Quality, Health, and Safety Assurance of Fish Produce based on the Republic of Indonesia's Governmental Decree No. 57 of 2015 on the Quality, Health, and Safety Assurance of Fish Produce and the Increase of Fish Produce Value: A Sociophere Analysis in North Maluku

Absori Absori[1], Muhammad Amin Hanafi[2], Khudzaifah Dimyati[3], Natangsa Surbakti[4], Siti Barora[5], Suryani[6], Dewi Permatasari[7]

[1]Professor, Universitas Muhammadiyah Surakarta, [2]Lecturer, Universitas Khairun Ternate, [3]Professor, Universitas Muhammadiyah Surakarta, [4]Lecturer, Universitas Muhammadiyah Surakarta, [5]Siti Barora, Universitas Khairun Ternate, [6]Lecturer, Universitas Khairun Ternate, [7]Lecturer, Universitas Khairun Ternate

Abstract

Objective: This paper aims to describe the findings on quality, health, and safety guarantee of fish catch and the related regulations in the Governmental Decree No. 57 of 2015. **Method:** This research uses the juridical sociologic research method, with the descriptive qualitative approach, which describes the guarantee of quality, health, and safety of fish catch based on the Governmental Decree No. 57 of 2015. **Results:** It is found that there are violations in the form of an unhygienic method in processing the fish catch. In the Fish Auction Center, the processing uses chemical substances which are prohibited for food. **Conclusion:** The government should make a policy which support the fishermen, so that they may use a safer and a healthier method in processing fish.

Keywords: *Quality Guarantee, Health, Fish, Seafood, Regulations*

Background

The handling of the various problems which are the cause of food safety hazard regarding the fish-catching activity started from the activity in catching fish to the end consumers. The food safety system in the fish agroindustry include Good Manufacturing Practices (GMP), Standard Sanitation Operational Procedure (SSOP) and Hazard Analysis and Critical Control Point (HACCP)[1]. For the sales of domestic fish commodities or products, the fish catch of the fishermen are directly brought to the distributors to fulfill the demand of fresh seafood or to fulfill the demand of primary or secondary fish-processing industries.

Corresponding author:
Absori Absori,
Pabelan Street, Universitas Muhammadiyah Surakarta,
email: absorisaroni@gmail.com

Food quality and safety cannot be separated when discussing about seafood products. This is based on the fact that fish is included as highly perishable food. Thus, there must be high attention to the efforts to maintain the quality and safety of the products. Food products such as fish and its produces must be required to fulfill some food health and safety standards before being consumed.[2]

The fishermen have a crucial role in maintaining the health and safety standards of those fish. In the food industry, it is a must for the businessowners to pay attention to the safety of the food products so that the products may be accepted with superior quality.[3]

To guarantee the fish catch quality of health and safety, the Fishery and Sea Service of North Maluku worked together with the Fishery and Health Service of Ternate City to establish the fish catch guarantee of quality monitoring in the fish ports in the Fish Auction Center which was participated by fishermen, processing,

and marketing representatives.

In this activity, the head of the Fishery and Sea Service of North Maluku, M. Buyung Rajiloen, S.H., M.H. (personal communication, June 2020) stated that, "It is crucial to guarantee the health quality of the fish products in this fishery port to increase the fish catch health and safety quality for the people to consume. The increase of fish catch quality by the fishermen, the processors, and the marketers in Madya Ternate city may increase its price, which will surely increase the income of the fishermen."

The increase of health safety and quality on the fish for consumption may be carried out after the fish caught by the fishermen by using the cold chain system. This system is crucial as fish have a high level of water and protein, which makes them prone to rot. The most effective method is by maintaining the fish's temperature in a fresh condition when arriving at the port.[4]

Research Methods

This study used a sociological juridical research method with a qualitative descriptive approach, to describe the quality assurance, health and safety of fish catch based on Government Regulation No. 57 of 2015. Descriptive method is used to describe and explain the factual conditions during the research, examining how the **Quality Assurance, Health and Safety of Fishing Products in North Maluku.**

Discussion

The government actually has often socialized to fishermen, managers and the marketing department to not cheat in using additional materials which are prohibited by the government such as formaldehyde, rhodamine, and others. This needs to be conveyed in order to maintain the positive aspirations of processed fishery products from North Maluku province, such as Fufu (smoked fish), tore (roasted fish), salt (salted fish), ngafi (anchovies) and balacan (shrimp paste).

