

JELLYFISH AND THE ECONOMIC DEVELOPMENT POTENTIAL OF DO SON, HAI PHONG

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ABSTRACT

Hai Phong is located along the Bac Bo Bay - the sea area with the largest economic jellyfish reserves in our country, accounting for 88% of the total jellyfish reserves, so there are many fishing boats and jellyfish processing facilities. Every year, from the beginning of January until the fourth month of the lunar calendar, Do Son fishermen stretch their nets out to sea to catch jellyfish. Although the jellyfish season only lasts 3-4 months, the “sea fortune” from jellyfish has brought them a large source of income after each fishing trip. Jellyfish, with its high nutritional value, is a “white gold” resource for Do Son fishermen. In the article, we look at the economic development potential of jellyfish, and also point out limitations of jellyfish production and processing. Next, the article examines the orientation for developing the marine economy of Do Son, Hai Phong and offers some solutions to exploit the potential of jellyfish in developing the marine economy of Do Son, Hai Phong.

Keywords: Jellyfish, potential, economic development, Do Son, Hai Phong

1. Raising the issues

Do Son District is located between two rivers, Van Uc and Lach Tray, with a long coastline and wide sea area. This is an area with a strategic economic-social, security-defense position of Hai Phong city and the Northern coastal region; is an area with many favorable natural conditions for key marine economic sectors such as tourism services, farming, and fishing. (Manh Thuong, 2021)

The sea brings to Do Son many delicious and strange dishes. People here also work hard to find recipes to prepare dishes so as not to waste any ingredients from mother nature. Many dishes made from jellyfish are prepared with great care, such as jellyfish wraps and jellyfish salad ...

Jellyfish salad is one of the beautiful results of this creative process of the port people. Jellyfish salad is made very meticulously so it no longer has the salty taste of sea salt, on the contrary it is very crispy and cool.(Rachel Pham, 2022)

Every year, from the beginning of January until the fourth month of the lunar calendar, Do Son fishermen stretch their nets out to sea to catch jellyfish. Although the jellyfish season only lasts 3-4 months, the “sea fortune” from jellyfish has brought them a large source of income after each fishing trip. Unlike other types of seafood, which must be caught far from shore, jellyfish only need to be caught close to shore. Although jellyfish fishing is a difficult job, the income from this job is also quite unstable because not every year there is a good harvest. (Hai Ngan, 2019a)

Implementing Resolution 36-NQ/TW on “Strategy for sustainable development of Vietnam's marine economy to 2030, vision to 2045”, along with great progress in the field of tourism, Do Son district has important developments in fisheries services, exploitation, farming, processing and logistics.

In 2022, Do Son has a number of economic indicators that have increased over the same period, such as the growth rate of production value of economic sectors estimated at 17.71%; Accommodation and food service revenue reached 1,760 billion VND, an increase of 73% over the same period; industrial production value increased by 21.7%; Total retail sales of goods increased by 25.9%; Total tourist arrivals increased by 50.39% over the same period. (Haiphong.gov.vn, 2022)

In this research article, the author uses a desk research method, synthesizing data information in the media and reports on the economic situation of Do Son, Hai Phong in general, as well as assessments and analyzes of jellyfish potential here. In addition, in the research article to find out information about jellyfish and jellyfish in Do Son, Hai Phong, the research team collected more information by surveying through the link:

(<https://docs.google.com/forms/d/e/1FAIpQLSdcpgtv75txDBGqIR5hZCm4JSHSu4TMabrxt2hNxhaYjvgpg/view> form)

to grasp consumer trends with jellyfish products to gain more information and a basis to evaluate the economic development potential of Do Son, Hai Phong. During the survey on jellyfish in Do Son, Hai Phong, the research team went directly to Do Son to survey the people and tourists living and traveling here. The number of survey questionnaires was collected and included in the analysis. The total number in the research article is 254 votes.

