

## **SUPPLY CHAIN MANAGEMENT IN MR. ARPEN'S SALTED FISH BUSINESS IN BONTOSI VILLAGE, LABOBO SUB-DISTRICT, BANGGAI LAUT DISTRICT**

**Ellis Elviana Umbasene<sup>1</sup>, Sulaeman Miru<sup>2</sup>, Asngadi<sup>3</sup>**

**Master of Management Study Program, Faculty of Economics and Business, Tadulako Universities**

[eliselvianaumbasene@gmail.com](mailto:eliselvianaumbasene@gmail.com), [sulaimanmiru@yahoo.co.id](mailto:sulaimanmiru@yahoo.co.id), [asngadi@yahoo.com](mailto:asngadi@yahoo.com)

### **Abstract**

*The purpose of this study is to identify and analyze the supply chain model used in Mr. Arpen's salted fish business in Bontosi Village, Labobo District, Banggai Laut Regency. This research was conducted over the span of one month using a descriptive qualitative method with a survey approach. Data were collected through in-depth interviews with selected informants relevant to the study. The analysis was carried out using descriptive techniques based on supply chain analysis. The results revealed four types of supply chain models in Mr. Arpen's salted fish business. The first model involves fishermen, Mr. Arpen, and consumers. The second model includes fishermen, fish collectors, Mr. Arpen, retailers, and consumers. The third model consists of fishermen, fish collectors, Mr. Arpen, distributors, and consumers. The fourth model comprises fishermen, fish collectors, Mr. Arpen, distributors, retailers, and finally consumers.*

**Keywords:** *Supply Chain Management, Salted Fish Business, Supply Chain Analysis, Bontosi Village, Fish distribution.*

### **INTRODUCTION**

Salted fish business is a fish preservation business by utilizing salt and dried in the sun with a certain period of time until the fish is completely dry. The business of making salted fish is a business that is being carried out by Mr. Arpen in Bontosi Village, Labobo District, Banggai Laut Regency.

The selection of salted fish businesses from the many types of businesses is because most of the livelihoods of the people in the village are fishermen so that the supply of fish in the village can be said to be abundant for every day, besides that because most of the livelihoods of the people in the village are fishermen resulting in some fish catches that are not consumed by local people, giving rise to 2 (two) alternatives, namely selling in neighboring villages or choosing to sell to fish collectors in the place to be preserved or what we commonly know as making salted fish.

The salted fish business run by Mr. Arpen in Bontosi Village, the marketing of its products has entered outside the Banggai Laut Regency / City and some are even sold out of Central Sulawesi Province. The marketing destination of this salted fish is the North Sulawesi area, namely in Manado City and the area around Manado, this is because there are quite a lot of salted fish enthusiasts in the area and the availability of market access that makes Mr. Arpen easier to market salted fish products. As for the city of Palu and other areas, he admitted that there are still market access constraints as well as information difficulties and other supporting factors that make his salted fish marketing has not entered Palu City.

Although the Banggai Laut area is a coastal area especially Bontosi Village which has high fish production, but in reality there are several obstacles that are often faced by salted fish entrepreneurs such as, uneven availability of fresh fish every month due to seasonal types of fish, fluctuations in the type of fish, erratic weather conditions and durability and quality of fish that vary resulting in the type of fresh fish that will be used as salted fish tends to be erratic.

According to (Fadhullah, 2018) Another obstacle that usually occurs in salted fish processing businesses is that there are many salted fish processors who do not obtain sufficient information relating to quality, type and how much is needed by the market which results in marketing agencies having difficulty in meeting the demand for the required amount of supply. As a result of these constraints, it causes various problems such as supply shortages, unstable prices and other problems.

The situation that often occurs is that there is often a vacuum of salted fish stock due to the reduced amount of fish production due to bad weather and the marketing system applied, where the entire stock of salted fish that exists every two weeks will be distributed to its business partners who act as the second salted fish container in Banggai Islands Regency and will then be marketed outside the Banggai area entirely without leaving a stock of salted fish to be marketed in the area itself. This happens because there is still a lack of information about how much salted fish is needed by the market inside and outside the Banggai area, thus making the business owner distribute all his products without knowing whether his paduk is in accordance with the amount of demand or vice versa which causes the turnover of business capital to be slow.

