with sustainability standards, government inspection and strict control over stakeholders and procedures, as well as other facilitating factors. Among these, survey respondents identified the most significant facilitator as shrimp processing companies implementing processing and storage procedures in compliance with sustainability criteria (83.3% of respondents), followed by government agencies providing support and favorable conditions for stakeholders to comply with sustainability criteria (79.2%). The factor rated least significant was government inspection and strict control over stakeholders and procedures (54.2%).

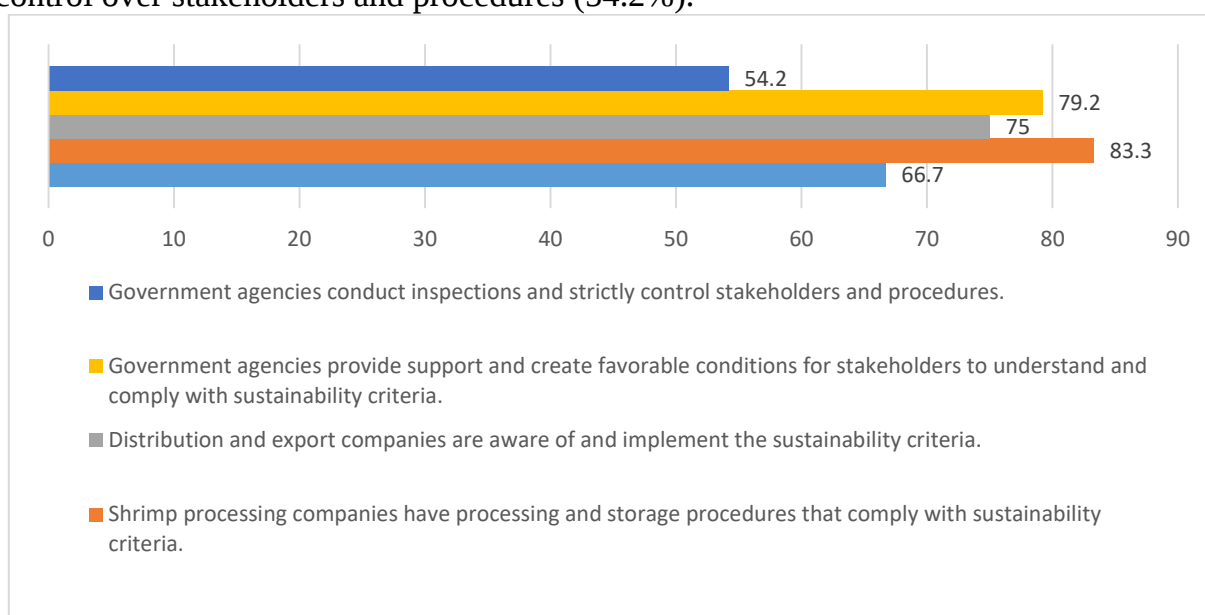


Figure 13. Survey Results on Advantages in Exporting Shrimp Products from Kien Giang in Meeting Sustainable Development Criteria

In addition, Kien Giang faces several challenges in meeting the sustainable development criteria. These challenges include the awareness and knowledge of shrimp farmers, the economic conditions of farming households, the production processes employed by shrimp processing enterprises, the techniques and technologies utilized by exporting companies, climatic and weather-related factors, governmental management and regulation, as well as other associated difficulties.