Mrs. Ivon as the head of quality development and verification from the Marine and Fisheries Office of North Maluku province conveyed the processing (SKP) from the Health Office of the Madya Ternate city, the head of the Drug and Food Monitoring Ternate Post, Drs. Karim Latu Consina Apt, M. Kes as the head of drug and food control delivered material about the assurance of safety and quality of food quality that will be marketed to the community.

Poor handling practices may lead to microbial contamination and may accelerate the rate of spoilage of fish[5]. Food safety, especially seafood, continues to be a problem for people around the world. Inappropriate food handling is caused by a lack of knowledge about food safety[6]. The fish catch requires special handling to keep the fish fresh. Handling of fish on board includes all actions against catches on board, from initial action to storage. This aims to maintain the quality or quality of fish according to the certain standard[7].

The fishing method (a type of fishing gear) is directly related to the way the fish die and the way the fish die is related to the physical and chemical processes that the fish body experiences in post-fishing. The government's concern for quality assurance of fishery products is quite high, it can be seen from the laws and regulations or policies that have been established, namely where these processes have a direct effect on fish quality.[8] The poor quality of fish can cause the sales price of the fish to decrease[9] as this has been regulated in the Government Regulation of the Republic of Indonesia Number 57 of 2015 concerning the System of Quality Assurance and Safety of Fishery Products and Increasing the Added Value of Fishery Products.[10] The cleanliness of the tools, the deck of the ship, the containers used are an effort to reduce contaminants in fish[11].

The absence of a clean seawater-cooler machine rends the facility regarded as inadequate or not fulfilling the standard. According to Nurani et al.[12], Ships with a refrigerated seawater system or RSW is better in implementing the quality standard compared to ships with a cooling system using ice blocks.

The fish-catching equipment which must be fulfilled by the fish-catching ships are as follows: 1) The tools and equipment must be kept clean; they must be kept in a good condition and must be ready to use. 2) There must be tarpaulin to protect the fish from the heat of the sun. 3) There must be a seawater pump. 4) There must be an adequate supply of ice to fulfill the need in sailing and in handling the fish after being caught. 5) The tools used to handle the caught fish must be maintained well. 6) There must be water/ice used to cool and to refrigerate.[13]

The requirements which must be met by the fish-catching ships regarding the role of the sailors are as follows: 1) the sailors must have the knowledge and the skills to catch fish, 2) the sailors have the responsibility to maintain personal hygiene and to maintain the ship's facilities including the tools and equipment, 3) The ship's crew who handle the fish must be in a healthy condition. s, 4) The ship's crew must undergo a periodic health examination at least once a year.[13]

The handling of the fresh fish by the North Maluku fishermen usually starts as the fish are brought up from their habitat in the sea. They are treated with low temperature. Sometimes, there is a lack of care regarding the factors of hygiene and health, even though the treatment, hygiene, and cooling process are the keys to produce fish catch of good quality. Only a small percent of motor boats bring ice to the sea. The fish hold used for it is usually far from perfect. There is a lack of sanitation and health factors when handling the fish on the boats. They do not keep the fish in a perfect condition, as some do not use chests or bulkheads, which makes the quality of the fish not good as they arrive on land.

Nasran[14] states that, "The process of cooling the sea catch is included as a post-harvesting activity. The fishing ships are completed with holds, tanks, and fish containers (chests, drum). But none of those equipment are insulated. They bring some supply of ice and other supporting materials, such as salt, fish-packing materials, etc."

The technical sampling analysis was carried out at six research locations in North Maluku. It was shown that dangerous additional chemical materials to preserve the fish in the form of formalin was found in three locations. Meanwhile, the rest of the three locations show a negative result. This shows that there are cases where dangerous additional chemicals were found in fresh fish, as concerned by the writer.