2. Overview of jellyfish

What is jellyfish

Jellyfish is a type of mollusks, boneless, umbrella-shaped, soft-bodied, surrounded by many tentacles used to catch prey. Jellyfish tentacles contain toxins that can cause itching and even skin burns. When moving, they contract their parachutes and then slowly push water out of their mouth holes and in the opposite direction. Jellyfish have a transparent body, especially containing up to 98% of their body as water, and are most adapted to tropical waters, including Vietnam's sea. (bachhoaxanh.com, 2023)

Jellyfish is considered a good food and also contains many beneficial substances. Every 100g of jellyfish meat contains: 12.3g of protein; 9.5g iron; 3.9g sugar; 1.32g iodine; 0.1g fat; 182mg calcium. Besides, it also contains B1, B2, phosphorus, magnesium and especially collagen - an extremely good active ingredient for the skin, slowing down the aging process. (bachhoaxanh.com, 2023)

Some kinds of jellyfish:

White jellyfish: In Vietnam, there is a very large exploitation reserve of jellyfish (more than million tons), especially the white jellyfish *Rhopilema hispidum* and the exploitation capacity is up to hundreds of thousands of tons per year. In terms of nutrition, economics and social significance, the white jellyfish *Rhopilema hispidum* is considered a superior object that can be used as a raw material to develop food products with high nutritional quality and many benefits for human's health with large-scale production. (VuThi Thu Hang, 2023).

Red jellyfish: In terms of shape and structure, red jellyfish are no different from regular jellyfish. The difference is that the jellyfish's entire body is dark brown and slightly smaller in size than regular jellyfish. Normally red jellyfish only reach 5-6kg, large ones reach 10kg but the selling price is ten times higher. Red jellyfish is valuable, but to become a delicious dish, the preparer must be very picky. (kenh14.vn, 2023)

In four coastal regions of Vietnam, the total economic jellyfish reserves are estimated at more than one million tons, mainly white jellyfish in season from January to July every year, red jellyfish usually from February to June, checkered jellyfish usually from April to August. (vnexpress.net, 2021)

If jellyfish are said to be the white gold of the sea, then red jellyfish can be considered "diamonds" chosen from that "white gold". According to local fishermen, out of thousands of

white jellyfish, only 1-2 red jellyfish can be found. Therefore, hunting red jellyfish is not easy and sometimes you are lucky to catch it.(kenh14.vn, 2023)

Uses of jellyfish:

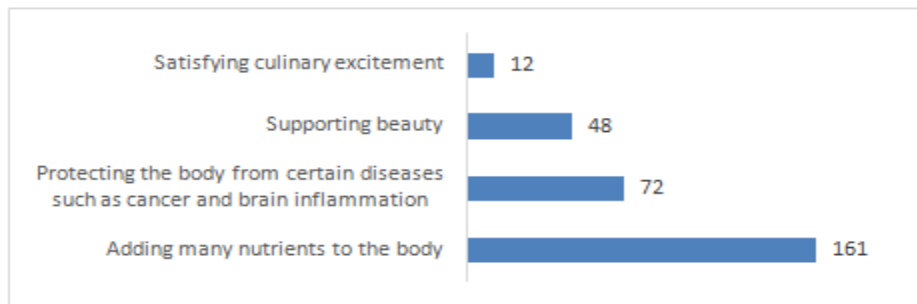
According to topasgo.vn (2021) Jellyfish is an animal that lives in an aquatic environment, capable of moving underwater when contracting, pushing water through its mouth and can move forward or backward in the opposite direction. On average, 100g of jellyfish contains 12.3g of protein, 0.1g of fat, 182mg of calcium, 3.9g of carbohydrate, 132mg of iodine, 9.5mg of iron, and also contains many other vitamins and other trace elements. in jellyfish... Uses of jellyfish:

- *Supplement many nutrients for the body:*Protein, antioxidants, jellyfish also contain small amounts of nutrients calcium, magnesium, phosphorus, choline...In addition, jellyfish also contains nutrients such as omega3 and omega6 fatty acids. These are essential fats in your daily diet. These acids are unsaturated fatty acids that may help reduce the risk of cardiovascular disease.
- *Strong anti-oxidant:* Jellyfish also contains high levels of polyphenols, which are natural compounds with strong antioxidant effects. This nutrient is very good in the diet because it promotes brain function and protects the body from certain chronic diseases such as cancer, type 2 diabetes.
- *Providing selenium for the body:*This is an antioxidant nutrient that protects cells in the body from oxidative stress, escapes Alzheimer's disease, and also has important effects in metabolism and thyroid's function.
- *Increasing amount of choline in daily diet:* Choline is one of the essential nutrients that many people do not supplement enough. 58g of dried jellyfish contains up to 10% of the daily nutritional value, so it is essential for those who need to supplement this rich source of choline nutrients. Choline has many important functions in the body such as synthesizing DNA, supporting the nervous system and producing fat for cell membranes, helping the brain process information better, faster and remember longer, helping the body reduce anxiety.
- *Proving an abundant amount collagen for the body:* Collagen is a protein that plays an important role in the structure of liver, skin and bone tissues. The collagen content in jellyfish can bring many benefits such as improving skin elasticity, reducing joint pain, anti-oxidation and significantly lowering blood pressure. In addition, the amount of collagen in jellyfish also helps protect prolapsed cells from the harmful effects of sunlight, improves the wound healing process and helps treat arthritis..