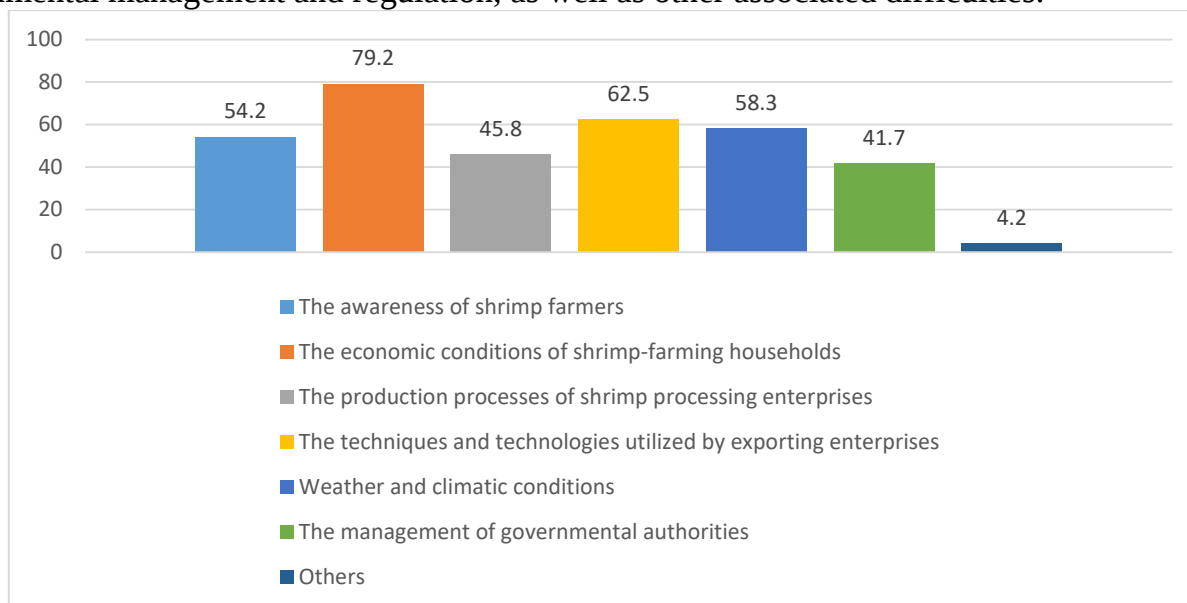


Figure 14. Survey Results on Difficulties in Exporting Shrimp Products from Kien Giang in Meeting Sustainable Development Criteria

(Source: Survey Results)

According to the survey findings, the most significant difficulty faced by Kien Giang in promoting shrimp exports toward sustainable development lies in the *economic conditions of shrimp-farming households* (selected by 79.2% of respondents), followed by *the technological and technical capacity of exporting enterprises* (62.5%). To meet the sustainability criteria in shrimp farming and processing, both farming households and enterprises must not only possess adequate awareness and understanding of the required standards but also invest in modern machinery, technology, and production systems. These investments are essential at every stage of the value chain—from shrimp farms to processing and export companies.

However, the province's weather and climatic conditions, characterized by prolonged heat and unpredictable changes, have posed additional challenges. In certain periods, extreme heat has caused mass shrimp mortality, while inadequate processing and preservation practices have further reduced product quality.

6. Solutions to Promote Shrimp Exports from Kien Giang, Vietnam, Toward Sustainable Development

6.1. Market Trends

In 2025, Vietnam's shrimp industry aims to achieve an export value of approximately USD 4.3–4.5 billion, reflecting a growth rate of 10–15% compared to 2024 (*thuysanvietnam.com.vn*, 2025). At the beginning of 2025, shrimp import trends in major consuming markets such as the United States, China, and the European Union (EU) have exhibited notable fluctuations.

In the United States, January import data showed strong growth in imports from India, while Ecuador's volume stagnated, Indonesia's slightly increased, and Vietnam continued its positive growth trend. The demand for shrimp consumption in the U.S. remains high, particularly among

younger consumers under 35 years old and the flexitarian population (those seeking to reduce red meat consumption). However, demand is somewhat constrained by concerns over price and preparation methods. Many consumers perceive shrimp as more expensive than chicken, although the price gap is not substantial. Moreover, convenience and familiarity in cooking are key factors—consumers enjoy shrimp but often hesitate to prepare it themselves due to difficulties in peeling, deveining, and cooking it properly. Younger consumers tend to consume shrimp more frequently than older groups, primarily through take-out or dining out. Therefore, to increase household consumption, shrimp companies should position shrimp as a daily protein source, offer smaller packaging sizes to reduce retail prices, and develop value-added, ready-to-cook shrimp products that cater to convenience-oriented lifestyles.