As we know, the fish catch products such as shrimp or fish which use the formalin preserving material have some characteristics. The characteristics include having a clean white color, springy texture, the gills are dark red instead of bright red, and the durability increases. Apart from that, the illegal additional chemical material in the form of formalin was also found on dried fish in four locations, meanwhile the other locations show negative results. Meanwhile, there is no proof of the presence of other illegal food additives such as borax and rhodamine B.

As described above, the evidences on those cases have been obtained from the survey results in the visited venues of fish-processing. Usually, the formalin chemical preservative is used on fresh fish or dried fish by the processor to fulfill certain market segments which demand springy and durable fish[15].

Technically, the processors consider the effectiveness and the quality of a better preservative, which is usually present in non-food preservatives. For that reason, many of the fish processors use formalin as fresh fish or dried fish preservatives. Apart from that, the use of formalin in food cannot be separated from macro policies which are implemented by the government.

The increase of the gas price which happened also influenced the income of the fishermen. The impact of that policy is seen from the increase of the production price. This makes the solar gas rarer and more expensive. The materials which must be brought to the sea become more expensive, including the ice blocks which are usually used to preserve fish by the fishermen.

Regarding the issue of formalin usage by the fishermen, marketers, or processors in the research venues, most have real impact to the fish demand. The people do not care about the fish they consume. The perception formed is that all fish marketed contain formalin. The impact is that the consumers will be scared or will have antipathy towards fish. Even though not all fish industries will be impacted, but this will make the people concerned as this will have direct impacts towards the income of the fishermen, the processors, or the sellers.

The government needs to formulate policies which support the fishermen, so that they may have the capability to use a healthier and a safer method. Without a pro-fishermen policy, thus the Republic of Indonesia Governmental Decree No. 57 of 2015 on the Quality and Safety Assurance System of Fish Produce and also the Increase of the Fish Produce Value becomes useless.

A one-sided decisive policy which is unbalanced by a pro-fishermen policy will be useless. The fishermen do

not have many choices in maintaining the fish products' safety and health standard if there is no incentive nor protection in the form of policies which bring advantage to the fishermen.

The sociosphere (the social environment) of the fishermen in North Maluku actually encourage them to use the method which produces an unhealthy and an unsafe sea produce from time to time. They are influenced by a non-populist policy which makes the sailing cost higher and higher. They lost competition to the illegal fishing perpetrators who have better ships and equipment. The healthy method of processing fish becomes less and less affordable.

The sociosphere is the most important environment in determining the health of the environment. The sociosphere is an environment which is formed due to a rational relation between human beings to fulfill the needs or to seek solutions towards the many challenges and difficulties together.

There are some socio-cultural problems which cause the continual malpractice in using illegal chemical products as the additives to the seafood caught in North Maluku. There is a lack of the official authorities. There is a lack of socialization, coaching, and trainings on food safety. There is a low awareness of the processors and the society on the food produce safety and there is a lack of long-term thinking. The society has an eating habit which lacks attention to the safety of the consumed food to their health.

In the institutional aspect, there is a weak coordination, job delegation, authority, implementation, and technical realization in the field regarding the sales and the processing of the food with safety and quality assurance. This is stated by the Minister of Health, Siti Fadilah Supari which suggests that there is a lack of coordination in the National Agency of Drug and Food Control which causes the issue of seafood being preserved with formalin. She suggests that the National Agency of Drug and Food Control have neglected its duty and its authority in monitoring the food and drugs, which may endanger the health of the people[16].

Conclusion

The handling of fish on the ship includes all treatments towards the fish catch on the ship, starting from the initial treatment to the storing. This aims to maintain the quality of the fish to match the desired standard. The indicator of a good treatment is that the fish catch has a good quality and is safe to be consumed. A bad quality of fish may cause the low price of the product in the market.

The government needs to formulate more policies which is pro-fishermen, so that they may use a safer and healthier method. The fishermen do not have many choices in maintaining the health and safety standard of the fish and its products if they do not receive incentives and if they do not have protection in the form of policies which put them on the upper hand.

The sociosphere of the fishermen in North Maluku actually encourages the fishermen to use unsafe and unhealthy methods in processing the sea produce. They are influenced by non-populist policies, which inflate the sailing cost. They also lost competition to the illegal fishing perpetrators who own ships and better equipment in treating the sea produce. The healthy processing method of sea produce becomes less and less affordable.

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