- Besides, jellyfish also has the effect of treating blood stasis that causes heat, acne, cough, phlegm, constipation, and body aches.

In the survey by the research group on jellyfish, the survey on the benefits that jellyfish brings to consumers, of the 254 survey participants, 184 have ever enjoyed products from jellyfish, their comments on the benefits of jellyfish are as follows:

Figure 1. Benefits of jellyfish

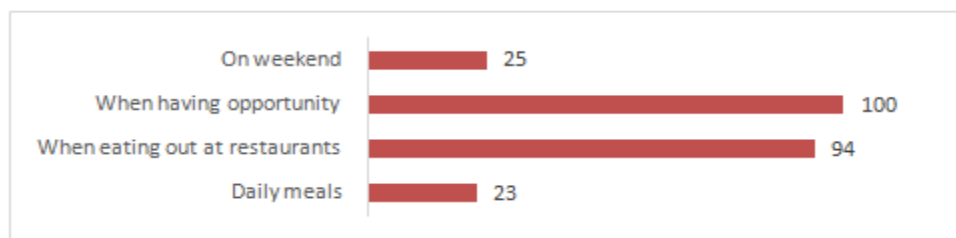


Source: The survey's results

The results showed that 161 votes said that jellyfish add many nutrients to the body, 72 votes said that jellyfish products help protect the body from certain diseases such as cancer and brain inflammation, 48 votes agreed with its effect in supporting beauty, in addition 12 votes said that jellyfish also helps satisfy culinary excitement.

Consuming jellyfish is also popular with many people. Surveys on the time consumers often use the product, survey results show:

Figure 2. Times to use jellyfish products



Source: The survey's results

Thus, 184 people who use jellyfish products show that they will enjoy it every time they have the opportunity with 100 responses, when eating out at restaurants with 94 responses, on weekends and holidays with 25 responses and daily meals with 23 responses.

2. Economic development potential of jellyfish in Do Son, Hai Phong

2.1. Economic development potential

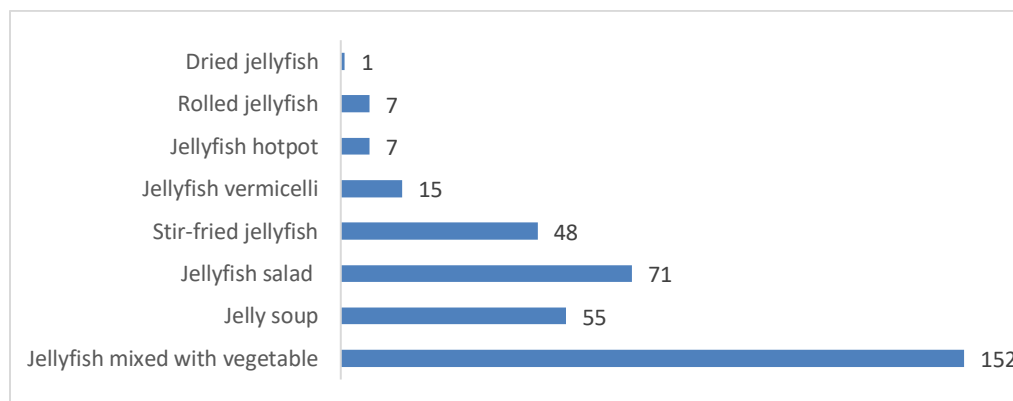
Sea jellyfish bring nutritional value, diversifying food sources: Jellyfish is an important food source and is widely used in the cuisine of many countries around the world. Jellyfish meat contains a lot of protein, vitamins and minerals necessary for health. In addition, other parts of jellyfish such as membranes, corneas and tentacles are also used in the production of cosmetics, drugs, pharmaceuticals and many other products.

Many foods can be made from jellyfish such as jellyfish salad, jellyfish salad, jellyfish soup... Do Son jellyfish salad appears every May, this is the time when Do Son catches a lot of jellyfish and uses them as a special ingredient. (Tran Le, 2022).