In China, lobster imports continued to increase in early 2025, while imports of whiteleg and black tiger shrimp have yet to fully recover, extending the trend observed at the end of 2024. Despite the overall decline in shrimp imports, shrimp still accounted for 24% of China's total seafood import volume and 41% of its import value. Shrimp remains the most popular seafood category on China's e-commerce platforms, with higher consumption rates in affluent urban areas such as Beijing and Shanghai compared to other regions.

In the European market, February 2025 recorded a relatively stable price and slow trading activity, as winter is not a peak consumption season. Thus, no significant changes were expected for March. In 2024, European shrimp consumption continued to rise, particularly in countries like Germany, France, and the Netherlands, where seafood forms an essential part of daily meals. European consumers increasingly favor clean, organic, and processed shrimp products. Ready-to-eat items—such as steamed, peeled, or packaged shrimp dishes—have witnessed robust demand, aligning with modern, convenience-driven lifestyles. Consumption habits, however, differ across regions: in Western Europe (Germany, France), consumers prioritize premium, sustainably sourced shrimp; in Southern Europe (Spain, Italy), fresh shrimp remains preferred for traditional dishes such as *paella* or grilled seafood; while in Eastern Europe, an expanding middle class tends to favor mid-priced products suited to their budget (*vasep.com.vn*, 2025).

Beyond consumption trends, sustainability has become a central focus in the global shrimp export industry. Producers are increasingly competing to adopt environmentally friendly aquaculture practices, aiming to mitigate the negative impacts of intensive whiteleg shrimp farming. Sustainable shrimp farming is now defined through compliance with internationally recognized certification standards, such as BAP (Best Aquaculture Practices), GSA (Global Seafood Alliance), HACCP, or VietGAP/CBIB. These certifications play a crucial role in strengthening consumer trust in sustainably produced shrimp products (*tepbac.com*, 2025).

6.2. Strategic Orientation

In response to evolving global market trends, Kien Giang has outlined several strategic directions for the coming years. The province continues to consider shrimp production and export as vital pillars of its economic structure. Kien Giang is transitioning toward clean and sustainable shrimp production models that meet stringent international standards, with the dual aim of maintaining existing export markets and penetrating new, high-demand markets. The province emphasizes the application of modern technologies in shrimp farming, processing, and preservation, alongside value-chain integration within Vietnam's shrimp sector. Moving forward, Kien Giang will prioritize the development of high-value, deeply processed shrimp products to increase added value and satisfy the requirements of demanding markets such as the United States, Japan, and the European Union.

6.3. Proposed Solutions

To further promote shrimp exports from Kien Giang toward sustainable development, surveyed stakeholders also proposed a range of recommendations, including:

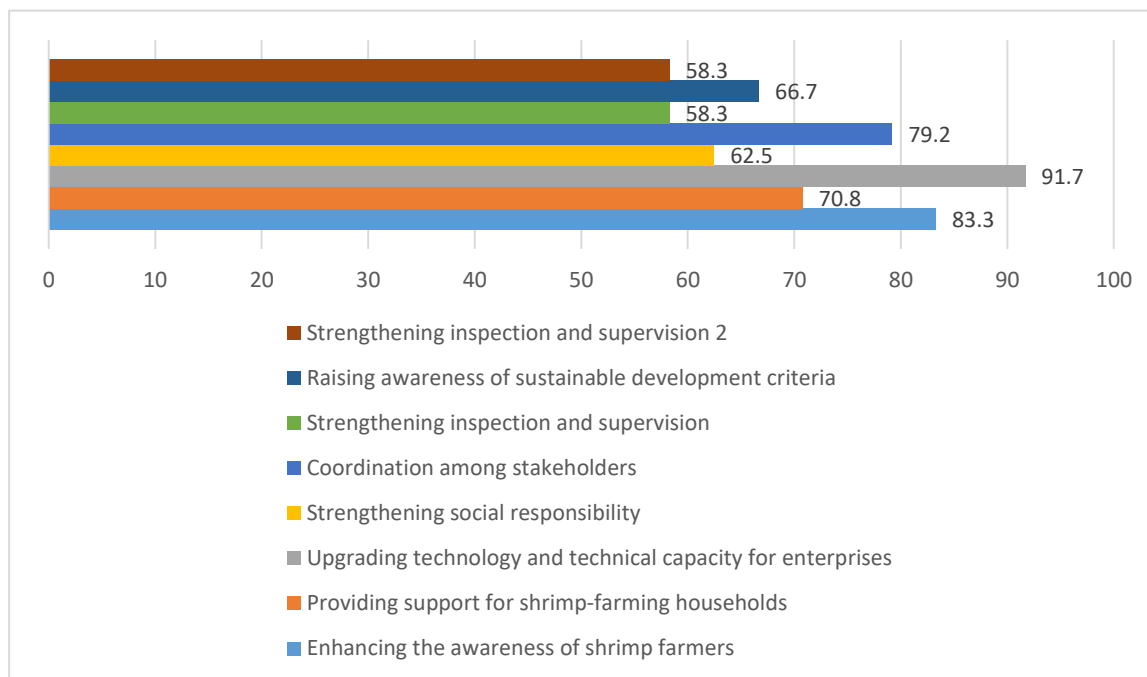


Figure 15. Survey Results on Proposed Solutions to Promote the Export of Shrimp Products from Kien Giang toward Sustainable Development

(Source: Survey Results)

According to the survey findings, upgrading technology and technical capacity for enterprises—including those engaged in purchasing, processing, and exporting shrimp products—was identified as the most crucial solution, accounting for 91.7% of the respondents' selections. This was followed by raising awareness among shrimp farmers (83.3%), as they are directly responsible for shrimp cultivation and care. Enhancing their understanding and equipping them with knowledge about sustainable development criteria is therefore essential to ensuring compliance with export requirements.

In addition, based on the actual situation of shrimp exports from Kien Giang, as well as current market trends and the province's strategic orientation, several practical measures should be implemented to promote shrimp exports in line with sustainable development objectives:

First, it is necessary to strengthen the cooperation among shrimp farmers and harvesters, purchasing and processing enterprises, and relevant state agencies (both domestic and international).

Second, shrimp farmers and enterprises should be encouraged to adopt proactive, innovative, and advanced clean technologies in production, harvesting, and preservation. Financial and credit support must be expanded to enable them to confidently and effectively apply such technologies in their operations, as well as to better understand consumer preferences and export market demands.

Third, it is essential to ensure compliance with sustainable development requirements throughout the production–harvesting–export–consumption chain. Digital technologies should be applied to design and monitor shrimp farming systems, promptly detect violations, and provide early warnings or corrective measures for farmers and processors. Convenient information channels should be established to allow international consumers to provide direct feedback on product quality.

Fourth, the diversification of shrimp products should be promoted to better meet consumer trends in importing markets. Processed shrimp products can be marinated, flavored, or categorized according to income levels, gender, religion, vegan preferences, or environmental friendliness, thereby improving competitiveness and adaptability.

Fifth, inspection and supervision should be strengthened to ensure the quality and brand reputation of Kien Giang's shrimp products. Farmers should be guided on how to comply with IUU (Illegal, Unreported, and Unregulated fishing) standards, while cooperation among farmers and enterprises should be enhanced to register national shrimp brands, establish international brand recognition, and ensure full traceability of origin to better penetrate global markets.

Conclusion

Shrimp exports have always been a strategic strength of Vietnam in general and Kien Giang Province in particular. In the context of increasing global competition and the tightening of technical barriers imposed by importing countries, it is imperative for Kien Giang to promote shrimp farming and processing toward sustainable development. Doing so will bring shared benefits to stakeholders, enhance the credibility and competitiveness of local aquaculture, and elevate the reputation of Vietnam's seafood industry in the international market.

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