In the provision of production factors, salted fish business managers need a good inventory management related to weather or climate change problems, seasonal types of fish and how to implement the marketing system. If business owners cannot manage inventory management as well as possible, then the fear is that there will be problems in terms of logistics, namely conditions where there is no increase in the value of a product but this will have an impact on increasing costs.

Efforts to overcome these problems or obstacles require the implementation of good supply chain management in a business venture. Supply Chain Management is a process used to manage and organize the flow of raw materials, finished products and information between the company and its suppliers (Miru, 2023). The main purpose of using SCM is to increase efficiency and effectiveness in managing the flow of goods, information and can be used to reduce operational costs.

Supply Chain Management (SCM) is a field of study that is closely related to efficiency and effectiveness in the flow of goods, information, and money flows that occur simultaneously so as to form the name Supply Chain Management (SCM) with the parties involved (Ariska & Gusminto, 2016). The important thing that is the basis of thought in this concept is the focus on reducing waste and how to optimize value in the related supply chain.

## **METHODS**

This type of research in this study is a type of qualitative research that is descriptive and tends to use analysis, process and meaning or the subject's perspective on qualitative research is more highlighted This study observes how the supply chain flow or salted fish distribution process in supply chain management in salted fish businesses located in Bontosi Village, Labobo District, North Banggai Regency. This approach is aimed at the context and the individual holistically (whole), so it is not allowed to isolate individuals or organizations into variables or hypotheses, but needs to view it as part of a whole (Moleong, 2004).

The subject of this research is the Salted Fish Business Owner, Mr. Arpen, which was conducted in Bontosi Village, Labobo District, Banggai Laut Regency, Central Sulawesi Province with a total of 10 informants. This research was conducted from February to March 2024 which lasted approximately 1 month and data collection methods by means of non-participant observation, interviews and documentation.

Data analysis using interactive analysis of the supply chain management of Mr. Arpen's salted fish business with the help of the Nvivo 12 plus application with data

analysis stages including data processing, data reduction, data presentation and conclusion drawing and the results of data analysis in the form of inbound and outbound.

## RESULTS and DISCUSSION

### Inbound

Inbound is a supply chain from raw materials to producers. In general, the salted fish supply chain system is a network that includes various parties, starting from production (inbound) to utilization at the consumer level. On the inbound side, salted fish is supplied from sources such as fishermen and fish collectors in the form of raw fish or those that have been processed into salted fish. The fish is then processed again by Mr. Arpen for resale to consumers. Regarding the Inbound research from Mr. Arpen's salted fish business, there are 5 (five) inbound to Mr. Arpen's salted fish business, namely size, salted fish making process, suppliers, raw materials, salted fish from suppliers and types of salted fish.

On the inbound path, researchers found 3 (three) inbound paths on Mr. Arpen's salted fish business. Here are the results of Mr. Arpen's salted fish business inbound:



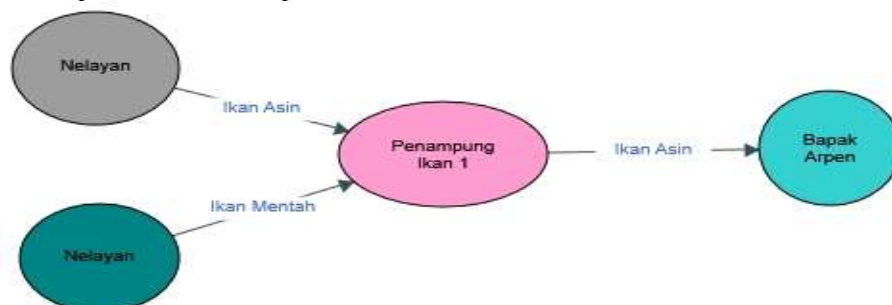
**Figure 1: Inbound path 1**

From the picture above explains how inbound from raw materials to the salted fish business owner Mr. Arpen, where the supply of raw materials for making salted fish comes from fishermen. On the path Mr. Arpen buys the raw material for making salted fish, namely raw fish which will then be processed into salted fish and then ready to be marketed. In addition to the path above, researchers also found the second inbound path in Mr. Arpen's salted fish business:



**Figure 2. Inbound Path 2**

The inbound flow of salted fish that has been finished to Mr. Arpen as the owner of the salted fish business, this salted fish comes from fishermen where fishermen have processed the fish first into salted fish and then sold to Mr. Arpen, salted fish purchased by Mr. Arpen from the fisherman is then dried again until the salted fish is completely dry, this is done because when the salted fish is purchased by Mr. Arpen from the fisherman the fish is not fully dry or still half dry. In addition to the two paths above researchers found the third inbound path from Mr. Arpen's salted fish business:



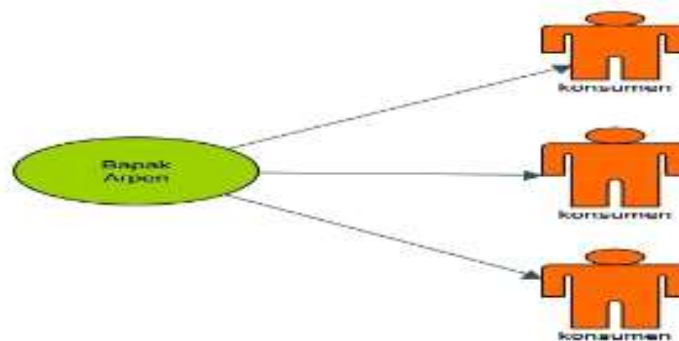
**Figure 3. Inbound Path 3**

The inbound flow of raw materials obtained from fishermen is then processed into salted fish by the container which is then sold back to Mr. Arpen. In addition to processing raw fish into salted fish, fish collectors also purchase finished salted fish to increase the stock of salted fish that they will sell to Mr. Arpen. The same thing is done by Mr. Arpen on the purchase of finished salted fish, the salted fish will be dried again by Mr. Arpen until the salted fish is completely dry and ready to be marketed to consumers within the Banggai Laut Regency area and outside the Banggai Laut Regency area even outside Central Sulawesi Province.

## OUTBOUND

Outbound is a supply chain from producers to consumers. Outbound is also closely related to all the processes of distributing salted fish from Mr. Arpen's salted fish business, distributors, to the hands of consumers. In a series of activities in an outbound company is a supply chain cycle that begins a process of moving an item from one place to another until the item reaches a certain destination and into the hands of consumers following Figure mapping outbound research results:

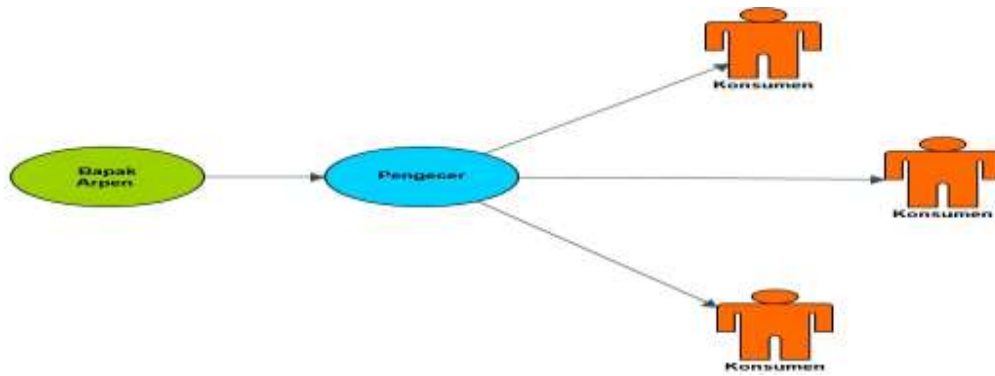
The results of outbound mapping research show a scheme regarding the amount of salted fish production per day, the price of raw fish per kilo, the price of salted fish per kilo, the cost of transportation and distribution of salted fish, the amount of salted fish sales per month, the supply chain price of salted fish and the supply of salted fish. Based on the outbound results, researchers found several supply chain paths of Mr. Arpen's salted fish to get to consumers, there are 4 supply chain paths in Mr. Arpen's salted fish business, namely:



**Figure 4. Supply Chain 1**

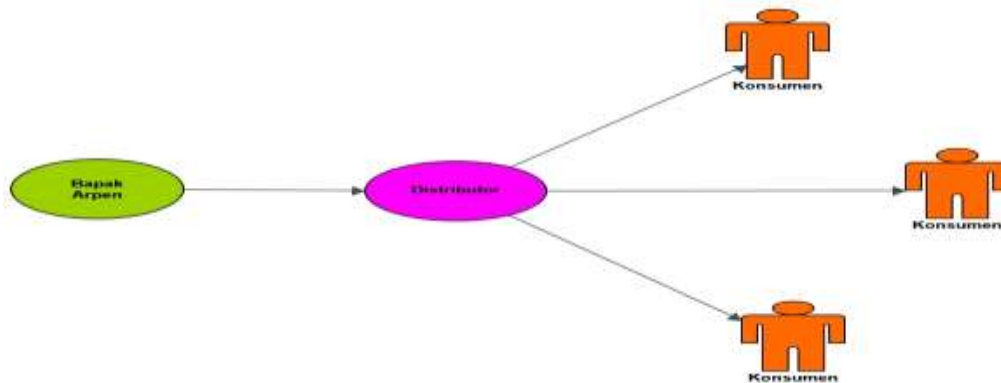
The process of salted fish supply lines originating from Mr. Arpen as a salted fish maker is then sold directly to consumers without going through any intermediaries, so consumers as the final supply chain who come directly to purchase salted fish from Mr. Arpen as a salted fish producer. According to (Hayati, 2014) supply chain management is the management of various activities to procure raw materials, followed by transformation activities so that it becomes a product in process, which then becomes a finished product and is sent to consumers through a distribution system. Activities implemented include traditional purchasing and other important activities related to suppliers and distributors.

From outbound research, the second supply chain path was also found by researchers, the second supply chain path:



**Figure 5. Supply Chain 2**

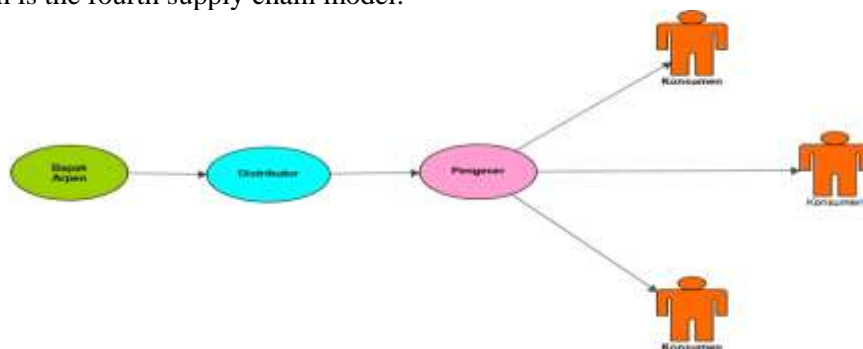
The supply chain flow starts from Mr. Arpen to the hands of consumers through salted fish retailers. The salted fish produced by Mr. Arpen is then purchased by salted fish retailers and resold to consumers, the price offered when buying directly from the production site is different from the purchase price when sold by retailers or in the market, where the price bought directly to the production site is cheaper than buying salted fish through retailers or in the market, this usually happens because of the costs incurred by retailers at the time of distribution to consumers. From the outbound research, researchers found the third supply chain flow of this research, the third supply chain flow:



**Figure 6. Supply Chain 3**

The third supply chain that starts from Mr. Arpen to get to the hands of consumers through distributors. The distributor purchases salted fish from Mr. Arpen and then distributes it back to consumers. In this supply chain, distributors sell directly to consumers, also called distributors and retailers.

The supply chain model found by researchers based on the results of outbound research is the fourth supply chain model:



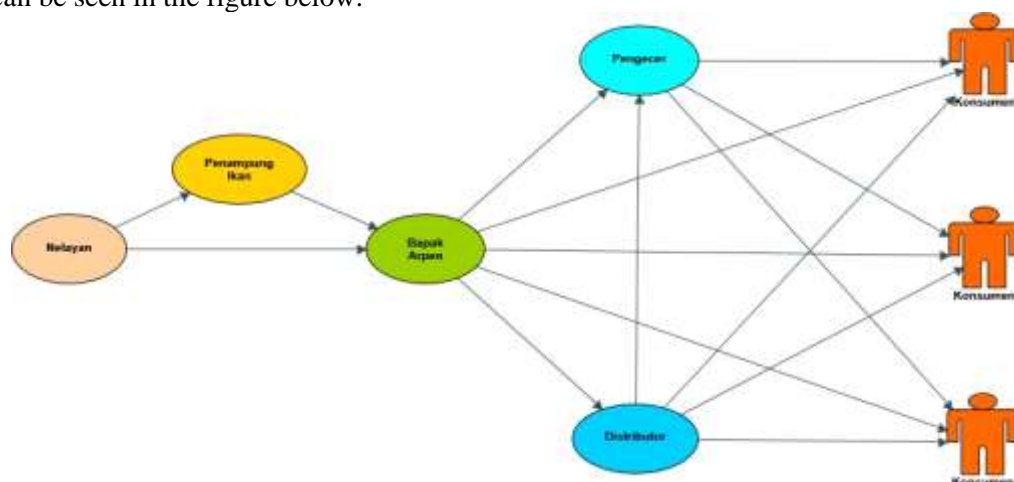
**Figure 7. Supply Chain 4**



The fourth supply chain that starts from Mr. Arpen, distributors, retailers and consumers. Salted fish that has been produced is then sold to salted fish distributors and then sold to retailers and finally to consumers. Salted fish produced by Mr. Arpen is then sold back to salted fish distributors who sell salted fish in Manado City and surrounding areas, salted fish produced by Mr. Arpen is entirely sold to the salted fish distributor, this is what triggers the frequent occurrence of salted fish stock in Mr. Arpen when consumers come to buy salted fish. This happens because between Mr. Arpen and the salted fish distributor have collaborated. Salted fish sold to the distributor is then resold in the Manado area in the form of kiosks or markets there.

consumers who buy salt fish directly to the producer, namely Mr. Arpen, often find a stock void when making purchases, this happens because the salted fish produced has been sold all to salted fish distributors in Manado without leaving stock for consumers in the area itself. because the stock void makes consumers in the area have to wait a few days until the salted fish stock is produced again. In contrast to consumers in other places outside the Banggai Laut area, namely Palu City and Manado, consumers make purchases of salted fish directly to the market or make purchases online through social media, and rarely or almost never experience a shortage of salted fish stocks. Consumers buy salted fish through salted fish retailers. The price offered from Mr. Arpen to the consumer is different.

From several inbound and outbound paths found by researchers, the researchers summarized the entire supply chain path that exists in Mr. Arpen's salted fish business starting from the earliest supply chain to the final supply chain, namely consumers, which can be seen in the figure below:



**Figure 8. Supply Chain Path in Mr. Arpen's Salted Fish Business**

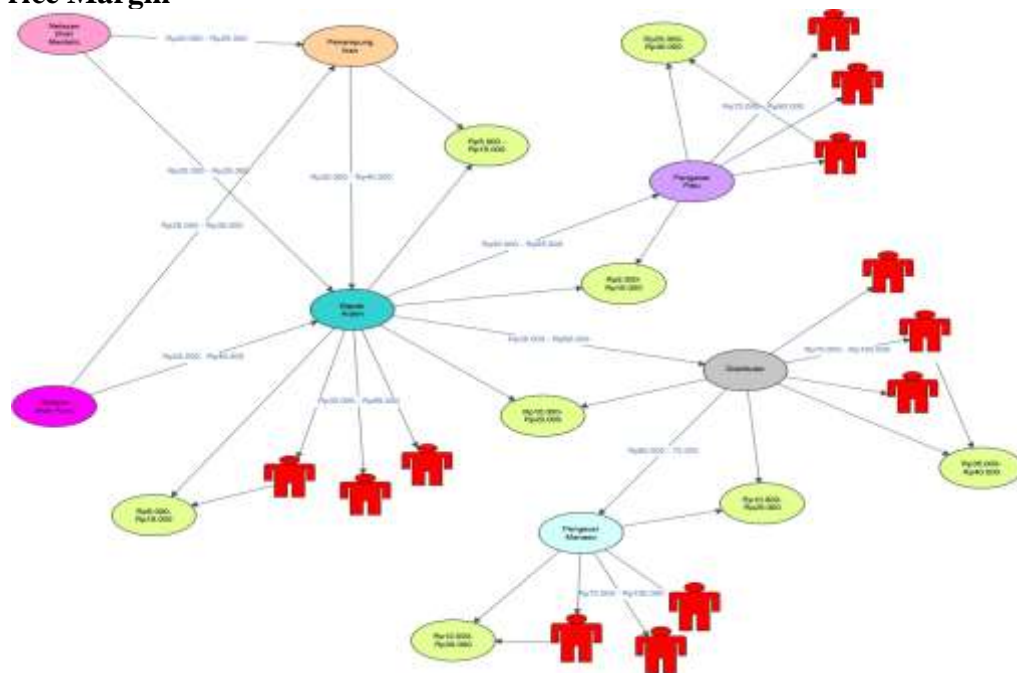
From the picture above it is known that the earliest supply chain in Mr. Arpen's salted fish production business starts from fishermen. Fishermen are suppliers of initial raw materials for the manufacture of salted fish, fishermen are divided into 2 (two), namely fishermen who supply fish in the form of raw fish then processed by Mr. Arpen into salted fish, there are also fishermen who supply in the form of half-dried salted fish to Mr. Arpen, which will then be dried again until the salted fish is completely dry. Furthermore, there are suppliers from fish collectors. Fish collectors obtain raw materials for making fish from fishermen in the form of raw fish then processed into salted fish and fishermen who supply in the form of salted fish. Furthermore, the fish collector sells it to Mr. Arpen in the form of half-dried salted fish then dried again by Mr. Arpen until the salted fish is completely dry.