In May, the end of the jellyfish fishing season is also the beginning of jellyfish dishes being widely prepared throughout Hai Phong, the most prominent of which is jellyfish salad. The salad is clear in color, chewy and crunchy, very enjoyable, mixed with an interesting sour, spicy, salty and sweet taste. Milk salad is suitable as an appetizer or eaten with rice. (Nguyen Hong Ngoc, 2022)

Do Son jellyfish salad, a dish with a unique flavor of crispy jellyfish, sliced to taste and eaten with vegetables, spices to taste, adding a little sesame for extremely fun and attractive. Jellyfish salad at Do Son is fresh and delicious. When eaten, it still feels crispy and chewy. The sesame flavor combined with the accompanying vegetables and jellyfish meat creates a refreshing taste. (Thao Nguyen, 2022)

Figure 2. Some popular jellyfish products



Source: The survey's results

In the research team's survey results on favorite jellyfish products, the top spot is “jellyfish salad” with 152 choices, followed by “jellyfish salad” with 71 choices, “jellyfish soup” with 55 choices, “stir-fried jellyfish” 48 choices, “jellyfish vermicelli” 15 choices, “jellyfish hot pot” and “rolled jellyfish” with 7 choices and 1 choice for “dried jellyfish”.

Jellyfish is considered as “white gold”: In the past, jellyfish always made fishermen stay away because they were worried about tearing their nets, but now suddenly they have turned into “white gold”, a specialty processed and packaged for export...(Tien Dung, 2017)

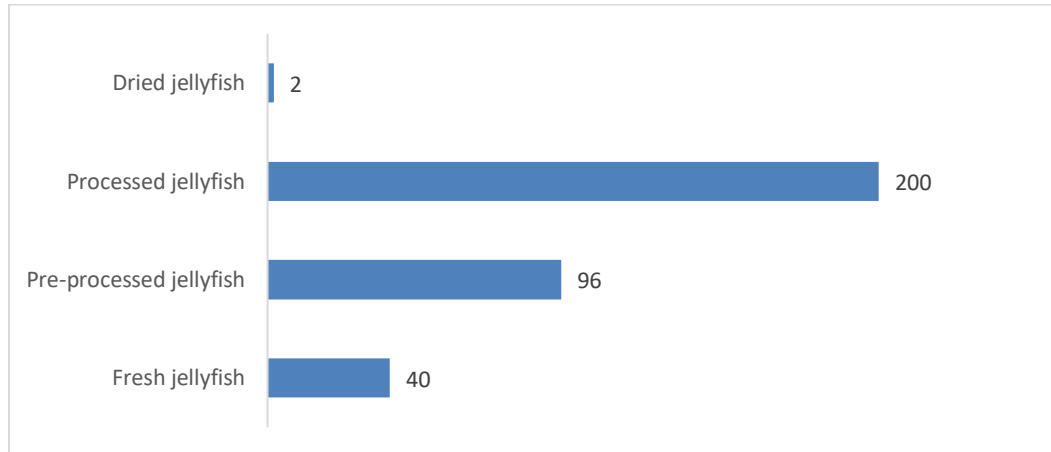
Unlike other types of seafood, which must be caught far from shore, jellyfish only need to be caught close to shore. Every time it's jellyfish season, except for days when the sea is rough or when the water is “stagnant” when the boats don't go out to sea, otherwise they go out to sea regularly. There are many days, making 2 or 3 trips is normal. Doing a quick mental calculation, each jellyfish season, each ship can earn from several hundred million to billions VND. (Tu Hung, 2016)

Jellyfish brings jobs and income for fisherman: Jellyfish fishing has been around for a long time, but in the past ten years, jellyfish have been exported, bringing income to people, so it has received attention. The price of jellyfish depends on the year and season. Large jellyfish cost from 15,000 - 20,000 VND/fish, smaller jellyfish cost about 8,000 - 12,000 VND/fish. Normally, there are 2 floods a month, each flood lasts about 7-8 days. On a trip out to sea, if you catch a lot of jellyfish, you will catch about 1,500 jellyfish, but if you catch a lot of them, you will only get about 300 - 400 jellyfish. The jellyfish's legs and arms are the most delicious parts, accounting for more than 60% of the whole value, sold for about 60,000 VND/kg. Jellyfish slab costs about 13,000 VND/kg. The amount of finished jellyfish products is mainly exported to China, the rest is sold domestically to be processed into jellyfish salad and jellyfish soup... (Hai Ngan, 2019a)

Ngoc Hai fishing port currently has 6 jellyfish processing facilities. On average, each factory receives about 10 trains/day. During the jellyfish season, each ship has 5-6 members and if they work hard, they will earn about 200 million/month; Minus all costs, each crew member earns 60-80 million/crop. Not only that, each factory also creates jobs for about 20 workers with an income of 40-50 million/crop/person. Although the jellyfish fishing profession is quite difficult, the processing is laborious, and the income is unstable depending on the water for seafarers in Do Son on days when the sea is empty of shrimp and fish, jellyfish are like a “sea fortune” that God gives.(Hai Ngan, 2019a)

Sea jellyfish are loved by many people. When asked about the type of sea jellyfish that people and tourists often buy, the survey results were recorded in Figure 3.

Figure 3. Various types of jellyfish are consumed

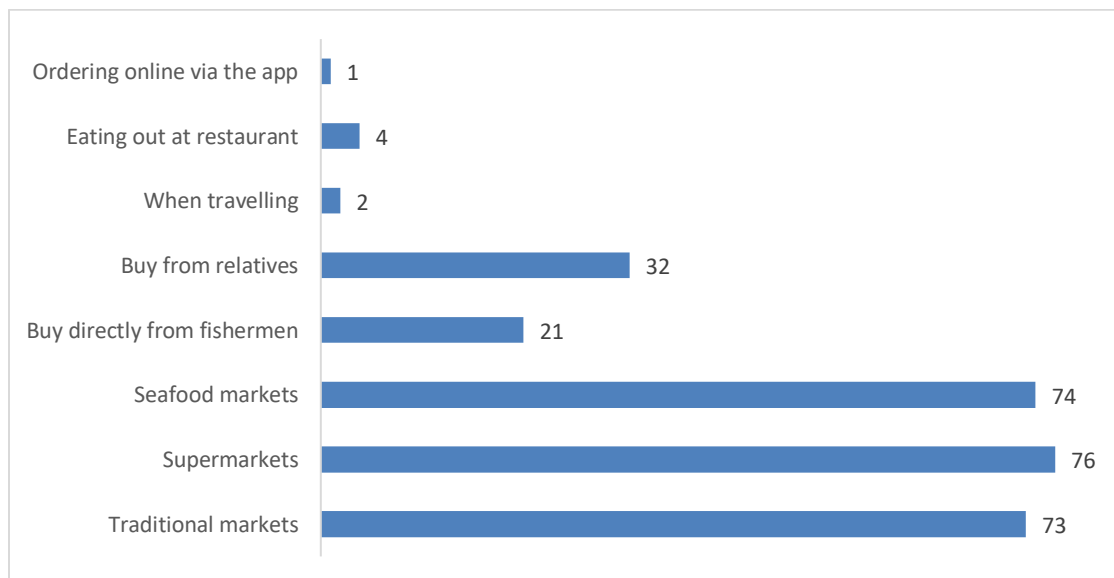


Source: The survey's results

Pre-processed jellyfish is the most chosen choice with 200 choices, pre-processed jellyfish with 96 choices, fresh jellyfish with 40 choices and 2 choices to buy dried jellyfish.

Jellyfish shopping is also bustling, and when asked about places where people and tourists can approach and buy jellyfish, the answer was recorded in Figure 4.

Figure 4. Places to buy jellyfish



Source: The survey's results

The results show that the majority of people will choose to buy at supermarkets, seafood markets and traditional markets with 76, 74, 73 choices respectively, followed by buying from relatives with 32 choices, buy directly from fishermen 21 options, in addition some comments suggest only eating out at restaurants, when traveling, and ordering online via the app.

2.2. Concerns from jellyfish

Although jellyfish have many advantages in terms of nutritional and economic value, there are also some limitations for the marine environment and other creatures as well as for tourists in Do Son, Hai Phong, including:

Impact on tourists: Some tourists on vacation at Do Son beach, Cat Ba... posted warnings on social networks because they were constantly attacked by jellyfish. Experts say that direct contact with some types of jellyfish for a long time can cause partial skin necrosis because of the toxins secreted from the jellyfish's body. Sea jellyfish are toxic to humans because the jellyfish's body has tentacles with millions of cells containing allergens and poisons. So, if you accidentally touch a jellyfish while swimming, these toxins will stick to the skin and enter the body. (Minh Duc, 2022)

Negative impact on the marine environment:

Jellyfish is a fairly healthy creature and has the ability to reproduce quickly. If the number of jellyfish increases too much, they can cause negative impacts on the marine environment, such as reducing the amount of dissolved oxygen in the water, affecting other creatures in the environment.