Salted fish that has been produced by Mr. Arpen is then distributed to consumers through distributors, retailers and direct purchases at Mr. Arpen. The selling price for consumers and retailers who make direct purchases to Mr. Arpen starts from the price of

Rp30,000 to Rp55,000 per kilo according to the type and size of salted fish, while the selling price of salted fish from Mr. Arpen to salted fish distributors is increased by Rp5,000 per kilo from the selling price to consumers based on the type and size of the fish. Salted fish distributors are then channeled to salted fish retailers and to consumers directly at prices that differ from the initial purchase price as well as retailers.

The salted fish production of Mr. Arpen is sold more to distributors than to consumers or retailers directly, this is because of the cooperation that agrees to sell salted fish production as a whole to salted fish distributors so that it often causes a vacuum of salted fish stock at the production site when consumers or retailers come to make purchases directly and have to wait a few days for the salted fish stock to be available again.

### Price Margin



### Salted Fish Price Margin

The price margin is the difference between the selling price and the purchase price at each level of the supply chain. Price margins are influenced by various factors, such as production costs, transportation costs, storage costs, taxes, demand, supply and market structure. Market structure describes the conditions of competition between supply chain actors, such as the number and size of actors, the level of product differentiation, barriers to market entry and exit and dependence between actors. An unhealthy market structure can lead to inefficiency, inequality and injustice in the salted fish supply chain.

By applying the structure in discussing the price margin in Mr. Arpen's salted fish supply chain, it is hoped that it can provide a clearer picture of the dynamics of salted fish supply chain management. This is done as a basis for formulating appropriate and effective policies to increase efficiency in Mr. Arpen's salted fish supply chain.

The price margin is a combination of the entire series of fish purchasing processes from fishermen to end consumers in the form of salted fish. From the series of processes, the highest margin or highest profit is on the salted fish distributor with a profit of Rp35,000 - Rp40,000 / kg, in second place the highest profit is at Palu City retailers with a profit of Rp25,000 - Rp40,000 / kg. Furthermore, in third place is the Manado retailer with a profit of Rp10,000 - 30,000 / kg, in fifth place is with the amount of profit that is Rp5,000 -

Rp20,000 / kg and in the last position is the fish collector with a profit of Rp5,000 - Rp15,000 / kg.

## CONCLUSIONS

Based on the results of research and discussion of the Supply Chain of salted fish in Mr. Arpen's salted fish business, the following conclusions are obtained: Making salted fish consists of several stages, the first of which is cleaning, salting, drying and then packing according to the type and size of the fish. Salted fish sales are adjusted based on the type and size of the fish, the type of salted fish most often produced by Mr. Arpen is salted fish of katambak and cockatoo types. The size of salted fish is divided into 3 namely small, medium and large sizes. There are obstacles in the process of making salted fish, namely climate or weather constraints that affect the amount of raw materials for making salted fish. The salted fish supply chain in Mr. Arpen's salted fish business has five lines, the first line starts from fishermen to Mr. Arpen then to consumers. The second path starts from fishermen, fish collectors, Mr. Arpen then to consumers. The third path starts from fishermen, fish collectors, Mr. Arpen, retailers and then consumers. Path four starts with fishermen, fish collectors, Mr. Arpen, distributors and then consumers. Path five starts with fishermen, fish collectors, Mr. Arpen, distributors, retailers and then consumers.

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