Waste and pollution: Jellyfish exploitation activities and food production from jellyfish can cause pollution and waste, affecting the marine environment.

In research by Truong Van Tuan (2016), it was found that waste treatment measures at jellyfish processing facilities have not been paid attention to and are not thorough. Jellyfish processing wastewater is highly polluted, with indicators exceeding the average permissible limit from 2 to 11 times, and is discharged directly into the receiving source without going through a treatment or mitigation system. The impact of jellyfish processing wastewater is quite clear through assessment indicators before, during and after the processing season; increases the potential risk of environmental incidents, changing the quality of coastal water used for aquaculture, swimming and water sports activities. (ZKNIGHT, 2019)

For other creatures: Jellyfish can eat algae and bacteria, competing with other organisms in the same habitat. Additionally, jellyfish can also pose a threat to small fish by eating fish eggs or young fish.

Spreading: Jellyfish have the ability to move to different areas, posing a threat to the marine environment of those areas.

The hardship of fishermen: To obtain pounds of finished jellyfish for export to domestic and foreign markets, not only the fishermen but also the processing workers work hard. Normally, jellyfish fishing trips last from morning to night. The fishing boat will return to the fishing port from 11 p.m. to 5 a.m. the next day. The workers will also work all night to prepare the jellyfish because the jellyfish must be made while still fresh to ensure the deliciousness of the finished jellyfish is preserved. (Hai Ngan, 2019a)

The jellyfish processing process is complicated:

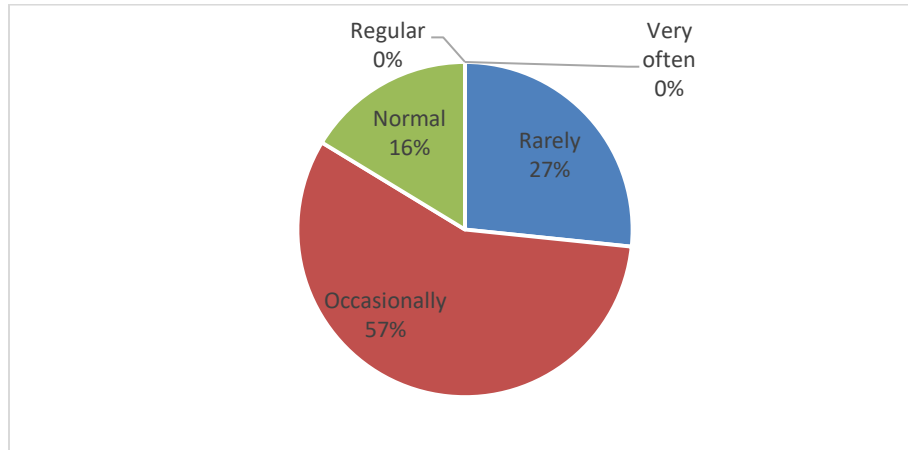
Jellyfish exploitation is a lucrative profession, but it is also an extremely strenuous profession. The net casting process is also complicated. The net is more than 2km long. It looks simply, but if you're not careful, it will overlap another house's net, so you have to spend time collecting the net and releasing it again. Next, the jellyfish must be picked up by hand. Every day, the fishermen have to soak their hands underwater for many hours. Jellyfish bodies are smooth and carry seawater so they are very heavy. On average, each jellyfish weighs about 15 - 20 kg, some are up to 1 quintal, so pulling them onto the boat is very difficult. In addition, jellyfish secrete toxins that cause itching and very uncomfortable hives. If you are not healthy enough and have sensitive skin that is prone to allergies, you cannot catch jellyfish. (Tien Dung, 2017)

The income of fishermen from fishing and processing is unstable: Although jellyfish fishing is a difficult job, the income from this job is also quite unstable because not every year there is a good harvest. (Hai Ngan, 2019a)

Domestic consumption is low, dependent on exports. Currently, up to 70 - 80% of Hai Phong's preprocessed jellyfish output is exported to China. Exports are mainly via unofficial sea routes and incur huge costs. The amount of official exports accounts for a small proportion of the export balance. The main exports are jellyfish limbs and brains. Jellyfish limbs - the most delicious and nutritious part of the jellyfish - are exported to China. (xuatnhapkhautheyeucau.com, n.d)

Meanwhile, domestic jellyfish consumption accounts for a small proportion. According to the research team's survey, the frequency of use of survey subjects was at the level of only occasionally using jellyfish products (Figure5)

Figure 5. Frequency of using jellyfish products among survey participants



Convention: 1. Rarely; 2. Occasionally; 3. Normal; 4. Regularly; 5. Very often

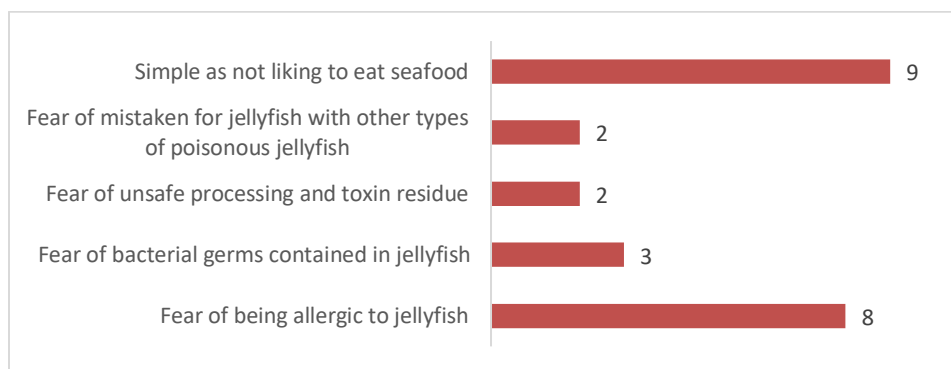
Therefore: Threshold score 1.00-1.80: Rarely; 1.81-2.60: Occasionally; 2.61-3.40: Normal; 3.41-4.20: Regular; 4.21-5.00: Very often

Source: The survey's results

Survey results of 184 people who have ever enjoyed jellyfish products, the answers showed that 105 people (57%) occasionally enjoy it, 49 people rarely enjoy it (27%), 30 people answered that it is normal. , and no one chooses regularly or very often. Therefore, the average score received for frequency of use is 1.90, showing that consumers only “occasionally” use the product.

At the same time, survey about concerns when enjoying jellyfish products. Results of a survey of people who do not eat jellyfish, the reasons are recorded in Figure6.

Figure 6. Concerns when enjoying jellyfish products



Source: The survey's results

The reasons given for not using jellyfish can be as simple as not liking to eat seafood, fear of being allergic to jellyfish, fear of bacterial germs contained in jellyfish, fear of being mistaken for jellyfish with other types of poisonous jellyfish, and fear of unsafe processing and toxin residue.

3. Solutions to exploit the potential of jellyfish in developing the marine economy of Do Son, Hai Phong

3.1. Orientation for marine economic development in Do Son, Hai Phong

Implementing Resolution 36-NQ/TW on “Strategy for sustainable development of Vietnam's marine economy to 2030, vision to 2045”, along with great progress in the field of tourism, Do Son district has important developments in fisheries services, exploitation, farming, processing and logistics.

To focus on developing the fisheries industry, Do Son district has issued many documents to lead, direct, and implement solutions to ensure safety for people and fishing vessels engaged in fisheries activities; coordinate with the Border Guard, Youth Union, Women's Union, and Farmers' Union ... Organize many programs to accompany, support and support fishermen at sea; Request the Department of Agriculture and Rural Development to provide financial support to fishing boat owners in the district according to Resolution 13/2020/NQHDND dated December 22, 2020 of the City People's Council stipulating policies to support the fishing boats monitoring system for fishermen in Hai Phong city; Strengthen management, inspection and sanctioning of administrative violations in fisheries exploitation activities; Coordinate with the city's IUU (Illegal, unreported and unregulated fishing) inter-sectoral delegation to participate in patrolling and checking the situation of illegal seafood exploitation at sea.(Manh Thuong, 2021)

3.2. Some solutions to exploit jellyfish potential in Do Son marine economic development

Increase the value of jellyfish: Currently, the annual jellyfish exploitation output in the world in general and in Vietnam in particular as well as in Do Son and Hai Phong is very large, but currently jellyfish are mainly only processed raw, most of them are primary products for domestic consumption as food and export with very low economic value. Therefore, finding processing technology to improve the use value and economic value of current jellyfish resources in general and Do Son and Hai Phong jellyfish in particular is important. It is necessary to continue research and have incentive mechanisms for scientists and investors to focus on this very potential product.

Encourage fishermen to stay at sea with peace of min: Every year, Do Son district needs to continue to coordinate with Hai Phong Fisheries Vocational School to organize training classes

and guide crew members for workers in the area; Coordinate with Do Son Border Guard Station to organize training classes and instructions on applying science and technology to the production, preservation, and processing of seafood in general and jellyfish in particular for fishing vessel owners; Actively disseminate the 2017 Fisheries Law and state regulations on ensuring food hygiene and safety for aquatic products and jellyfish on fishing vessels; Actively propagate to fishermen the provisions of law on combating illegal seafood exploitation for owners of fishing vessels and jellyfish exploitation...; It is necessary to soon research synchronous solutions to promote the potential for economic development of local fisheries in general and jellyfish in particular.

Find suitable cooperation and association models: Production units also need to see that building cooperative and linked models will help units support each other, control product quality, and protect valuable resources brought by the sea as well as finding a sustainable outlet for the product instead of purchasing, processing, and finding a market like today. At the same time, the local government of Do Son district and processing units need to have a plan to build a brand, promote propaganda and promotion, and introduce processed Do Son jellyfish products and dried jellyfish products at commercial establishments. Trade and culinary fairs, offers from supermarkets and large retail stores...

Focus on addressing aspects that consumers are concerned about with jellyfish products: Results of the research team's survey on aspects that consumers are concerned about, in which safety has the highest score and is at the "Very concerned" threshold, followed by flavor factors and processing processes, price, uses of jellyfish and nutritional content are all aspects of concern to consumers (Table 1)

Table 1. Aspects of concern to consumers

Aspects of concern	1	2	3	4	5	Average score	Level of concern
Health benefits	3	12	39	97	33	3.79	Concerned
Nutritional content	3	14	41	101	25	3.71	Concerned
Processing	1	7	31	99	46	3.99	Concerned
Prices	1	3	47	107	26	3.84	Concerned

Flavor	2	1	21	113	47	4.10	Concerned
Safety	2	1	17	80	84	4.32	Very concerned

Convention: 1. Very unconcerned; 2. Not concerned; 3. Normal; 4. Concerned; 5. Very concerned

Therefore: Threshold score 1.00-1.80: Very unconcerned; 1.81-2.60: Not concerned; 2.61-3.40: Normal; 3.41-4.20: Concerned; 4.21-5.00: Very concerned

Source: The survey's results

Therefore, jellyfish processing and production facilities need to pay special attention to these factors, need to ensure standard production processes, ensure classification of jellyfish, and ensure hygiene and food safety issues so that the product value is affirmed, and not only provides products for the domestic market, but can be processed to add value to jellyfish and exported, bringing income to fishermen, and also is to enrich Do Son, Hai Phong and Vietnam in general.

Increase waste treatment measures and protect the environment: Apply scientific research to waste treatment and environmental protection, such as applying research by Truong Van Tuan (2016) in choosing appropriate jellyfish processing wastewater treatment technology. With biochemical treatment method combined with activated sludge reflux process, calculated - designed - constructed - tested; Adjusted and perfected the technology model for jellyfish processing wastewater treatment with a capacity of 10m³/day and night. It is necessary to continue to replicate this model, and at the same time continue to research complete technological processes for jellyfish processing wastewater treatment to apply to jellyfish processing facilities in Do Son, Hai Phong and other areas.

Conclusion

Do Son jellyfish is an export product that brings high income, creating jobs for many workers in Do Son, Hai Phong: Jellyfish processing not only brings income to fishermen but also contributes to creating more sustainable on-site jobs for fishermen. Applying jellyfish processing technology to increase the value of jellyfish products so as not to be dependent on traders purchasing and exporting jellyfish abroad, it is necessary to diversify export markets and stimulate demand in the domestic market. This will be a direction that needs attention from local authorities and production facilities as well as fishermen in Do Son and Hai Phong in creating new directions for the jellyfish exploitation, production and processing industry of locality. In addition, it is necessary to pay attention to encouraging fishermen to stay at sea with peace of mind, find appropriate cooperation and association models, increase waste treatment measures, and protect the environment so that they do not only focus on exploiting jellyfish but also

preserve the environmental landscape, protect the living environment for sustainable development in economic, social and environmental aspects in Do Son.

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